

# Annexes 2 : figures

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## **6 Exemple de séries temporelles des précipitations maximales aux différentes échelles d'une station** 84

# 1 Nombre moyen de jour de pluie (seuil 1 mm/j)

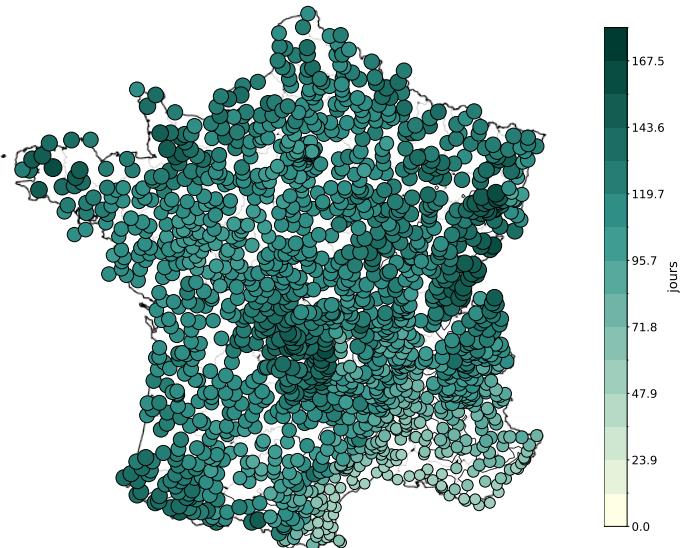
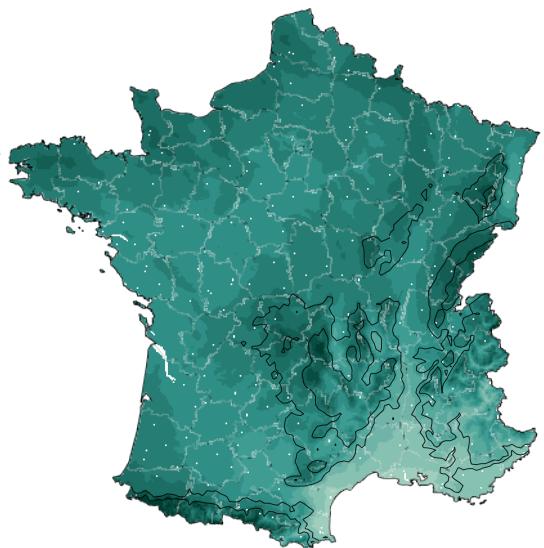
## 1.1 Données journalières (1959-2022)

**HYDRO**

$r = 0.95$

ME = 6.35

$n = 1583$

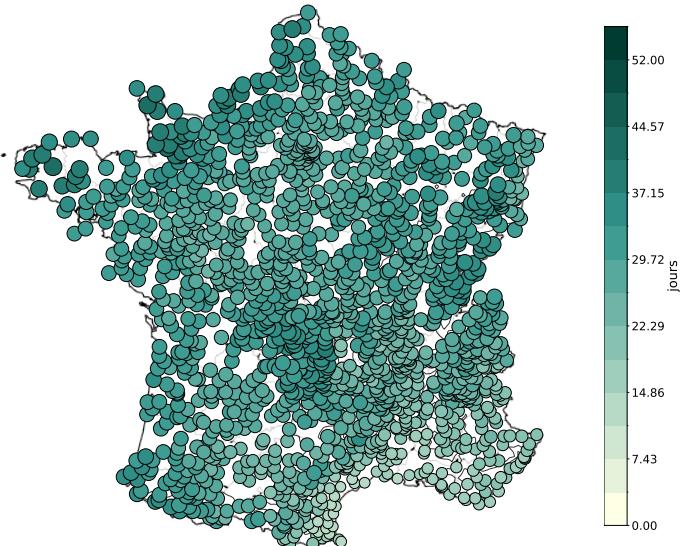
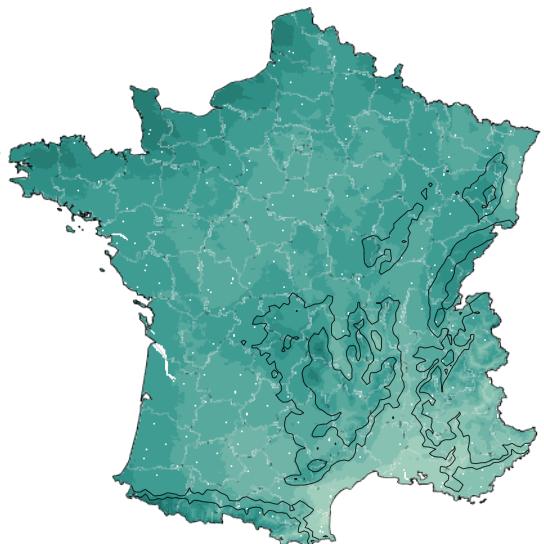


**SON**

$r = 0.95$

ME = 0.65

$n = 1664$

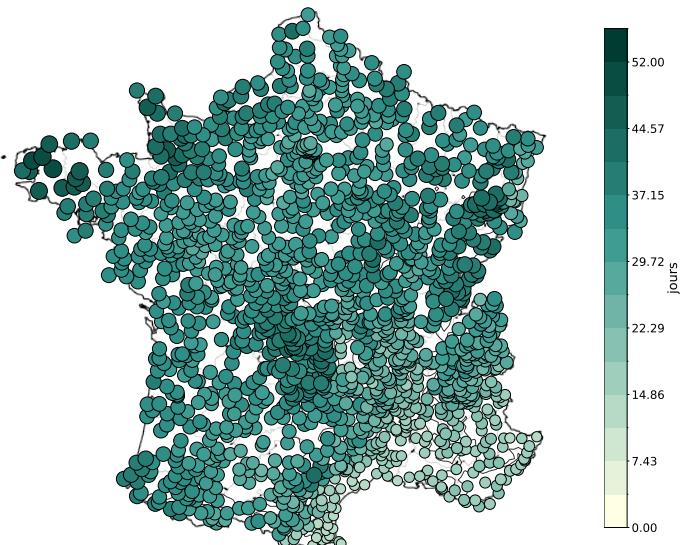
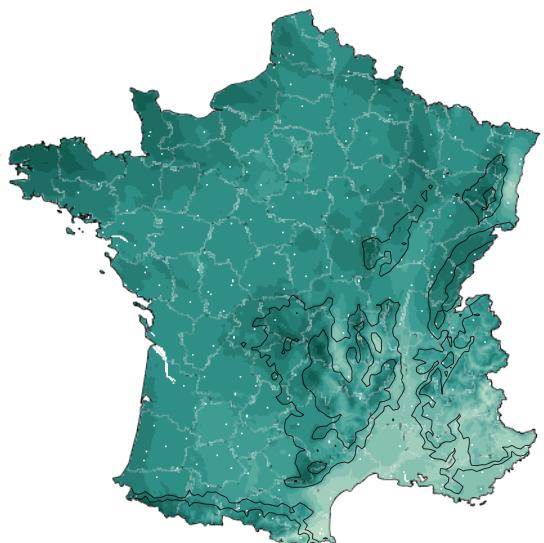


**DJF**

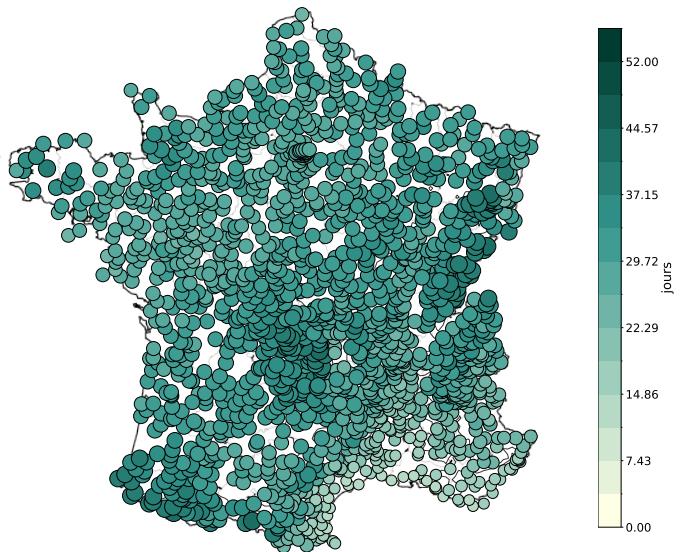
$r = 0.95$

ME = 2.16

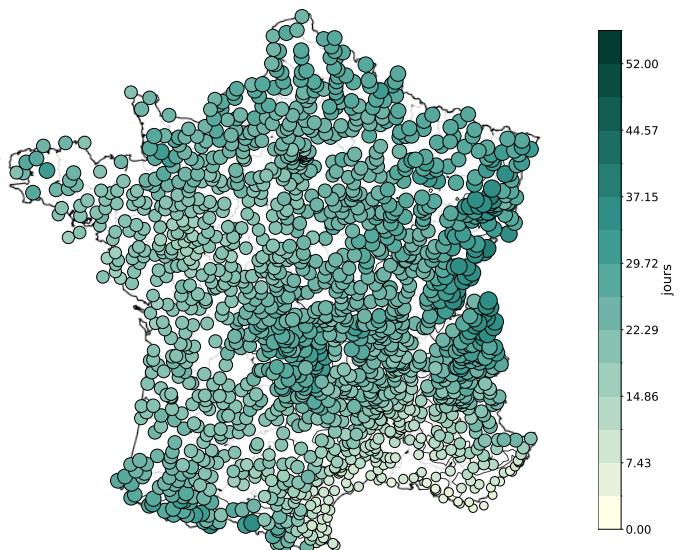
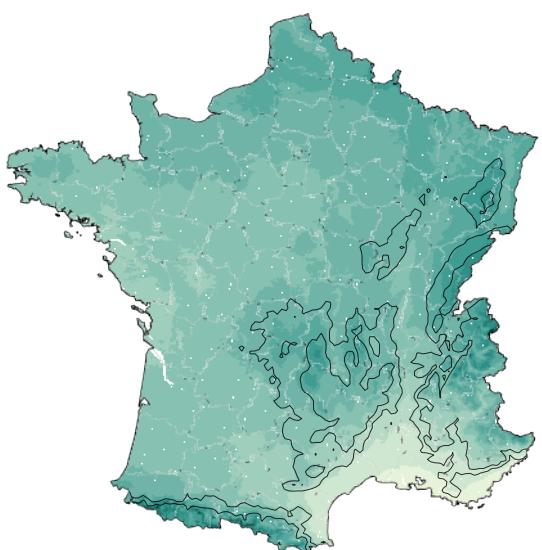
$n = 1603$



**MAM**  
 $r = 0.94$   
ME = 4.16  
 $n = 1650$

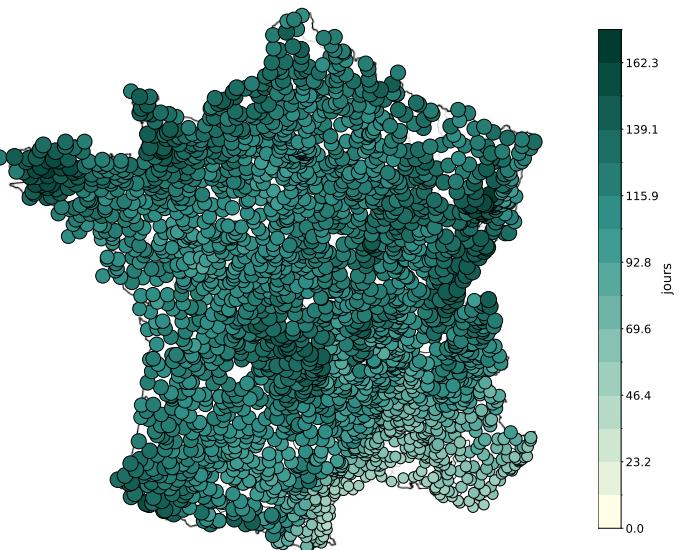


**JJA**  
 $r = 0.96$   
ME = -0.78  
 $n = 1640$



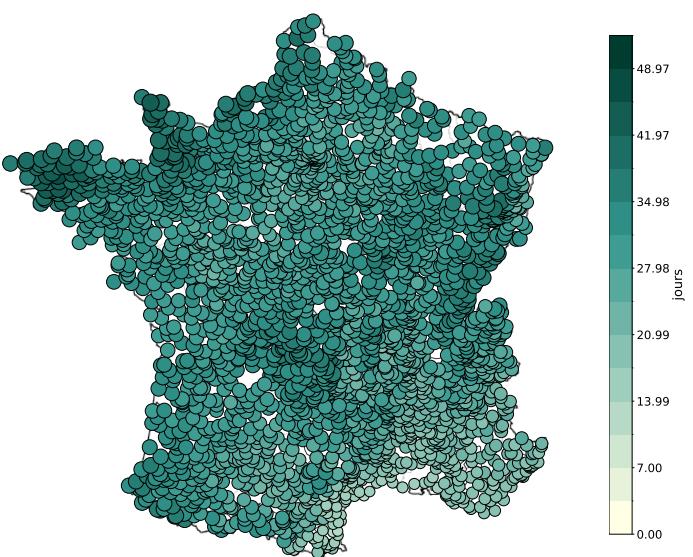
## 1.2 Données journalières (1990-2022)

**HYDRO**  
 $r = 0.95$   
ME = 2.82  
 $n = 2613$

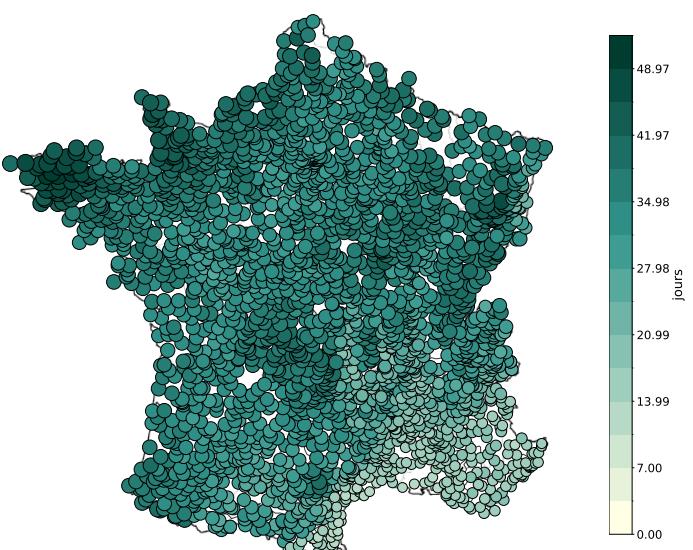
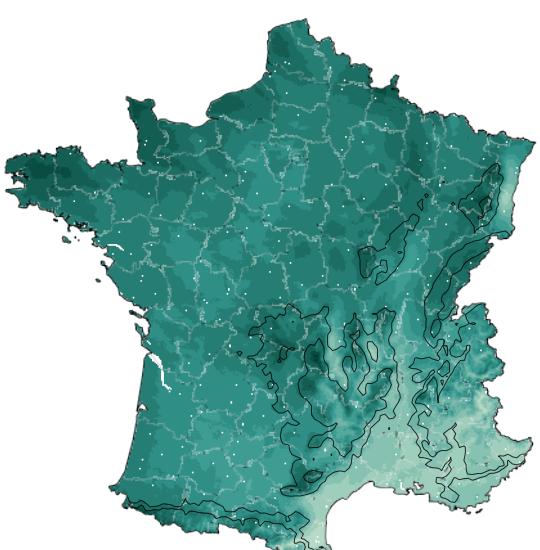




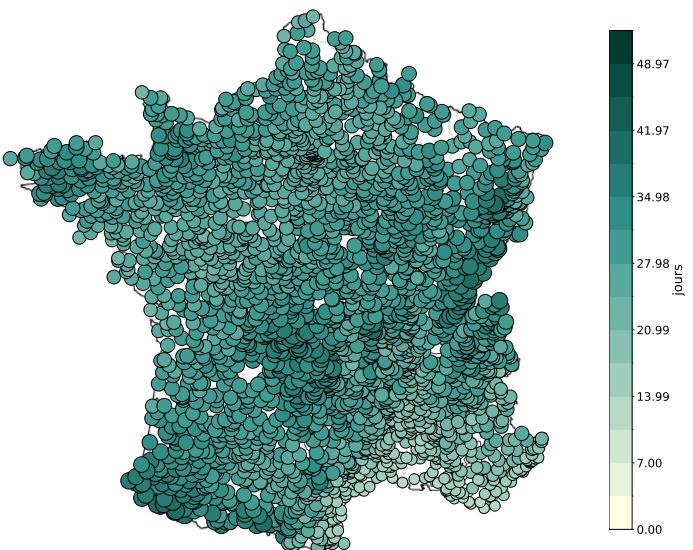
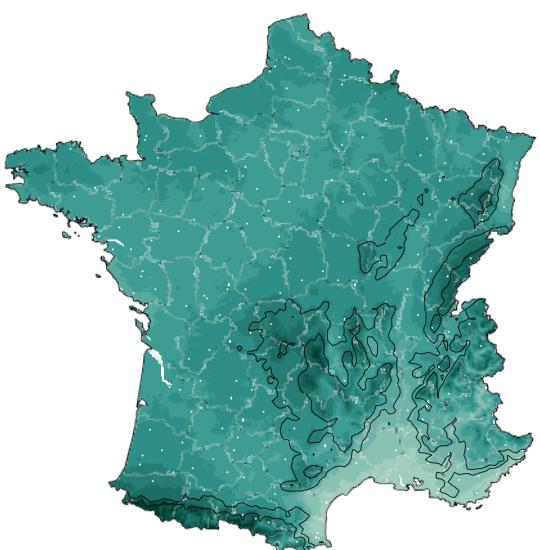
**SON**  
 $r = 0.94$   
ME = 0.09  
 $n = 2719$

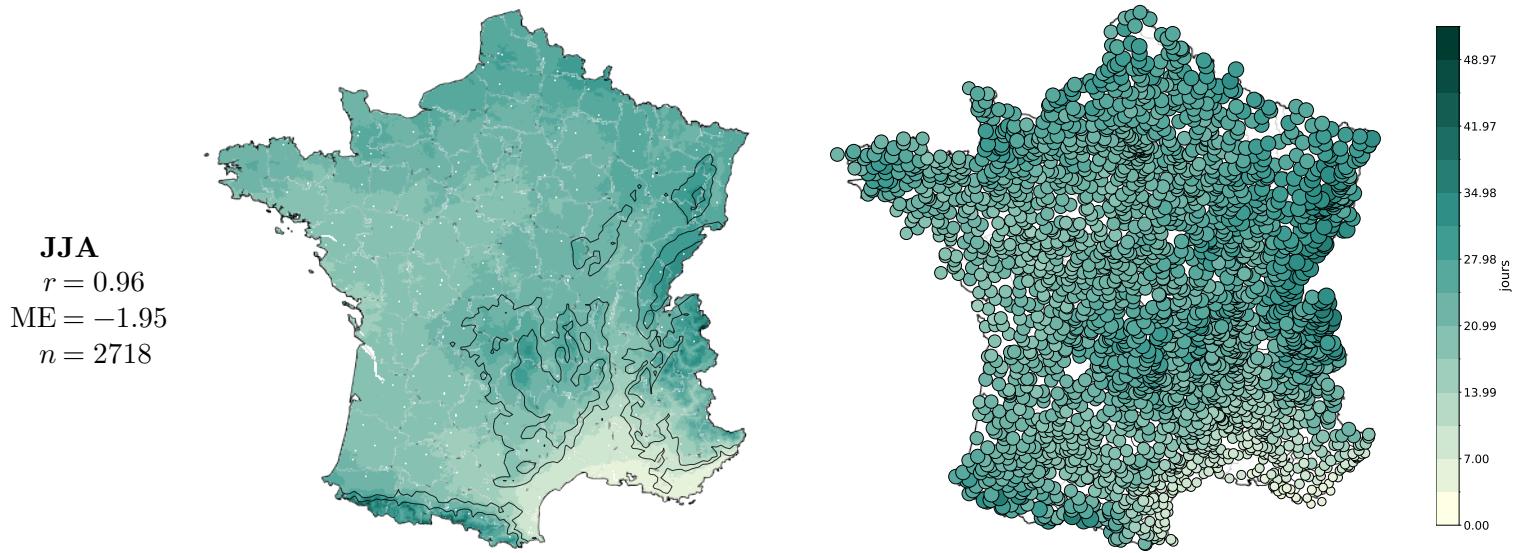


**DJF**  
 $r = 0.95$   
ME = 1.78  
 $n = 2663$



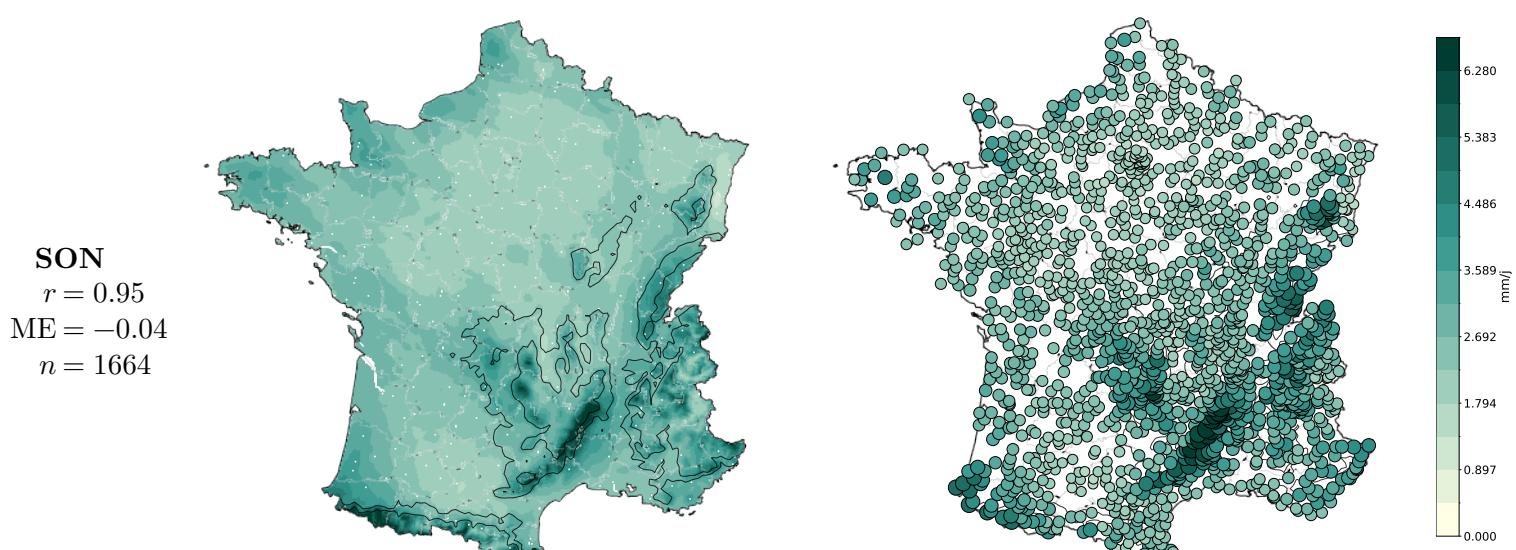
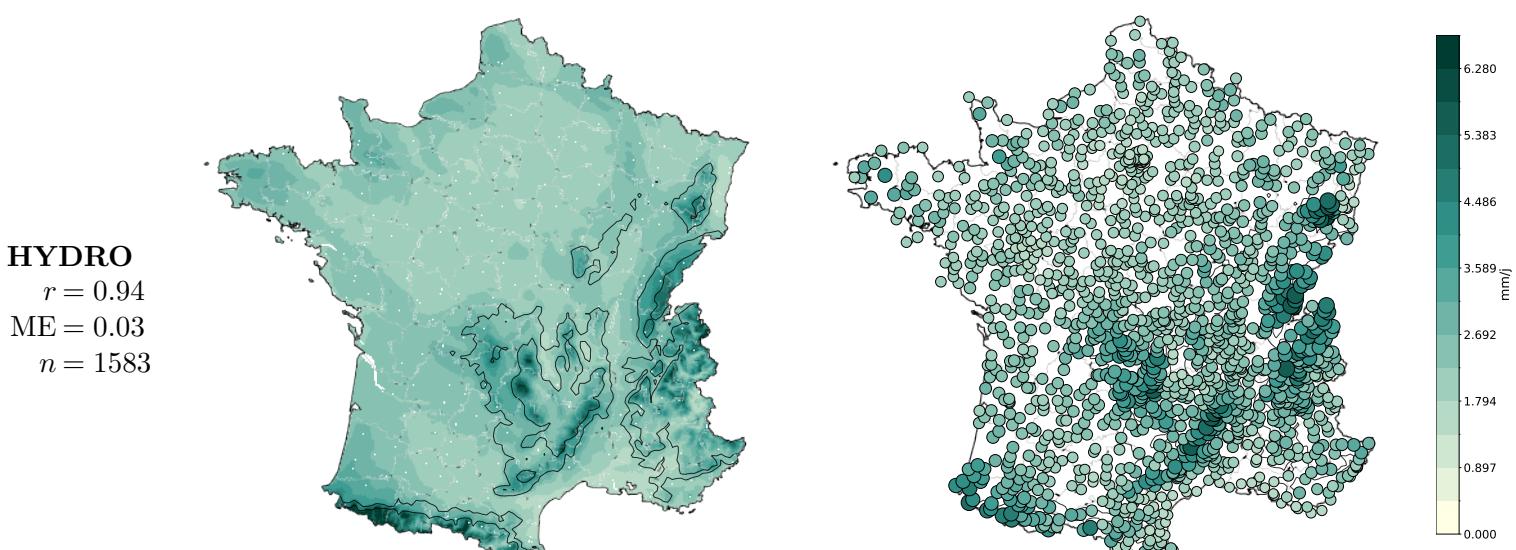
**MAM**  
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ME = 2.93  
 $n = 2729$



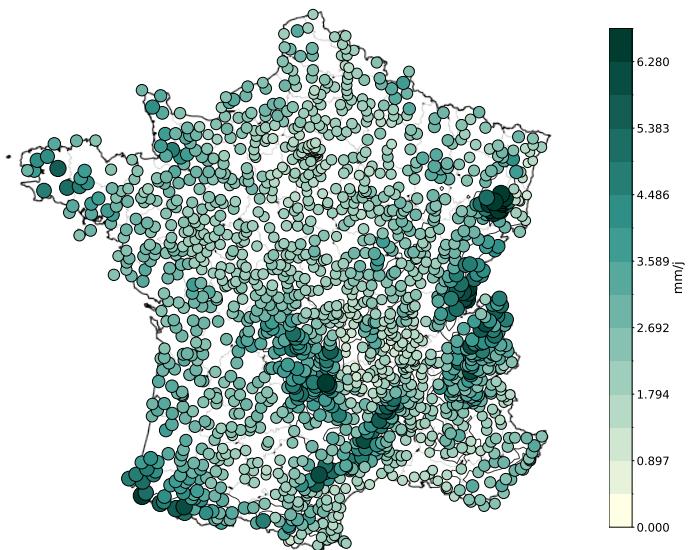
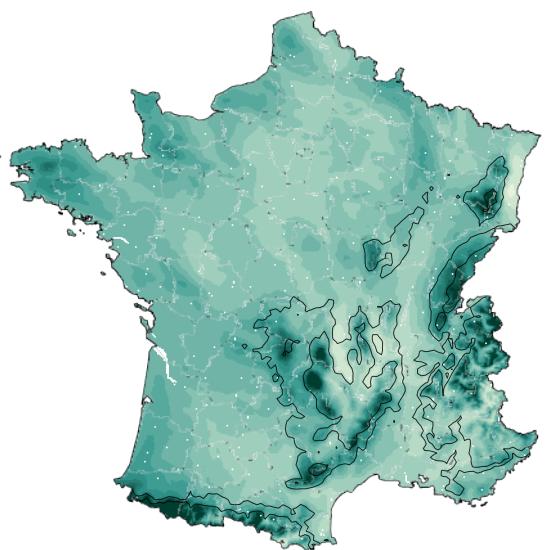


## 2 Cumul moyen des précipitations par année hydrologique

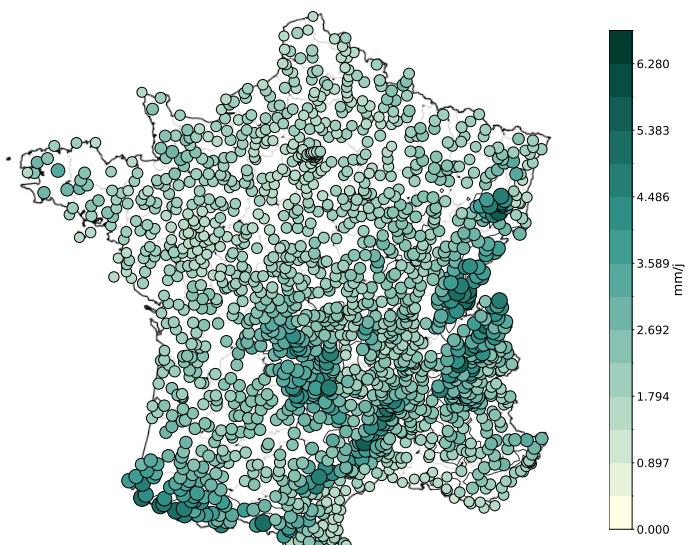
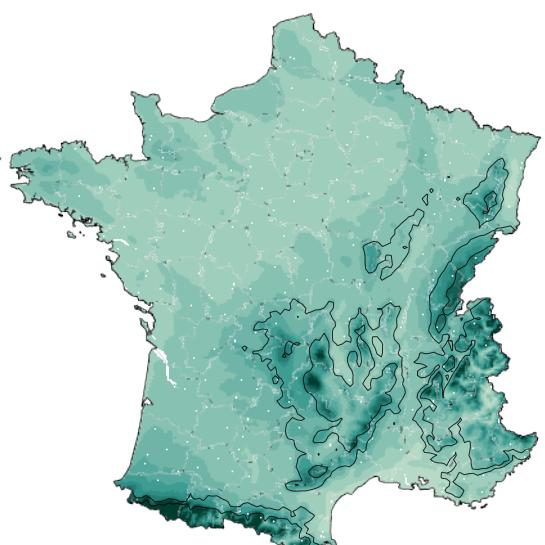
### 2.1 Données journalières (1959-2022)



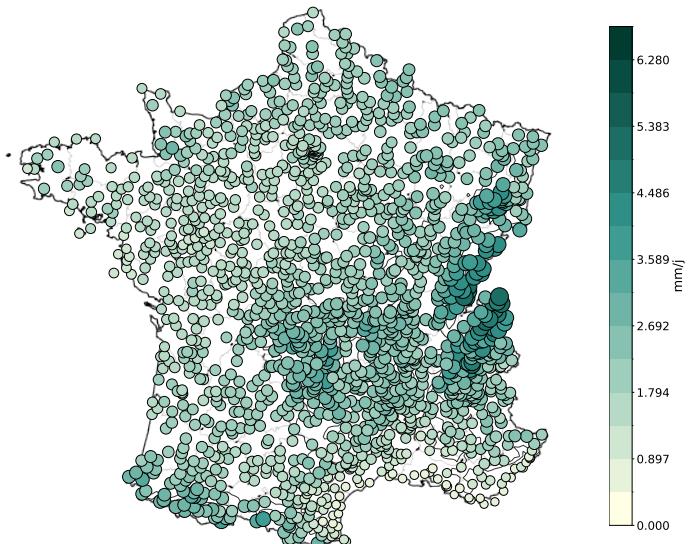
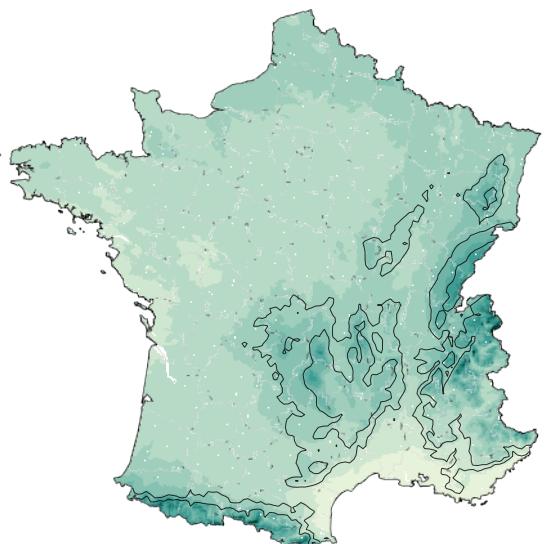
**DJF**  
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ME = 0.14  
 $n = 1603$



**MAM**  
 $r = 0.94$   
ME = 0.26  
 $n = 1650$

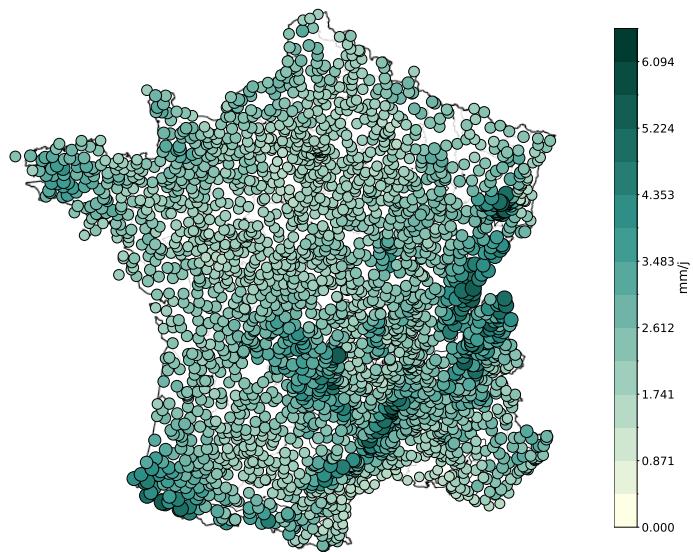
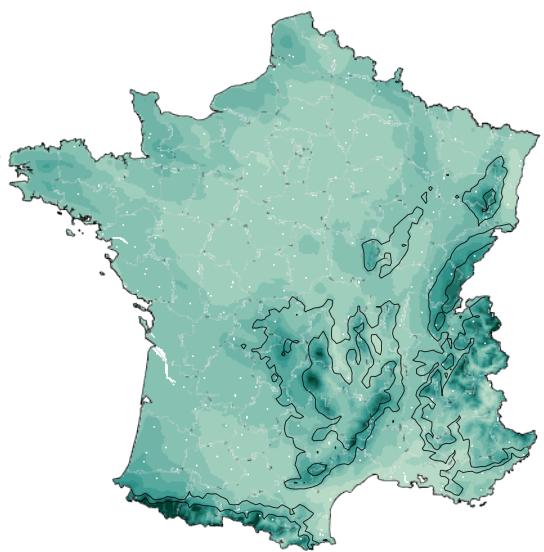


**JJA**  
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ME = -0.24  
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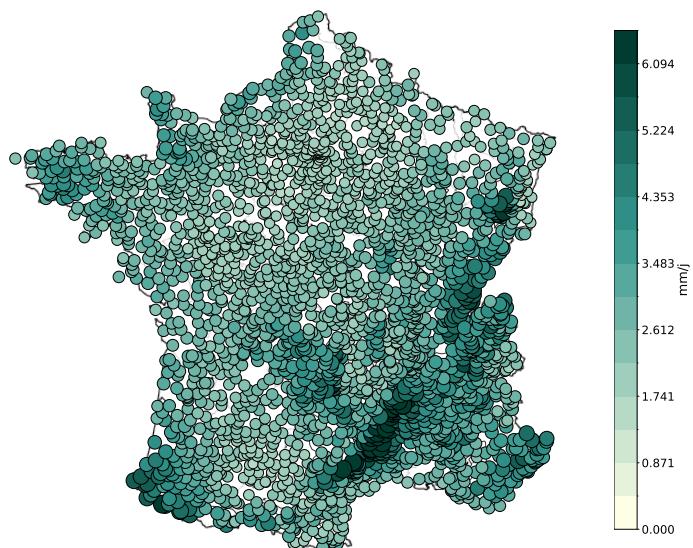
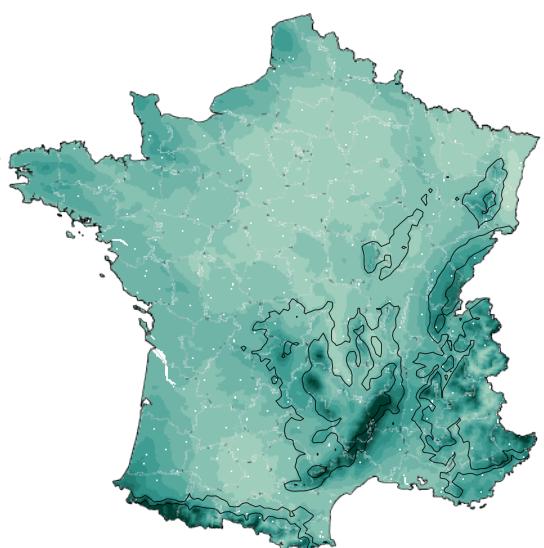


## 2.2 Données journalières (1990-2022)

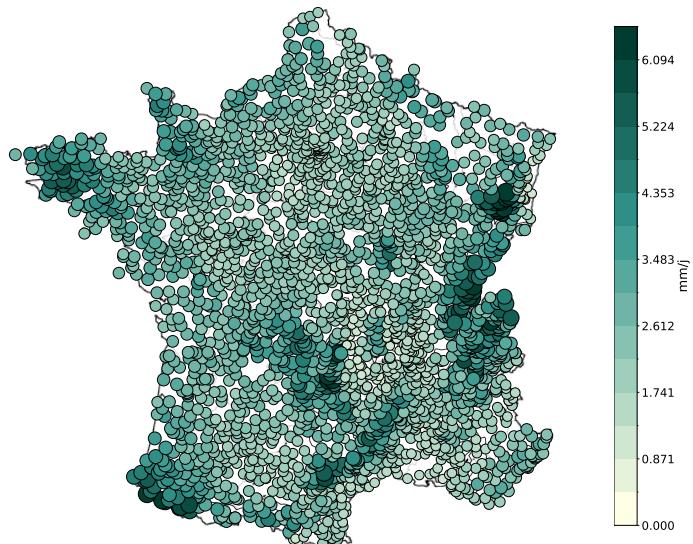
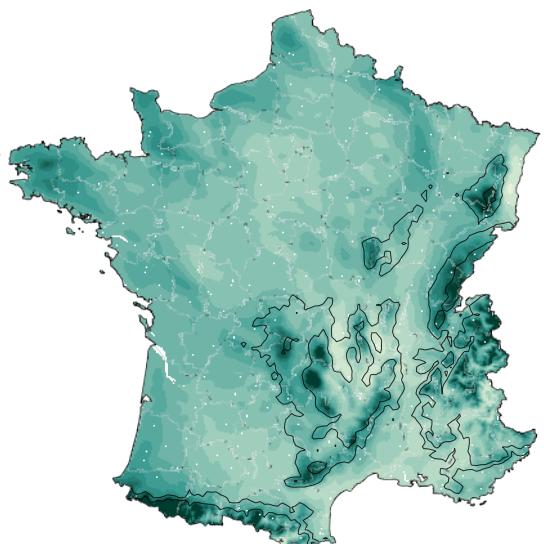
**HYDRO**  
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ME = -0.06  
 $n = 2613$



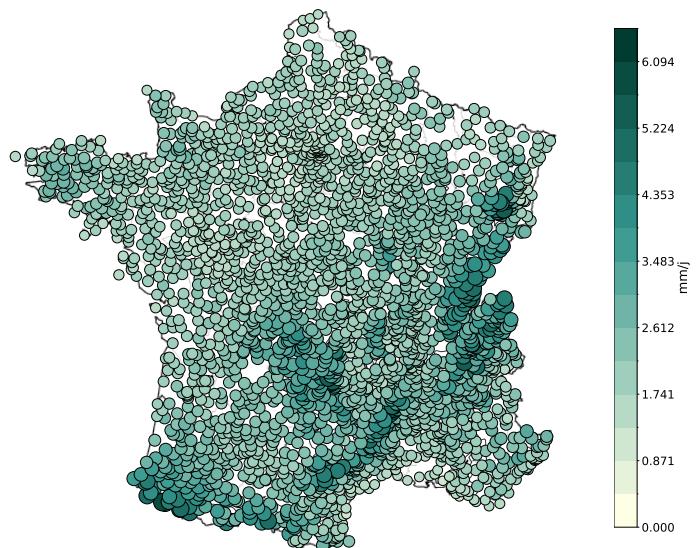
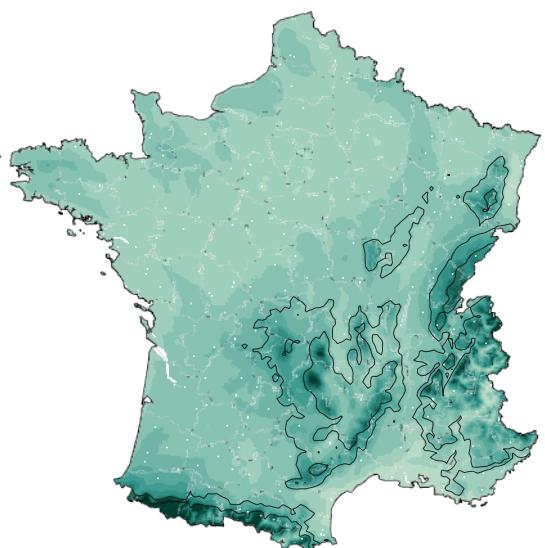
**SON**  
 $r = 0.95$   
ME = -0.11  
 $n = 2719$



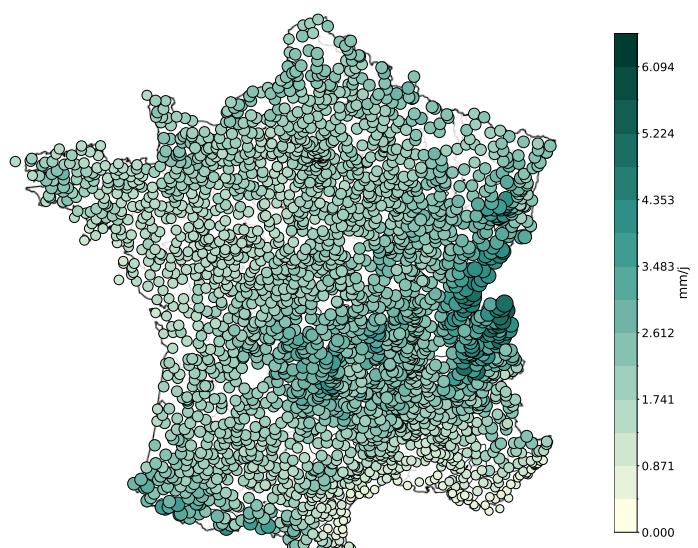
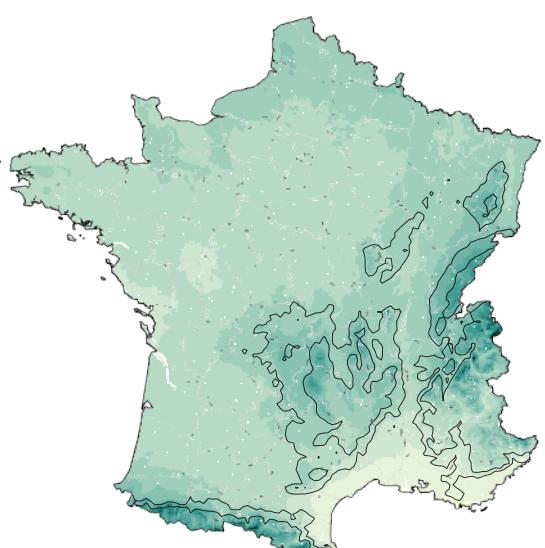
**DJF**  
 $r = 0.93$   
ME = 0.10  
 $n = 2663$



**MAM**  
 $r = 0.93$   
ME = 0.14  
 $n = 2729$

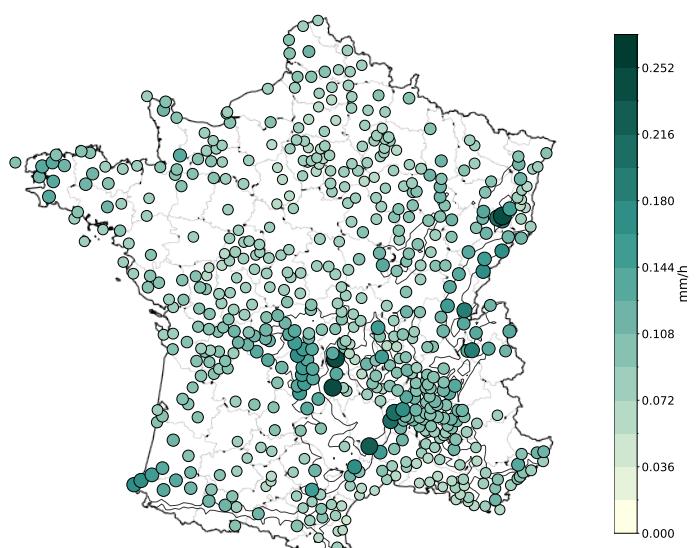
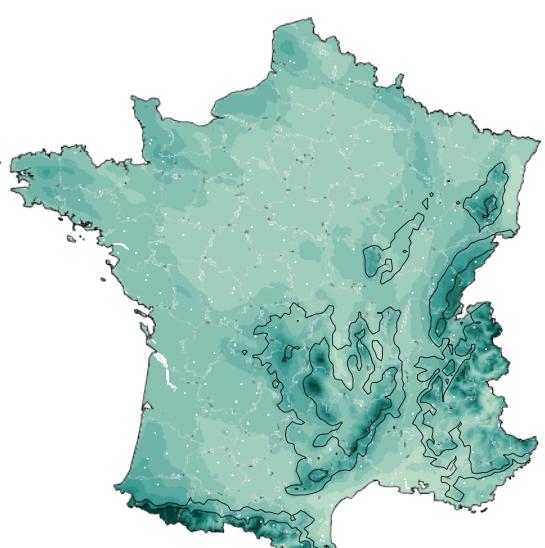


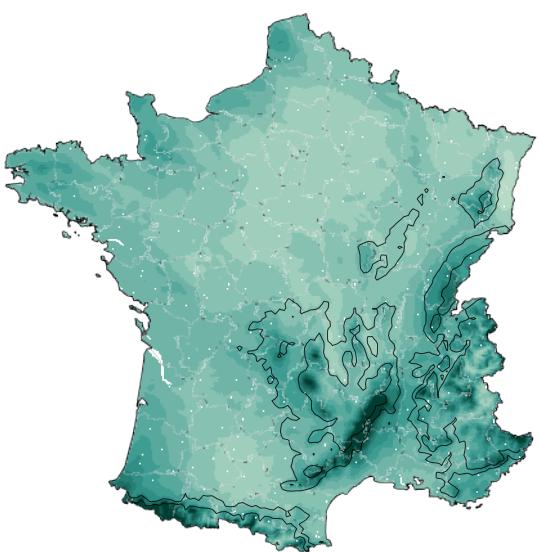
**JJA**  
 $r = 0.94$   
ME = -0.37  
 $n = 2718$



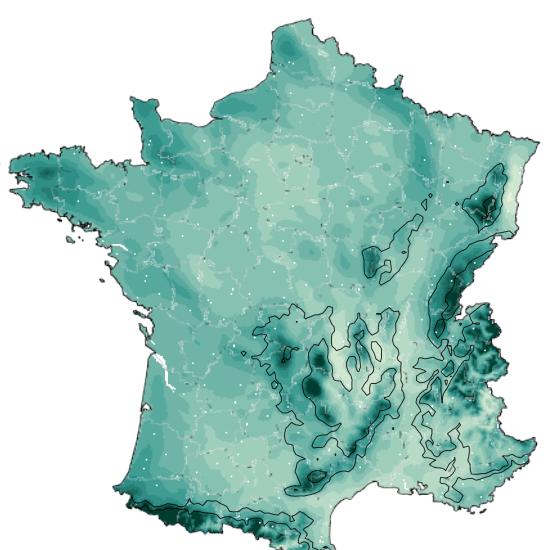
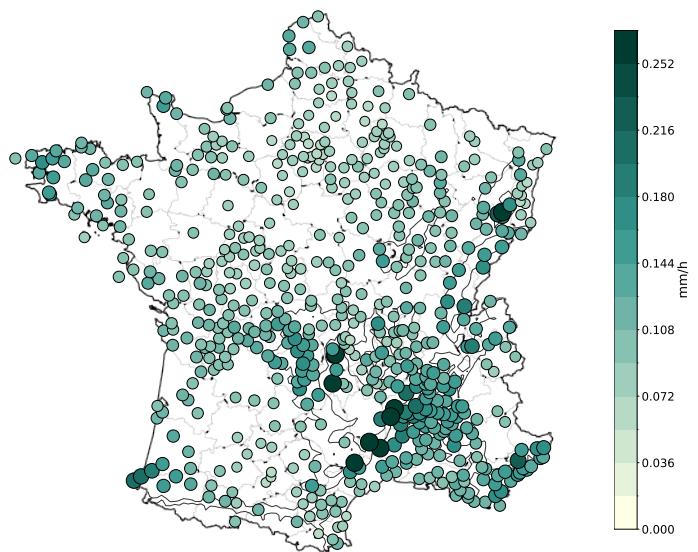
## 2.3 Données horaires (1990-2022)

**HYDRO**  
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ME = 0.00  
 $n = 574$

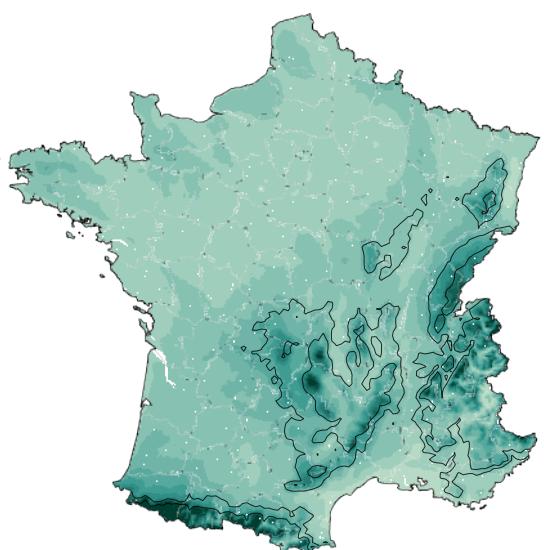
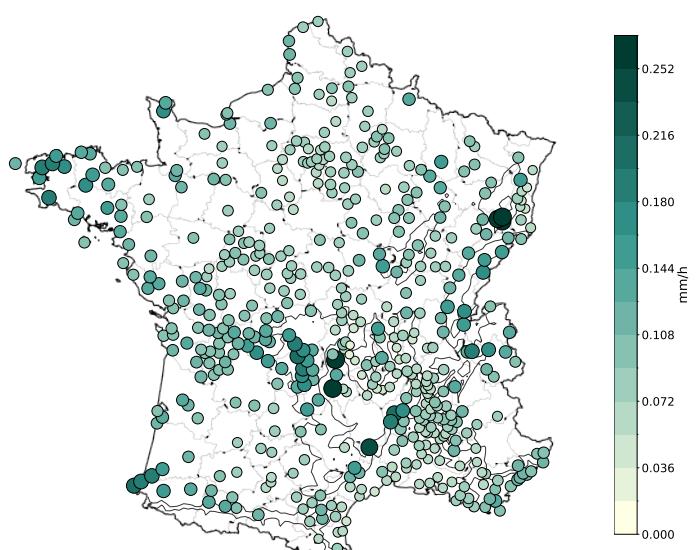




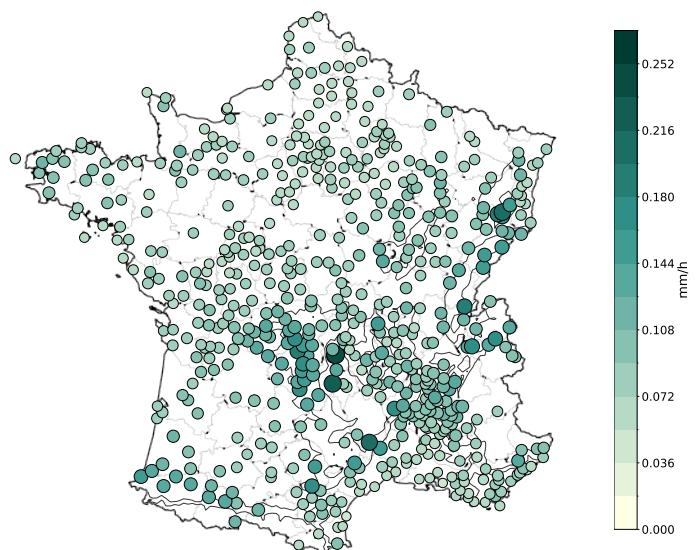
**SON**  
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ME = 0.00  
 $n = 609$



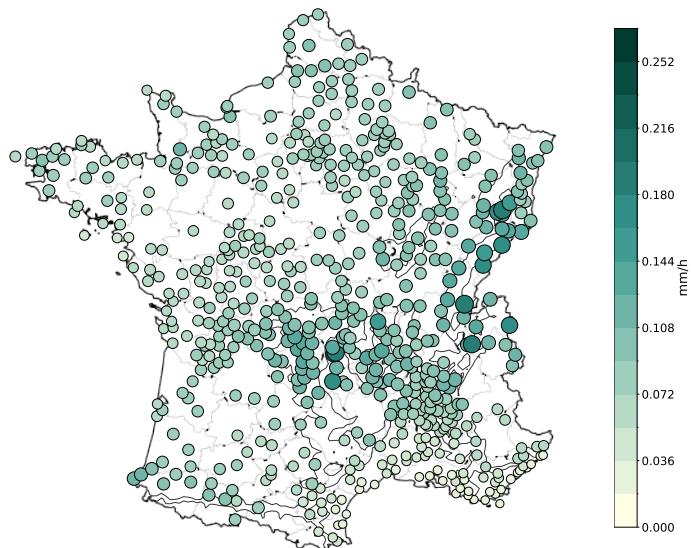
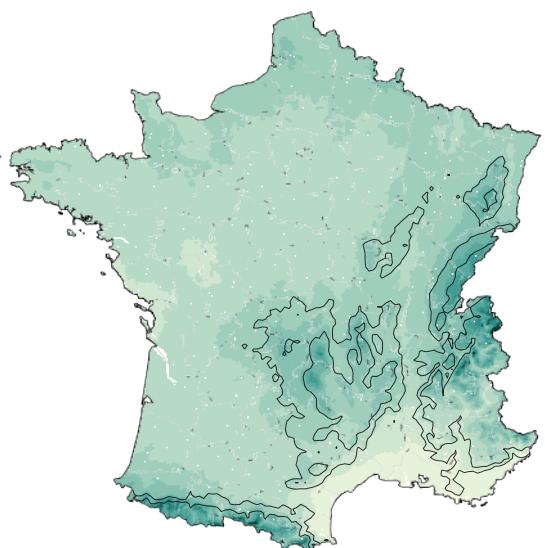
**DJF**  
 $r = 0.92$   
ME = 0.01  
 $n = 511$



**MAM**  
 $r = 0.94$   
ME = 0.01  
 $n = 589$



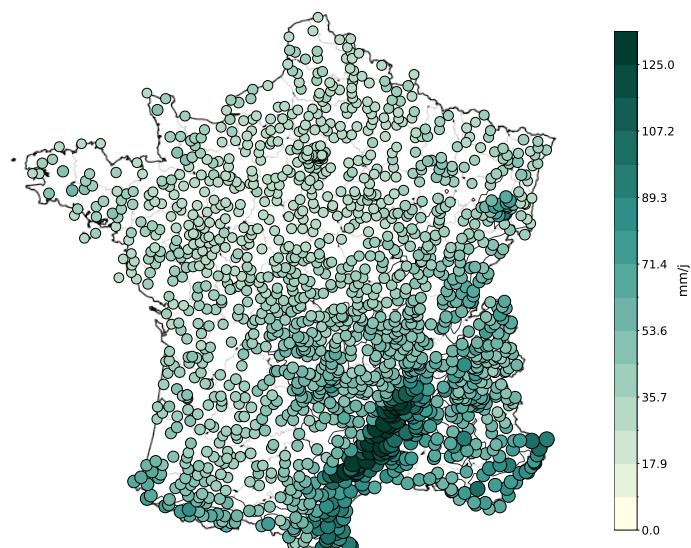
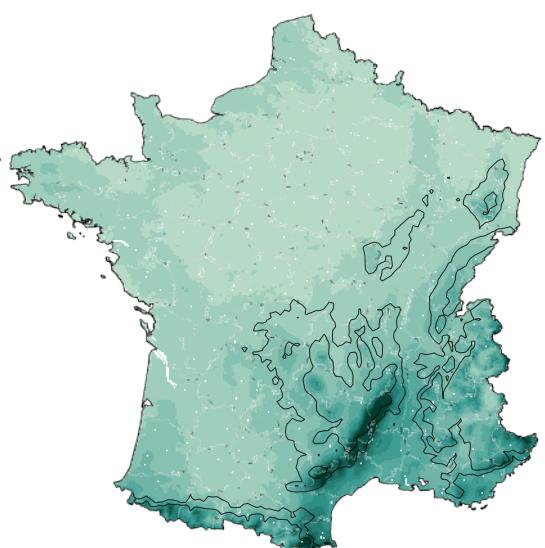
**JJA**  
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ME = -0.01  
 $n = 606$



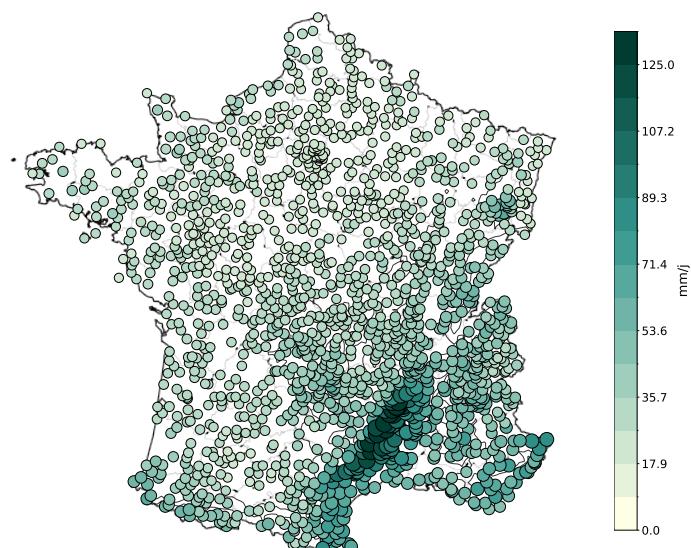
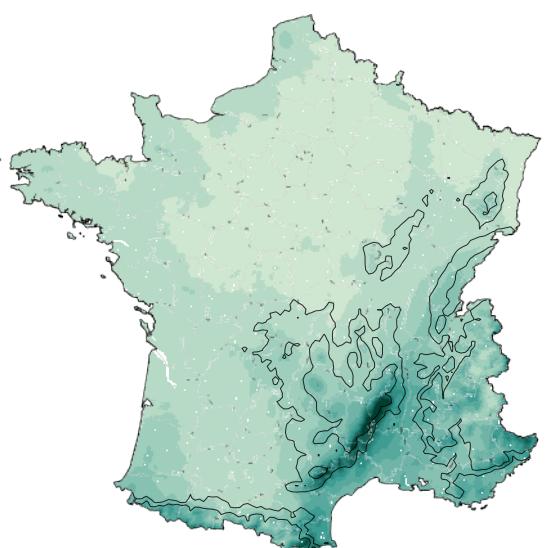
### 3 Moyenne des maxima des précipitations

#### 3.1 Données journalières (1959-2022)

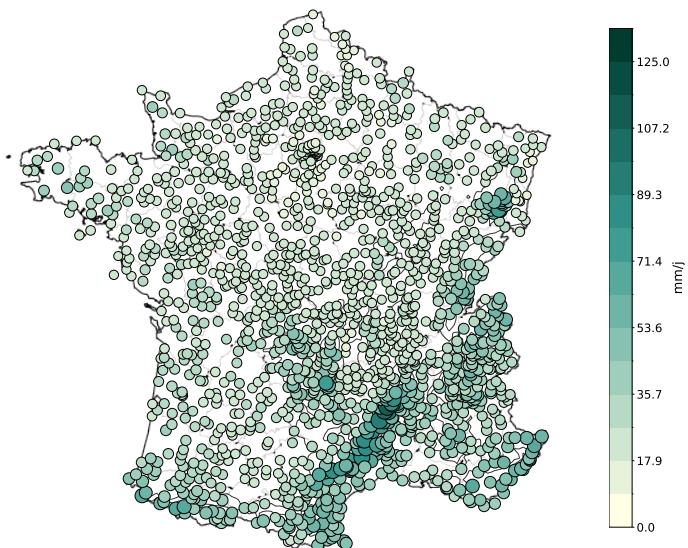
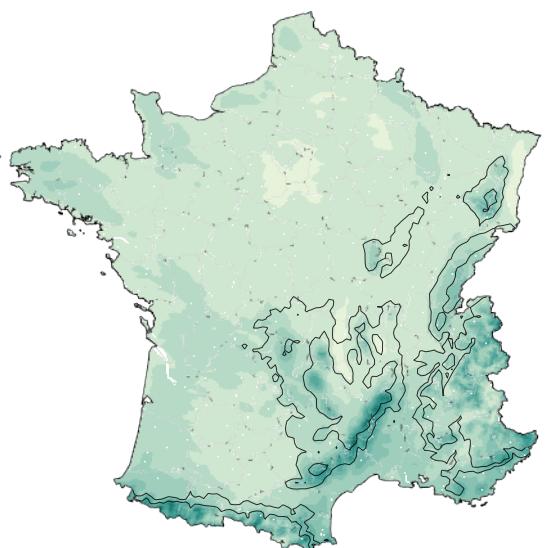
**HYDRO**  
 $r = 0.96$   
ME = -1.18  
 $n = 1583$



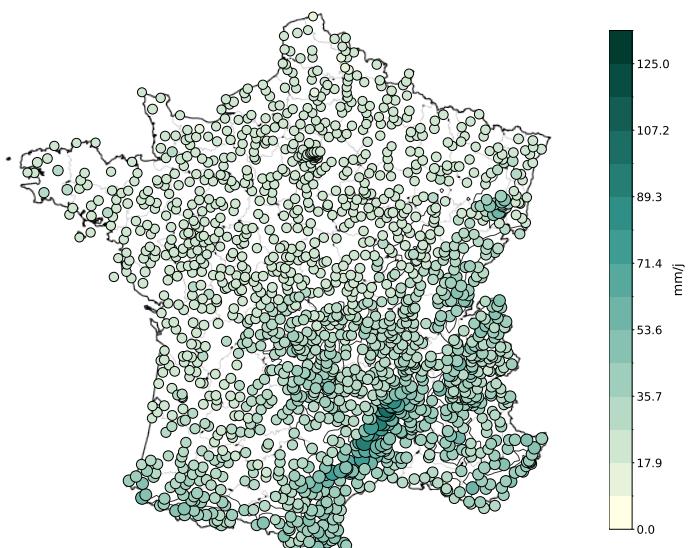
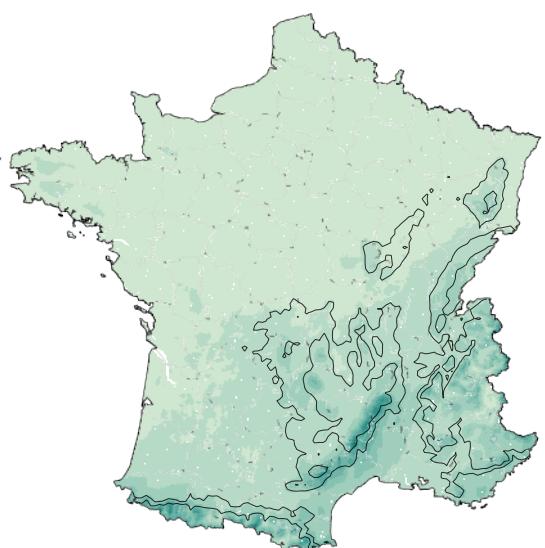
**SON**  
 $r = 0.97$   
ME = -0.41  
 $n = 1664$



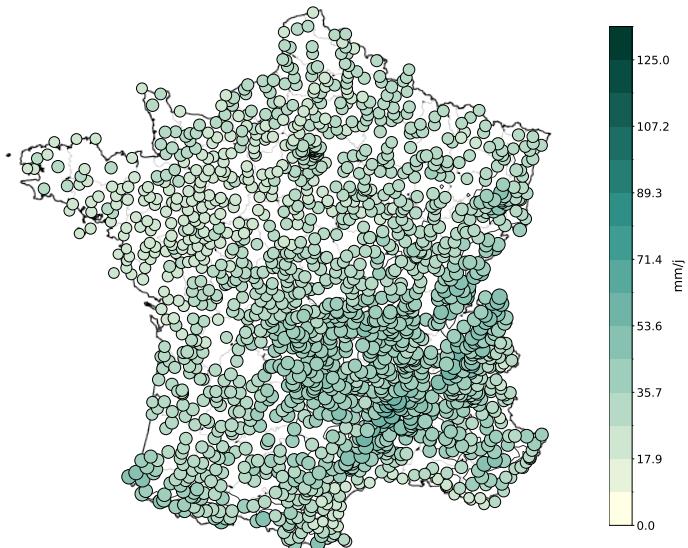
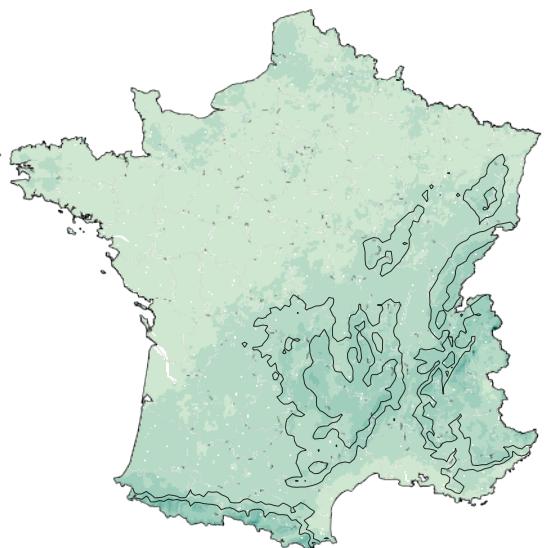
**DJF**  
 $r = 0.96$   
ME = 0.01  
 $n = 1603$



**MAM**  
 $r = 0.95$   
ME = -0.02  
 $n = 1650$

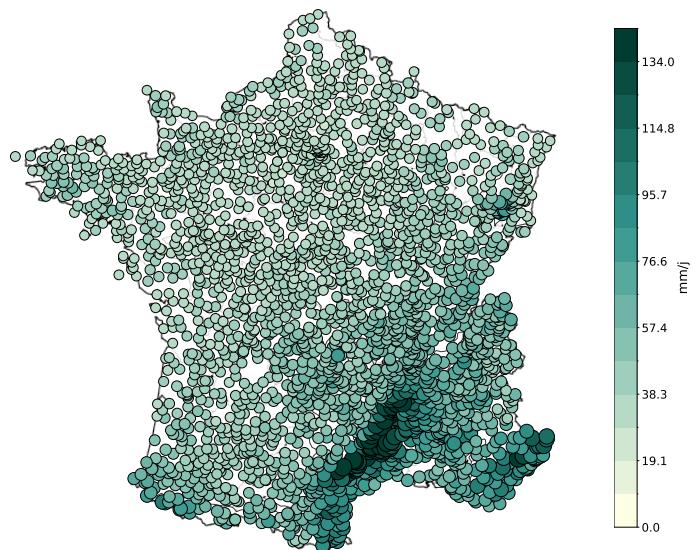
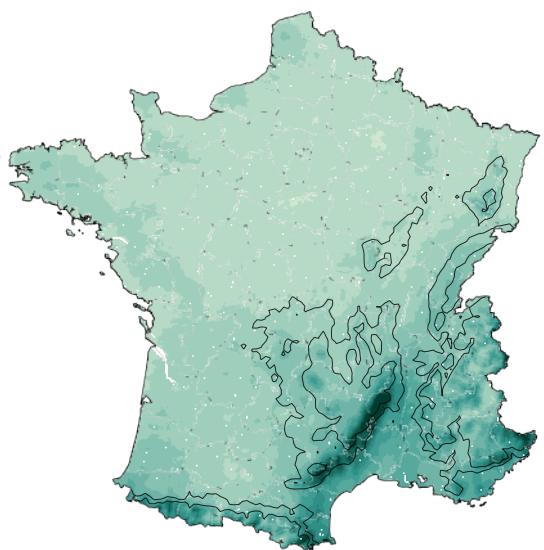


**JJA**  
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ME = -3.05  
 $n = 1640$

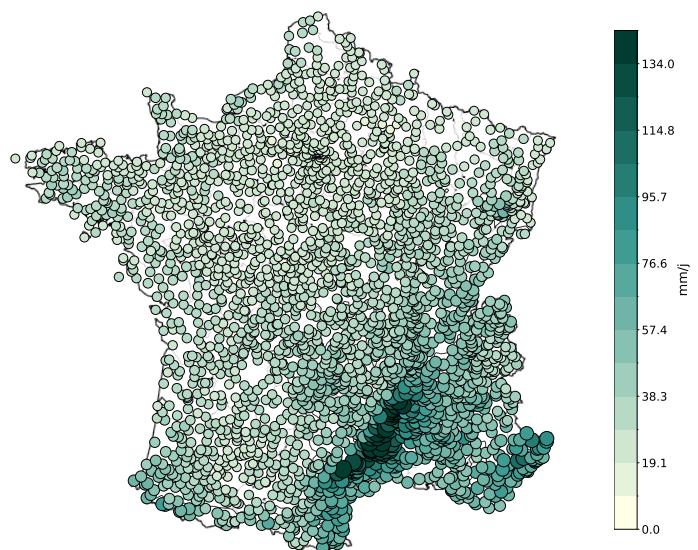
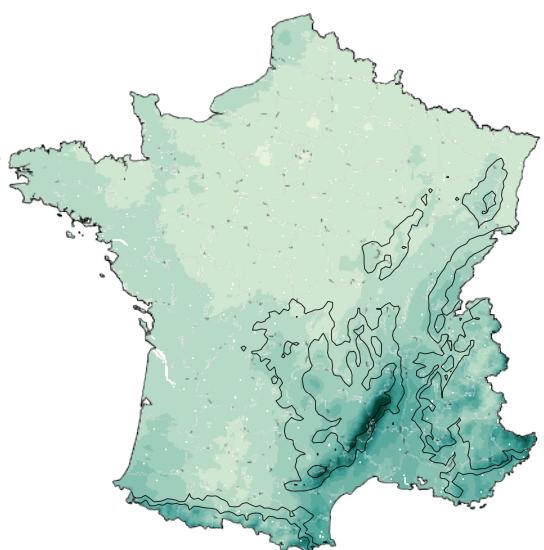


### 3.2 Données journalières (1990-2022)

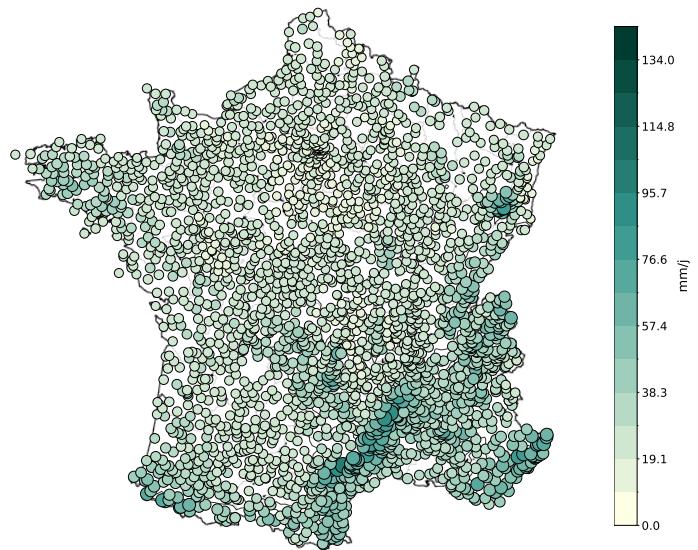
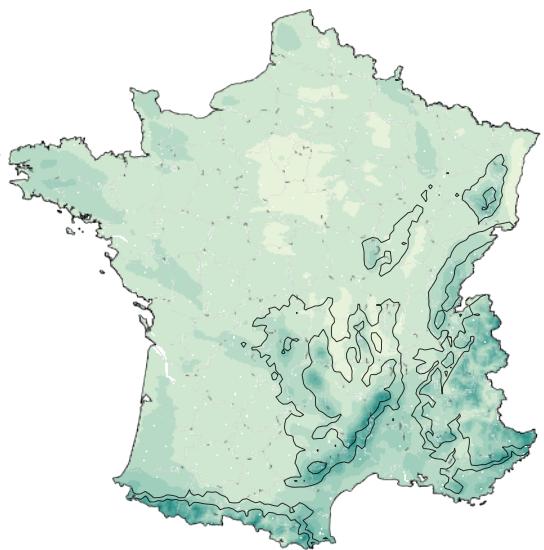
**HYDRO**  
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ME = -2.54  
 $n = 2613$



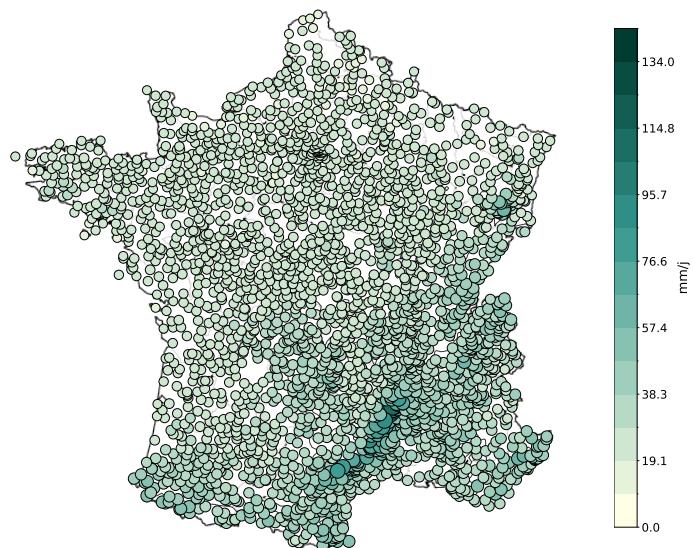
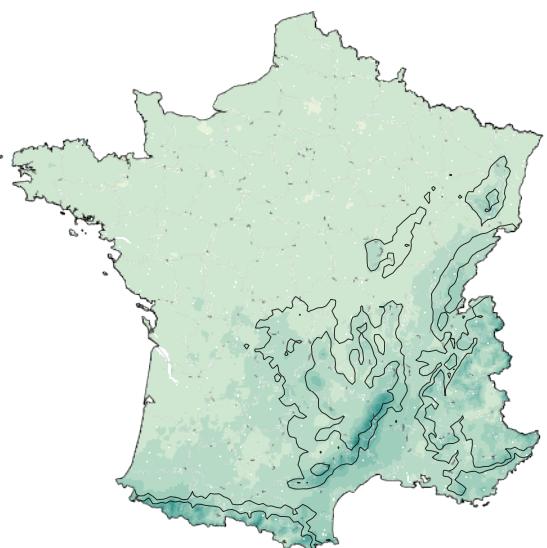
**SON**  
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ME = -1.21  
 $n = 2719$



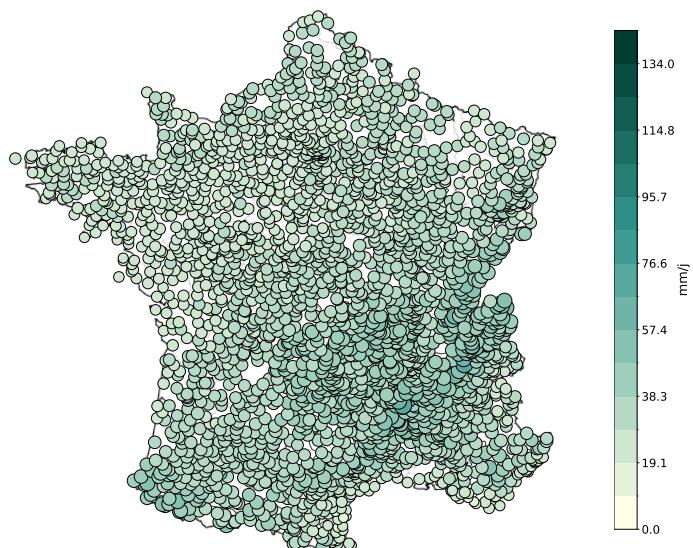
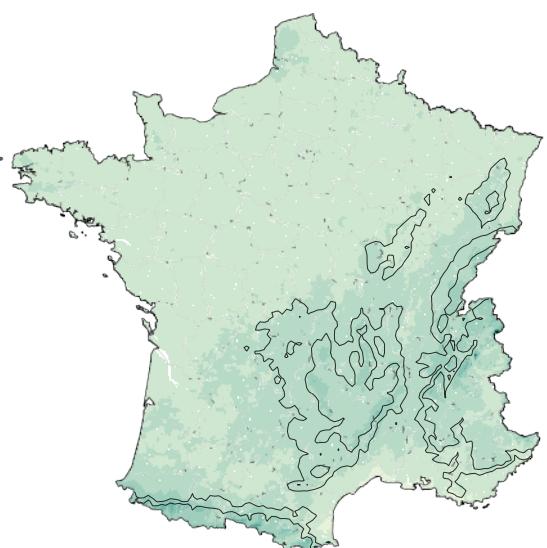
**DJF**  
 $r = 0.94$   
ME = -0.25  
 $n = 2663$



**MAM**  
 $r = 0.94$   
ME = -0.33  
 $n = 2729$

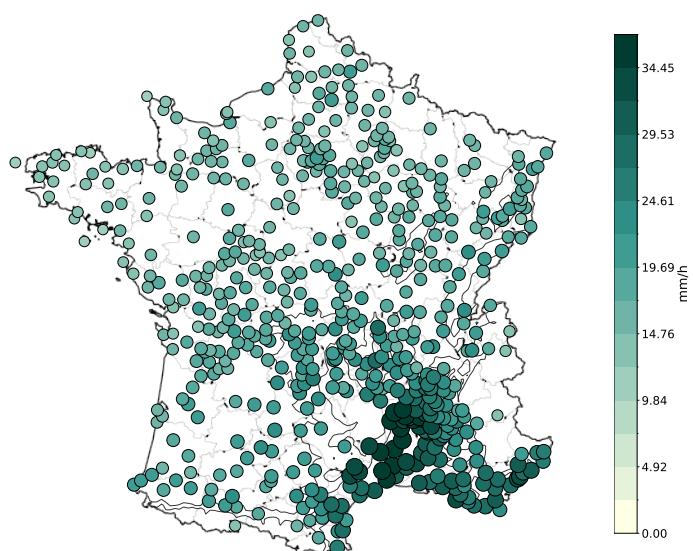
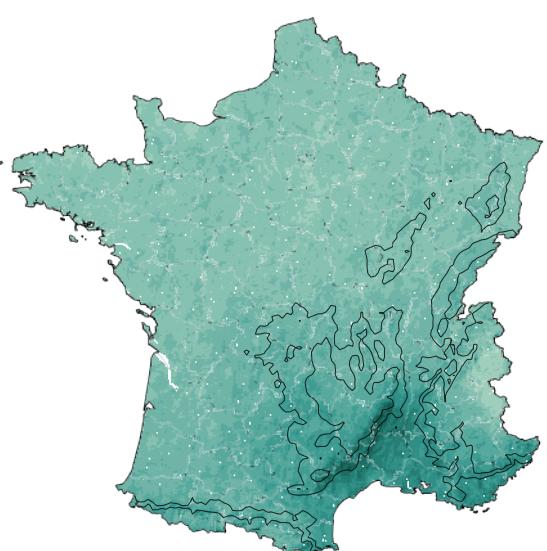


**JJA**  
 $r = 0.83$   
ME = -4.29  
 $n = 2718$

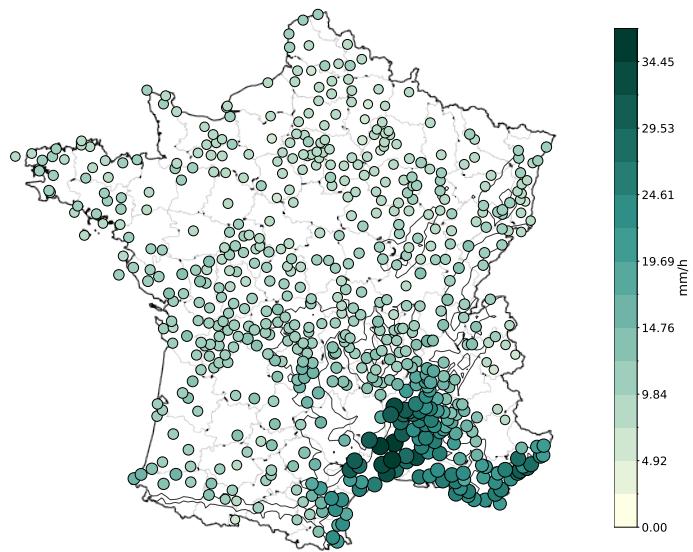
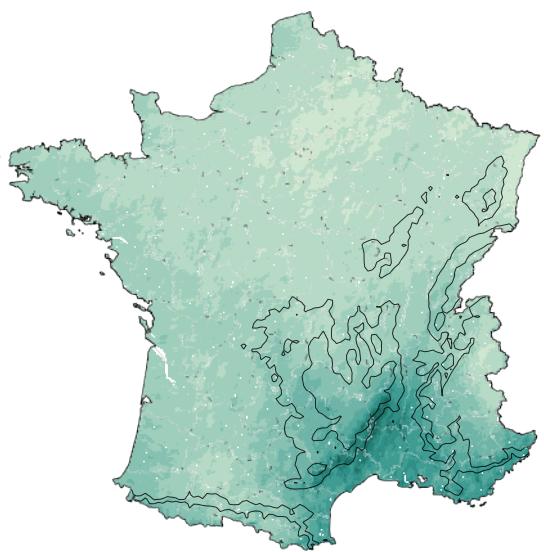


### 3.3 Données horaires (1990-2022)

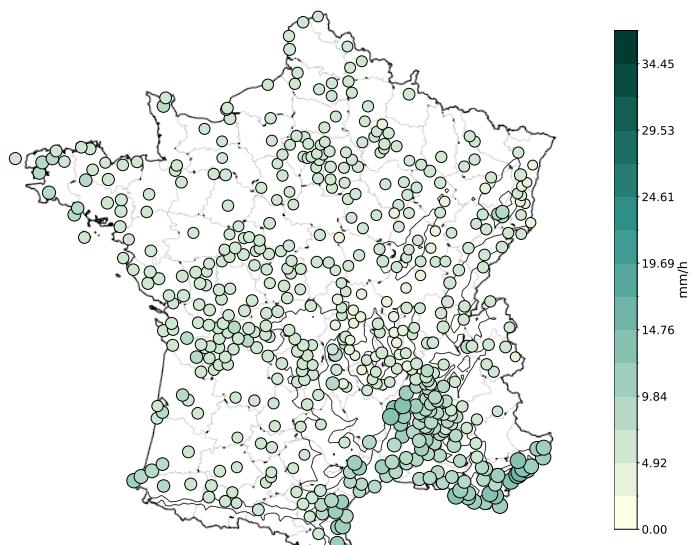
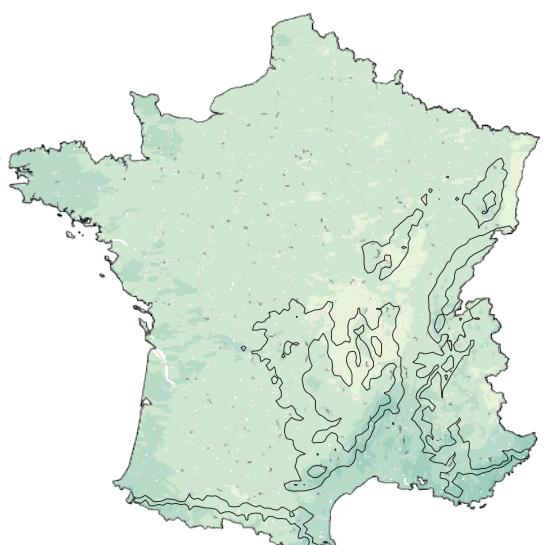
**HYDRO**  
 $r = 0.89$   
ME = -3.42  
 $n = 574$



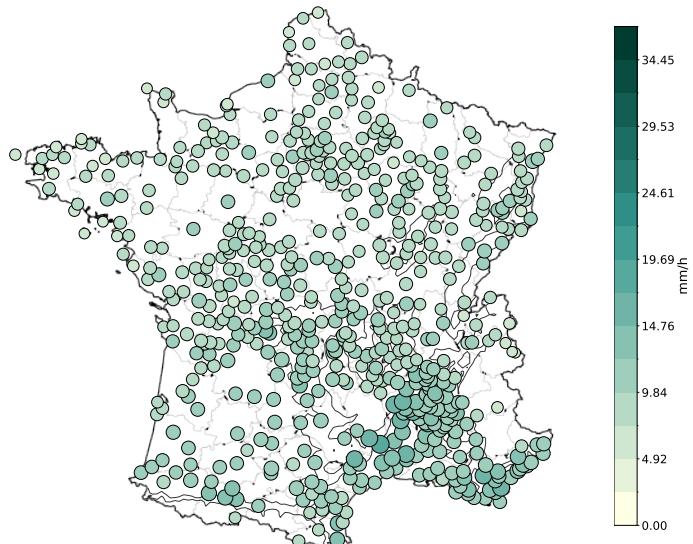
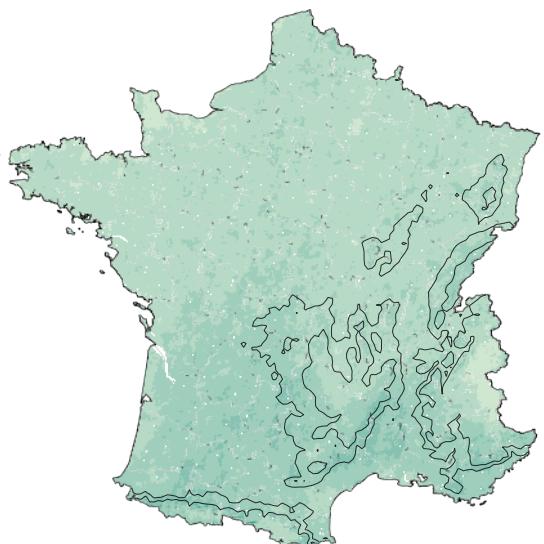
**SON**  
 $r = 0.93$   
ME = -1.18  
 $n = 609$

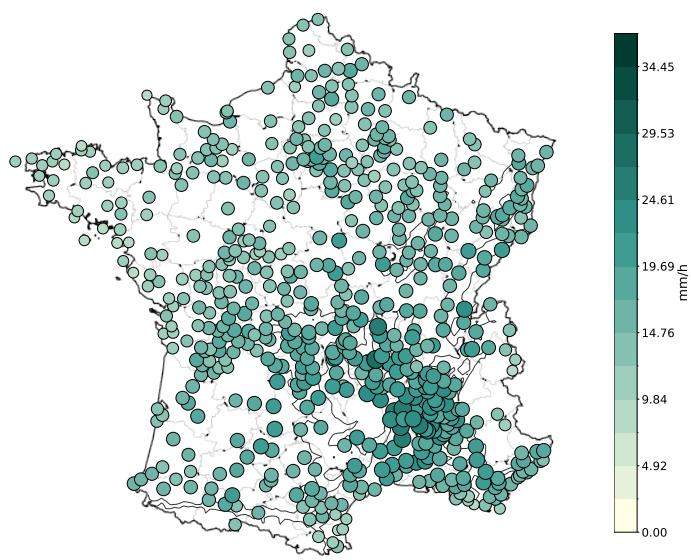
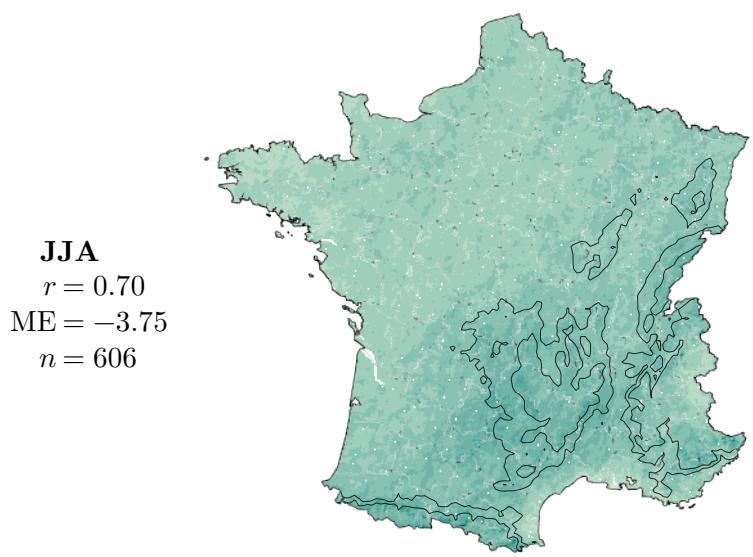


**DJF**  
 $r = 0.91$   
ME = -0.02  
 $n = 511$



**MAM**  
 $r = 0.70$   
ME = -0.13  
 $n = 589$





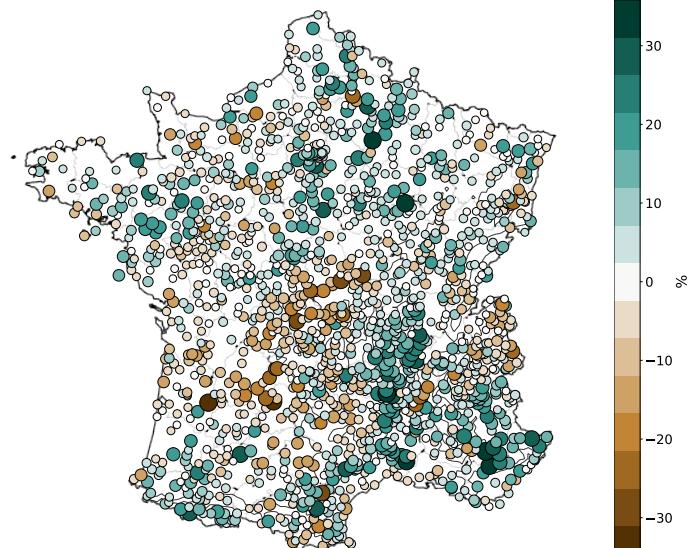
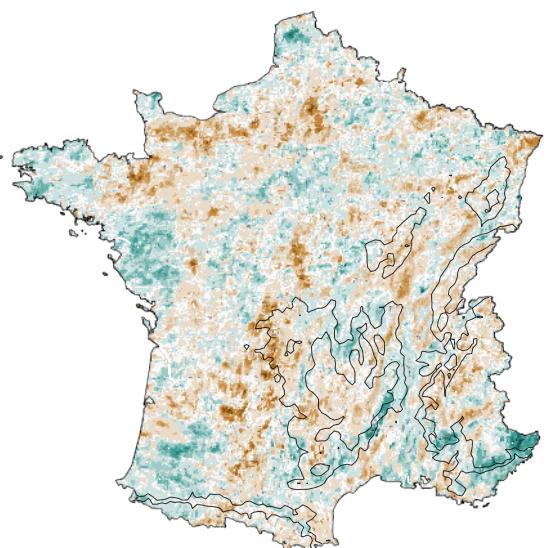
## 4 Tendances relatives du niveau de retour 10 ans estimée par le meilleur modèle

### 4.1 Données journalières (1959-2022)

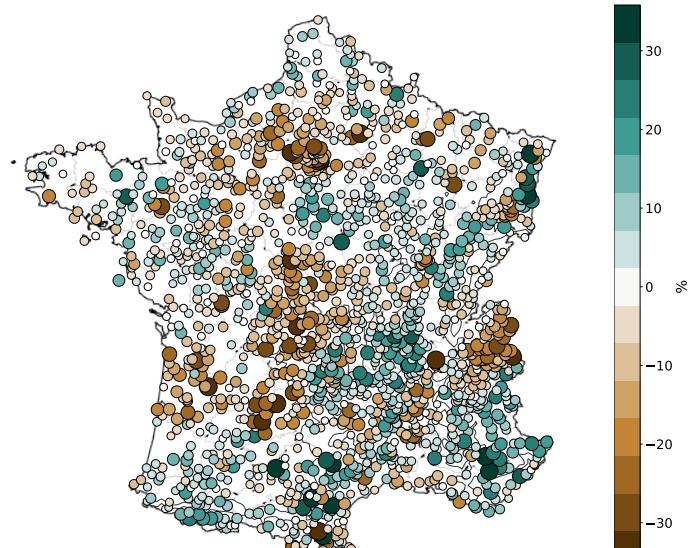
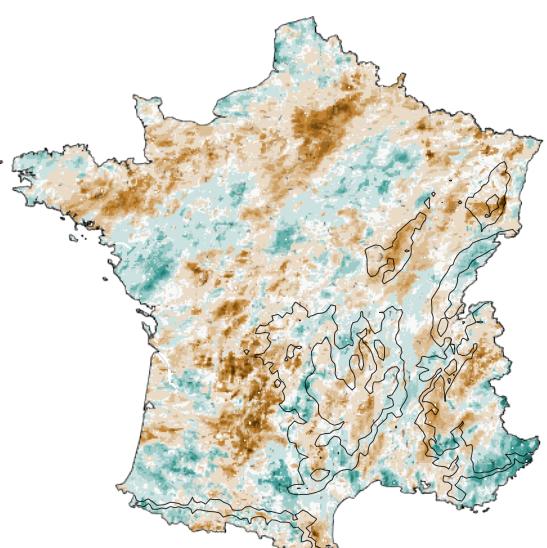
#### 4.1.1 Par saison

##### 4.1.1.1 Toutes tendances

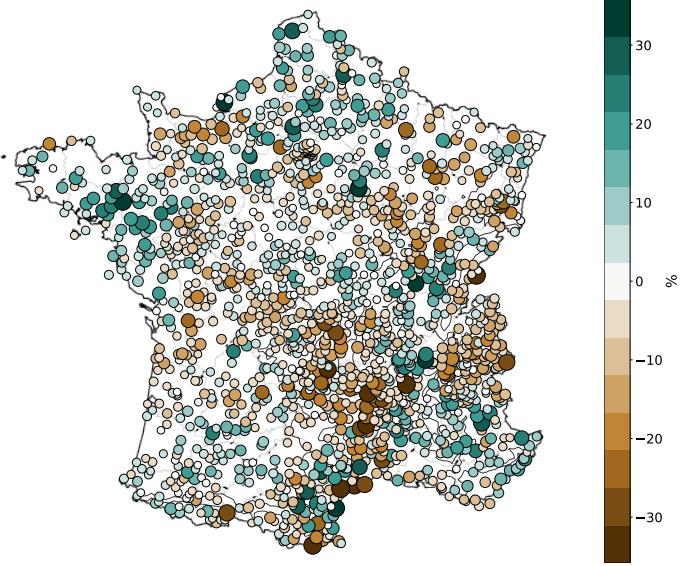
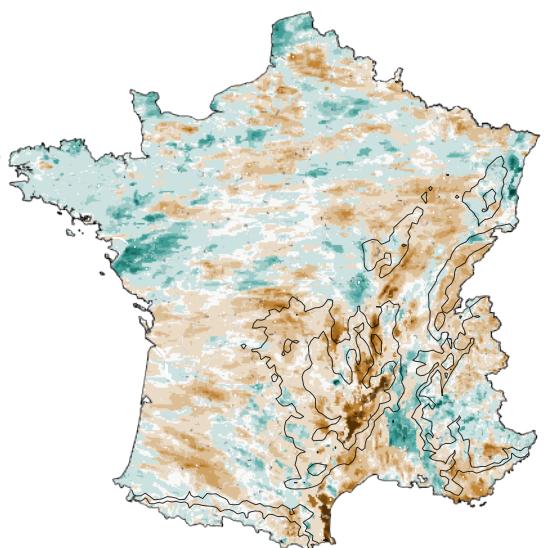
**HYDRO**  
 $r = 0.14$   
 $\text{ME} = -2.74$   
 $n = 1583$



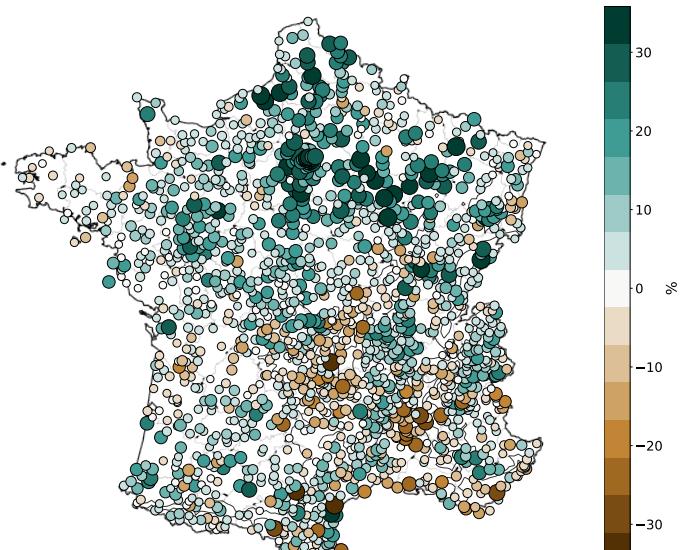
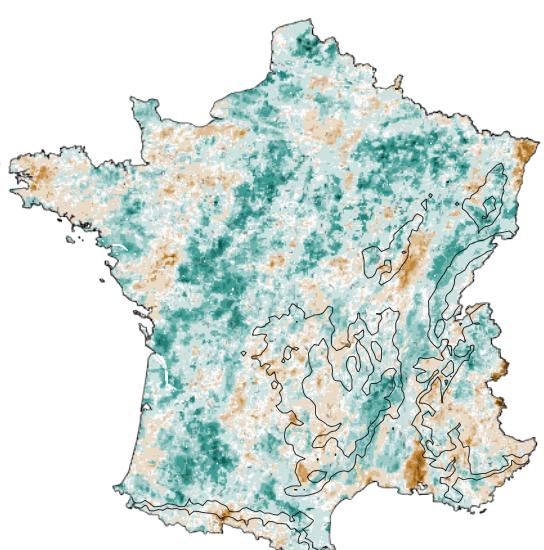
**SON**  
 $r = 0.21$   
 $\text{ME} = -1.44$   
 $n = 1664$



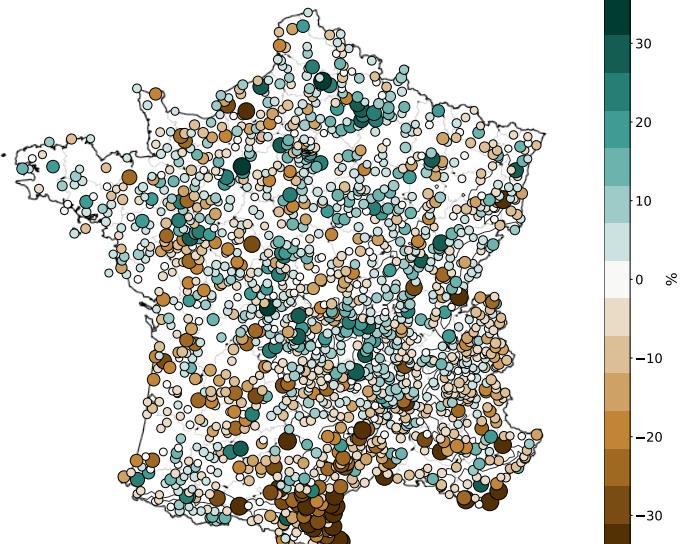
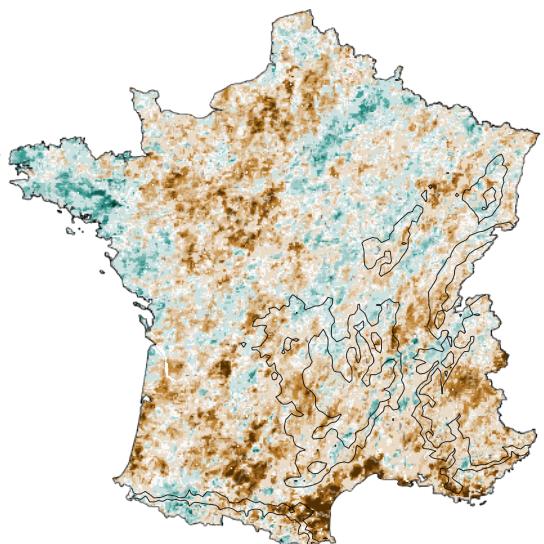
**DJF**  
 $r = 0.23$   
ME = -1.89  
 $n = 1603$



**MAM**  
 $r = 0.21$   
ME = -1.00  
 $n = 1650$

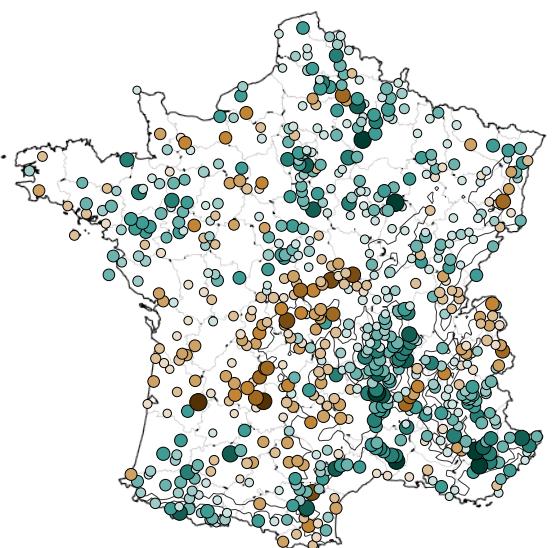
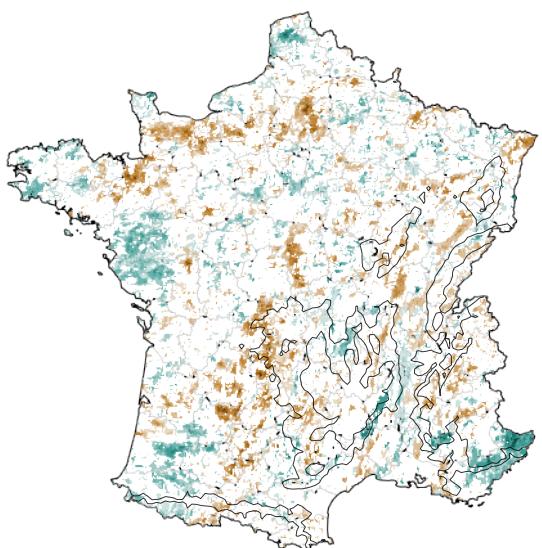


**JJA**  
 $r = 0.16$   
ME = -3.79  
 $n = 1640$

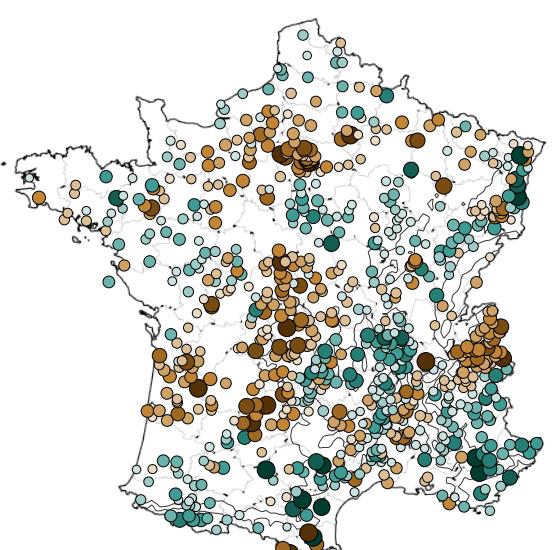
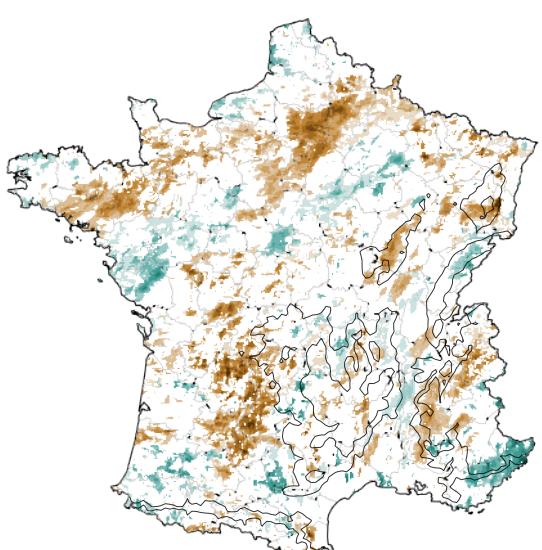


#### 4.1.1.2 Tendances significatives

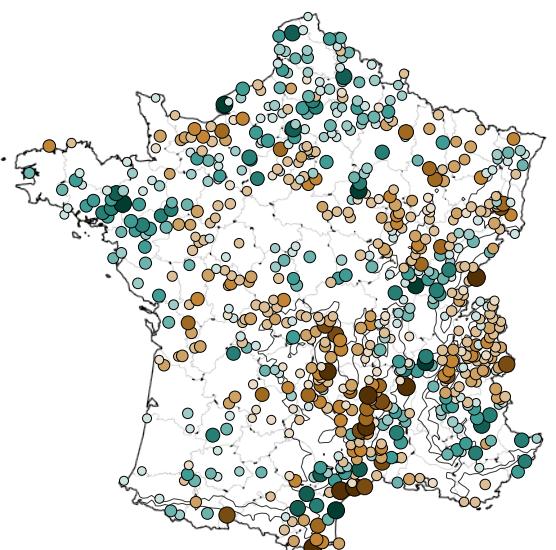
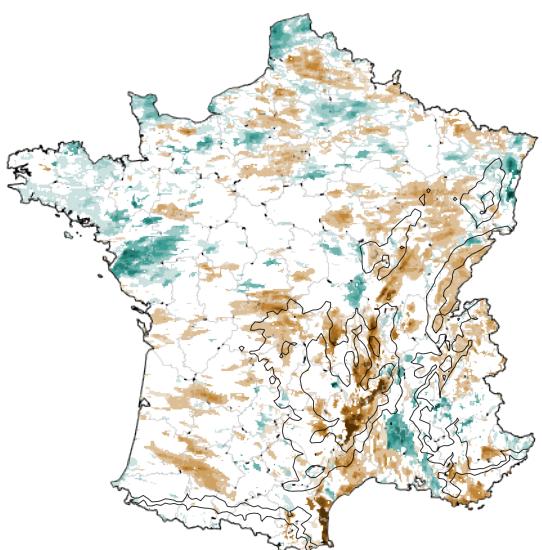
**HYDRO**  
 $r = 0.24$   
ME = -4.87  
 $n = 250$



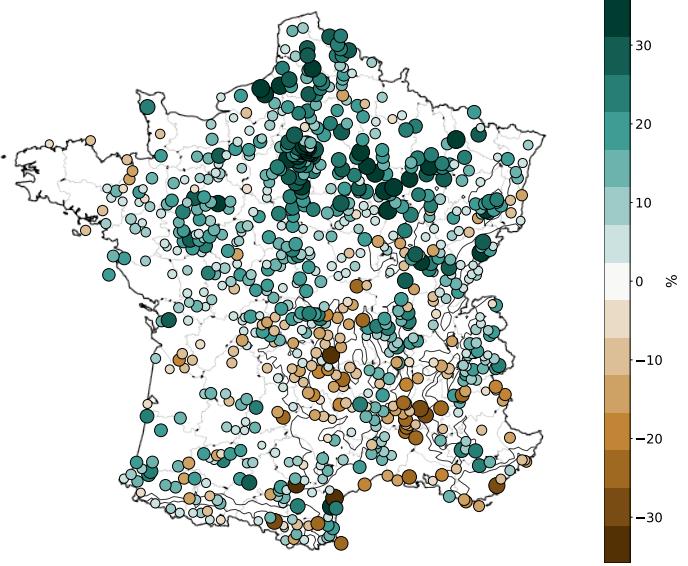
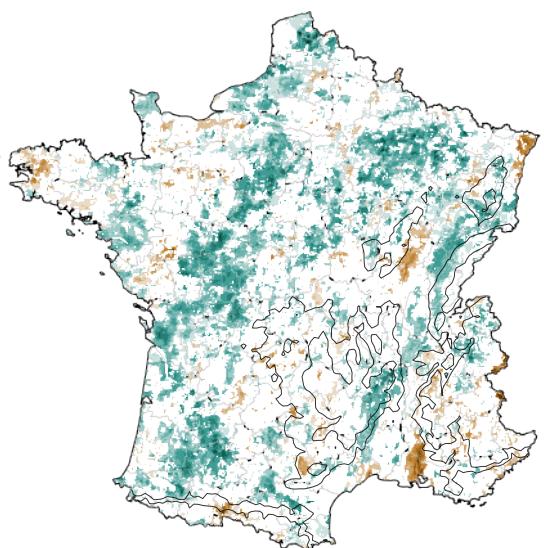
**SON**  
 $r = 0.31$   
ME = -3.01  
 $n = 305$



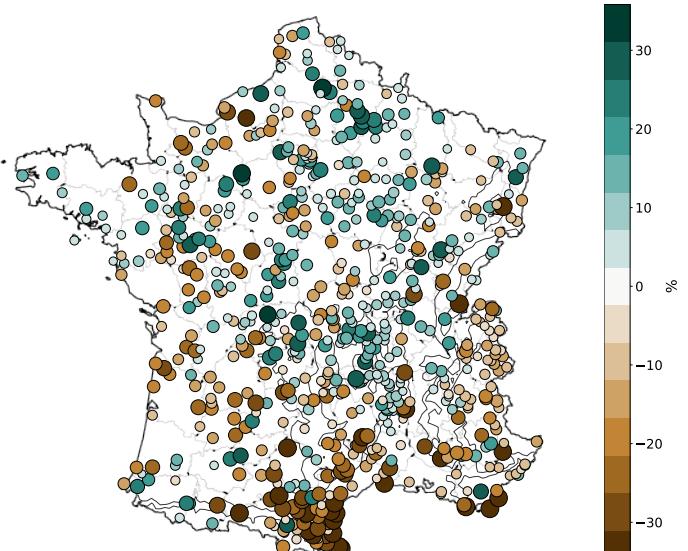
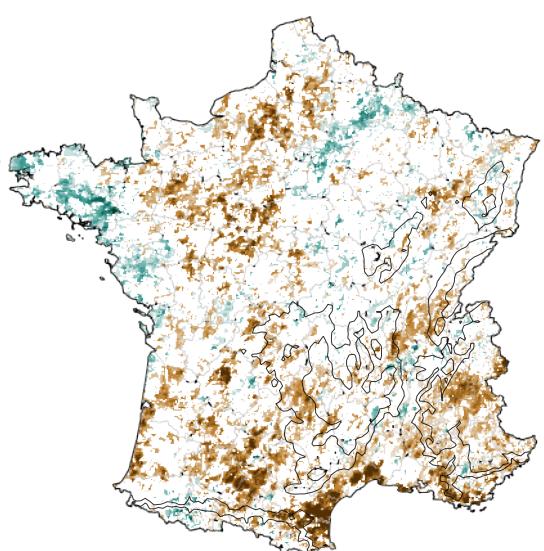
**DJF**  
 $r = 0.39$   
ME = -2.76  
 $n = 353$



**MAM**  
 $r = 0.19$   
ME = -2.42  
 $n = 344$



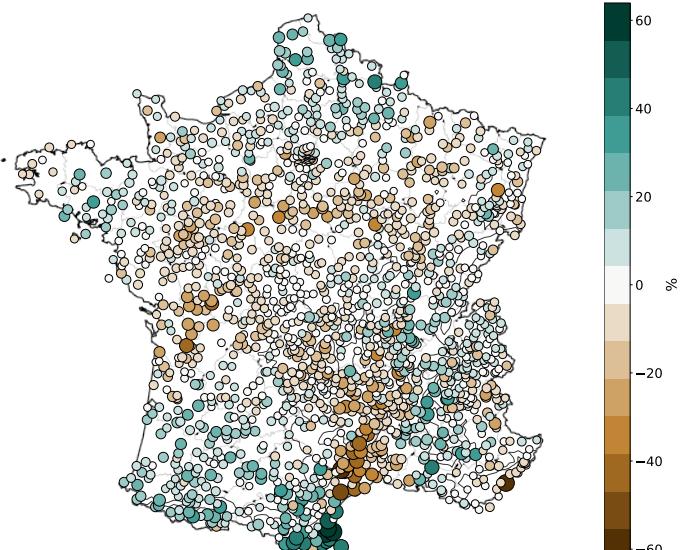
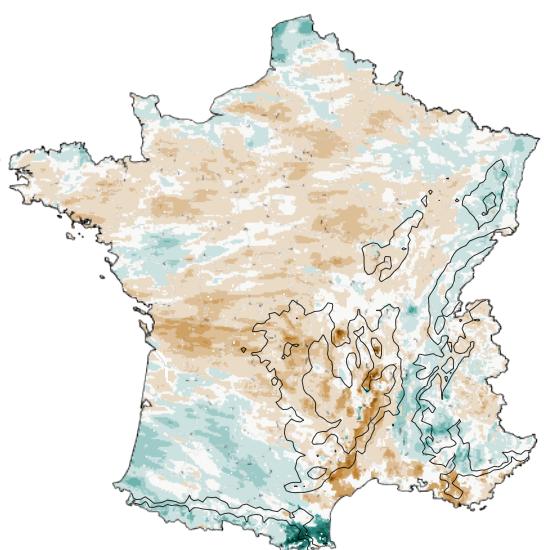
**JJA**  
 $r = 0.21$   
ME = -5.58  
 $n = 272$

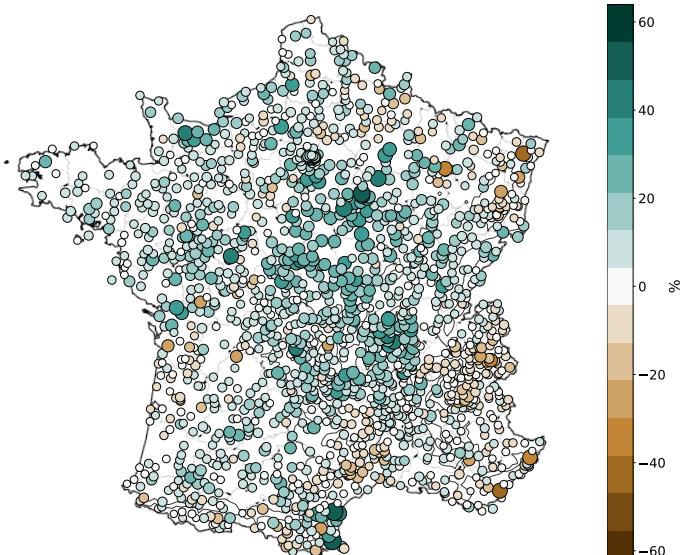
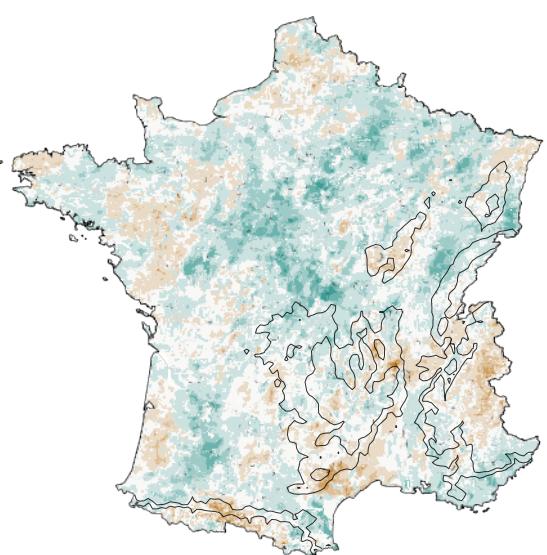
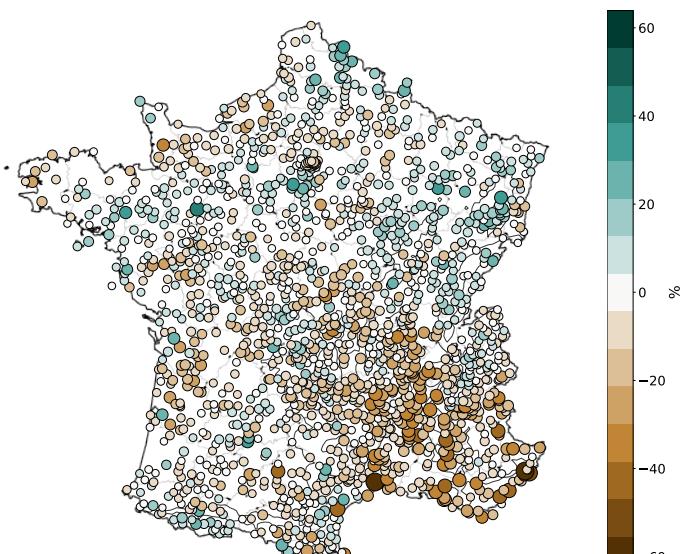
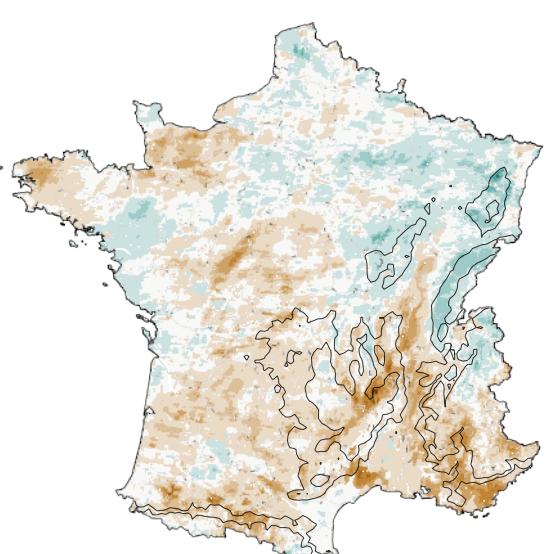
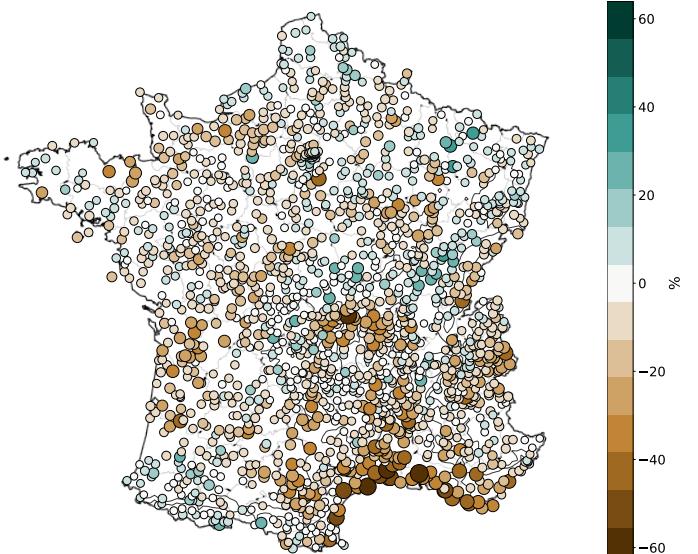
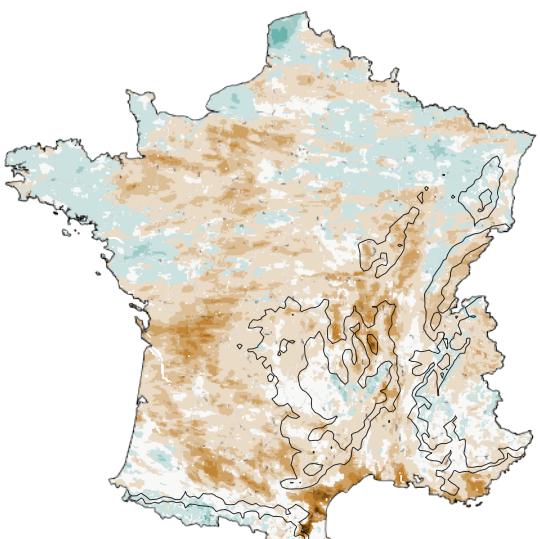


#### 4.1.2 Par mois

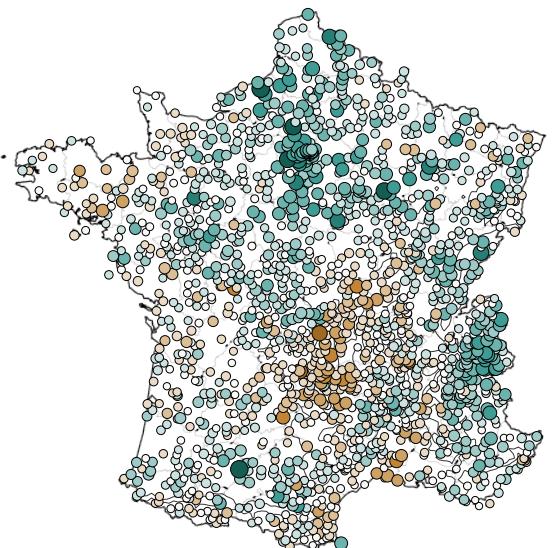
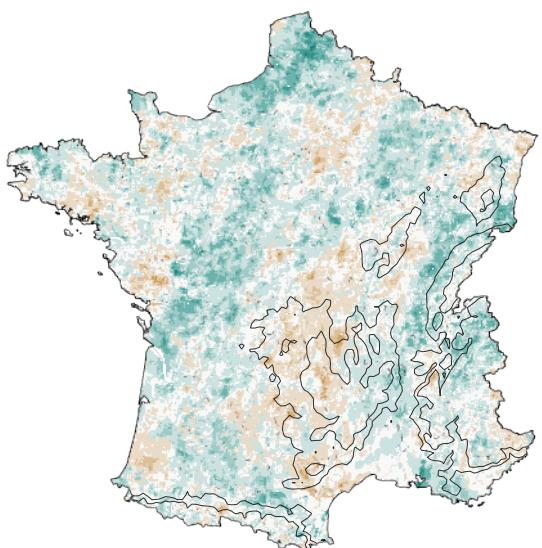
##### 4.1.2.1 Toutes tendances

**JAN**  
 $r = 0.41$   
ME = -2.75  
 $n = 1672$

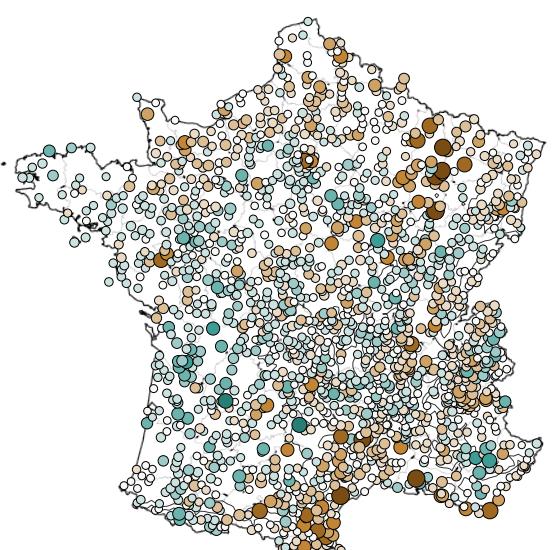
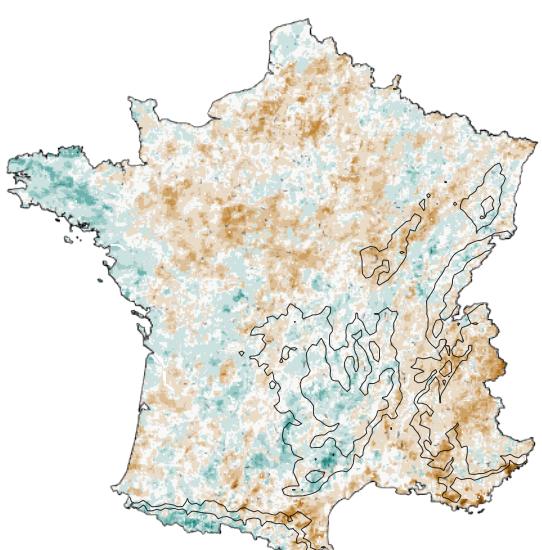




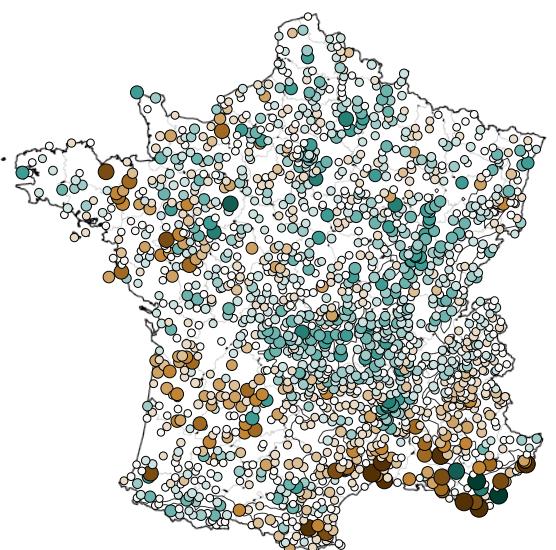
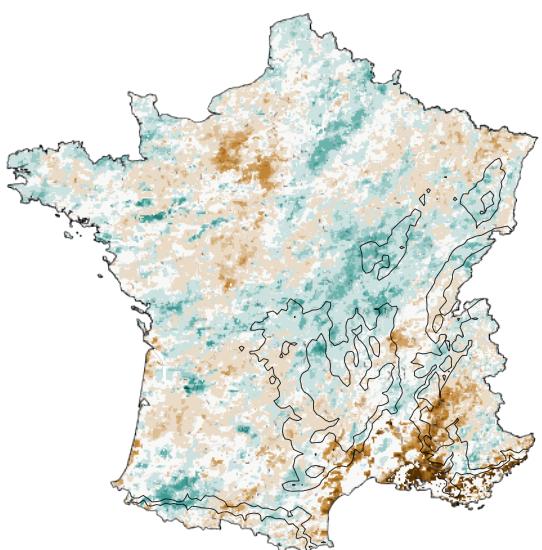
**MAI**  
 $r = 0.27$   
ME = -0.86  
 $n = 1682$



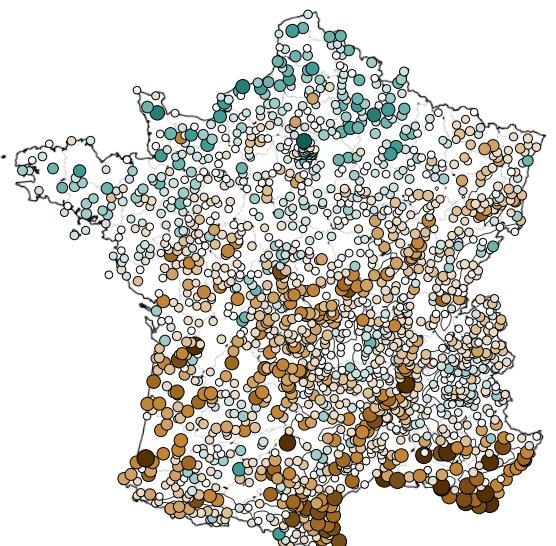
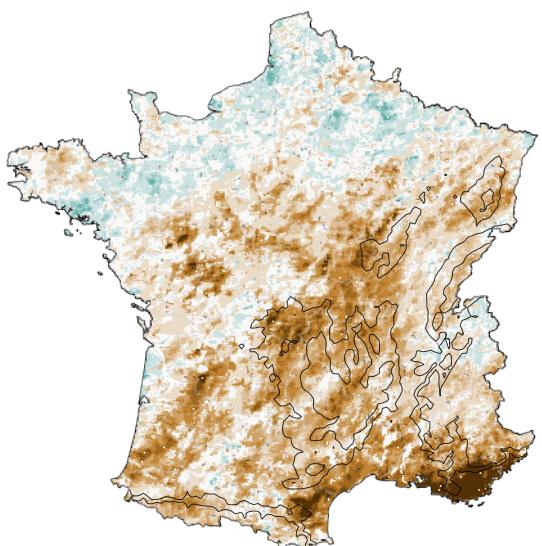
**JUI**  
 $r = 0.07$   
ME = -2.27  
 $n = 1685$



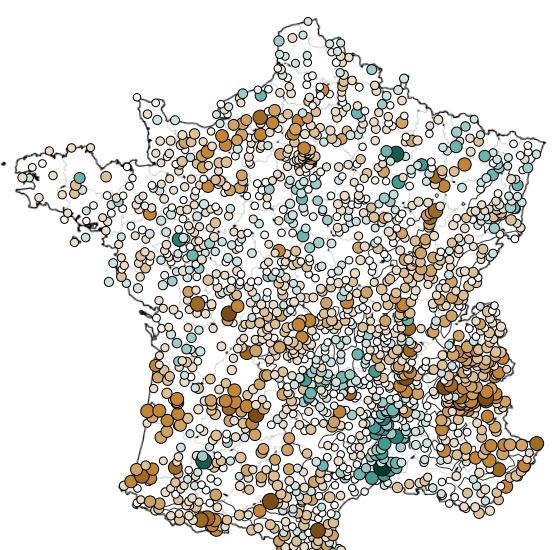
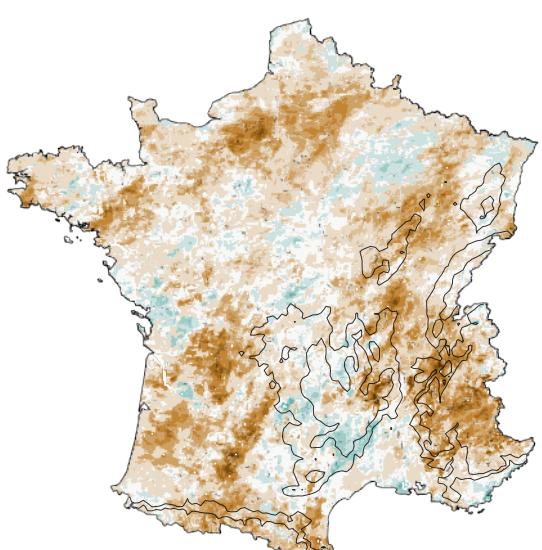
**JUILL**  
 $r = 0.25$   
ME = -1.94  
 $n = 1682$



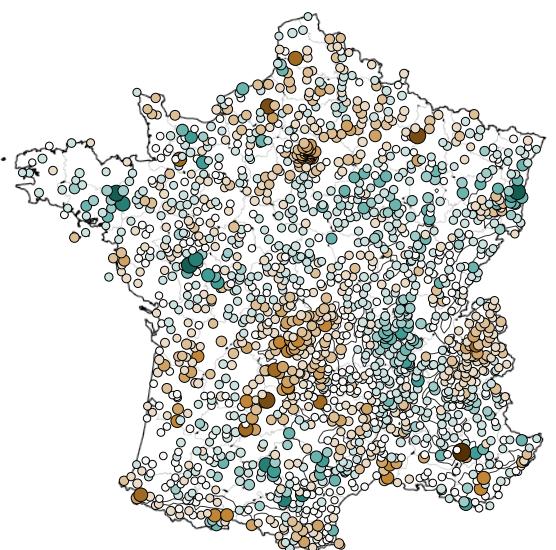
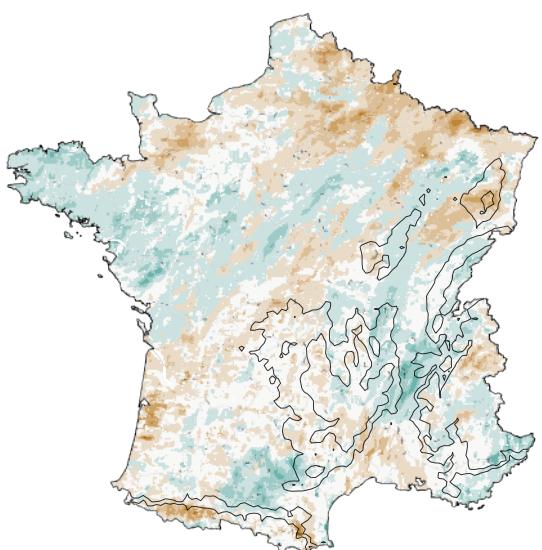
**AOU**  
 $r = 0.40$   
ME = -8.14  
 $n = 1685$



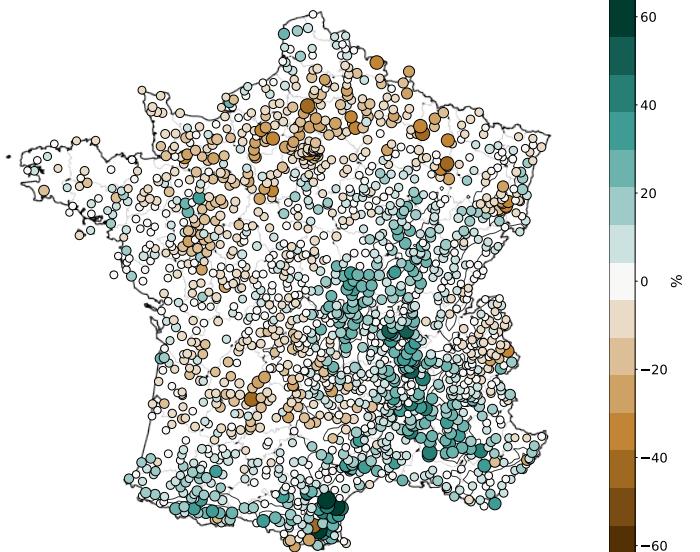
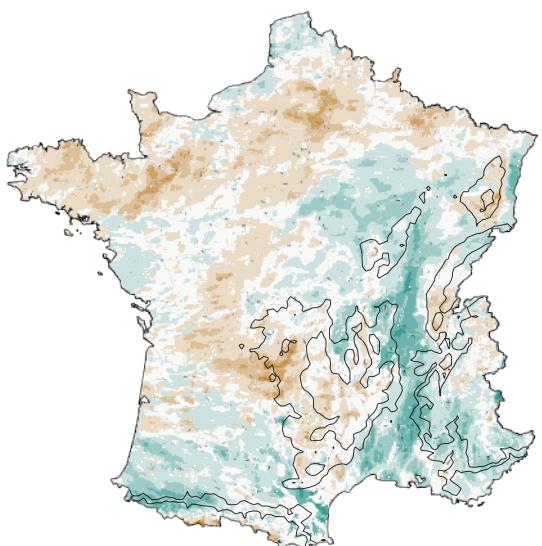
**SEP**  
 $r = 0.27$   
ME = -4.55  
 $n = 1690$



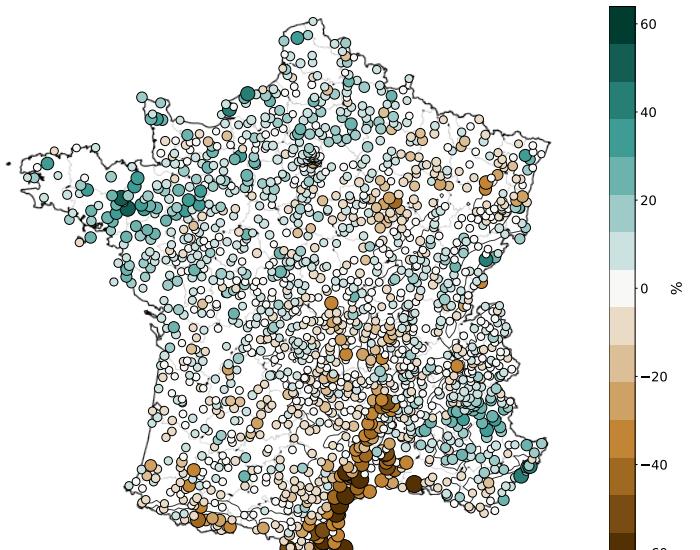
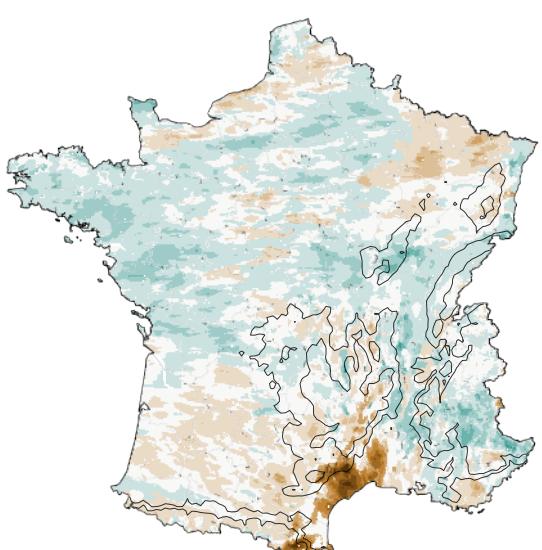
**OCT**  
 $r = 0.23$   
ME = 0.55  
 $n = 1693$



**NOV**  
 $r = 0.48$   
ME = -0.68  
 $n = 1705$

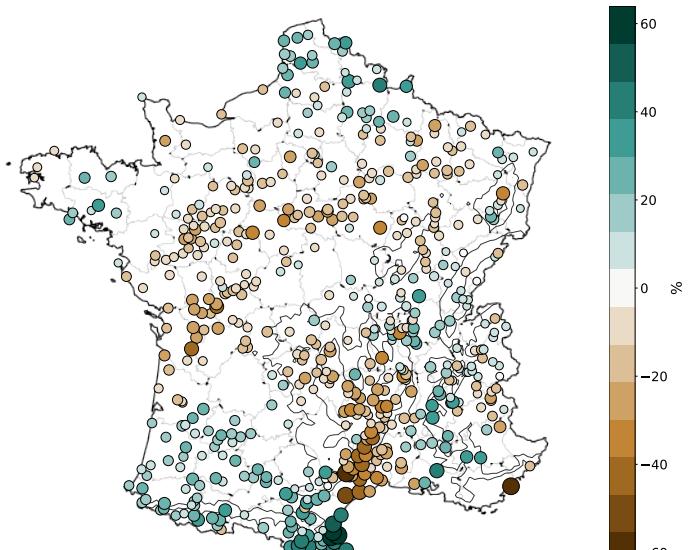
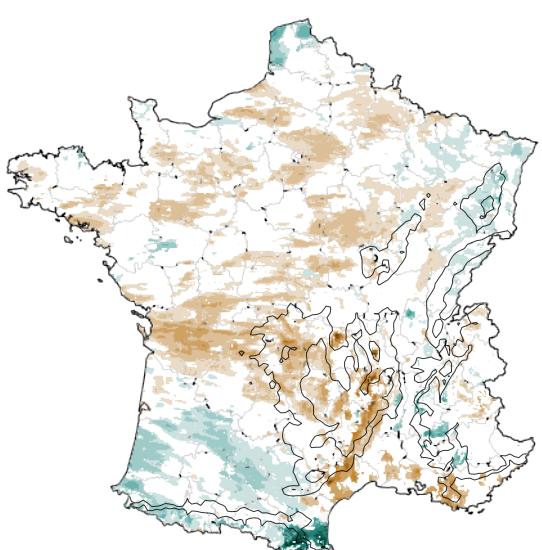


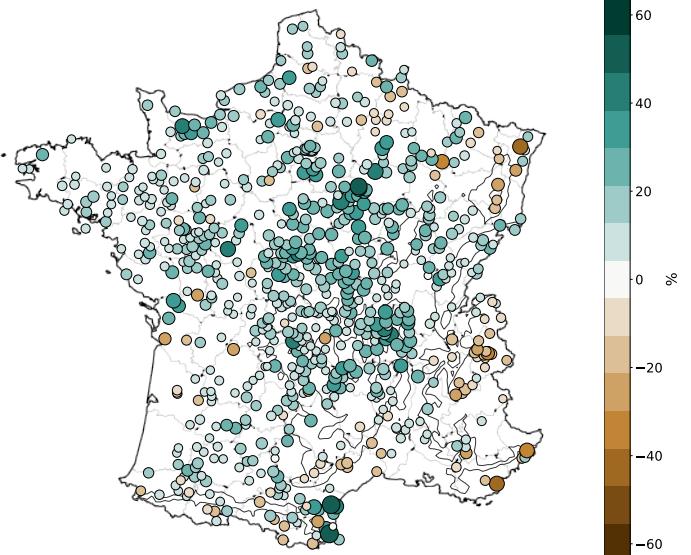
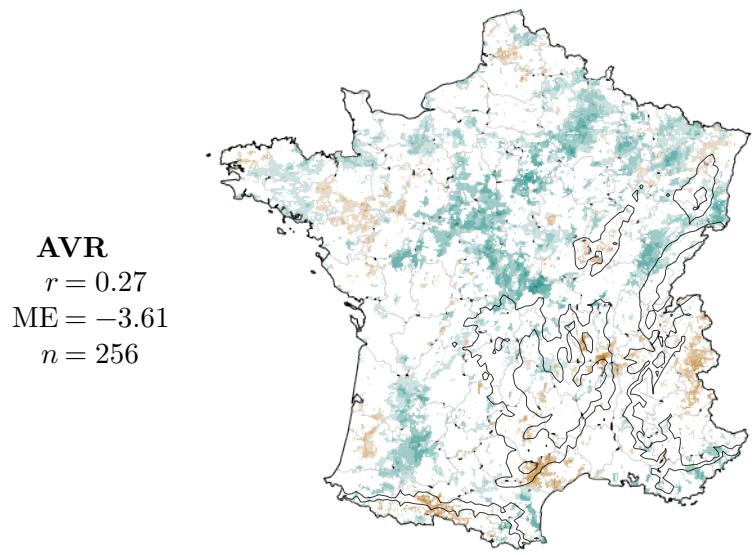
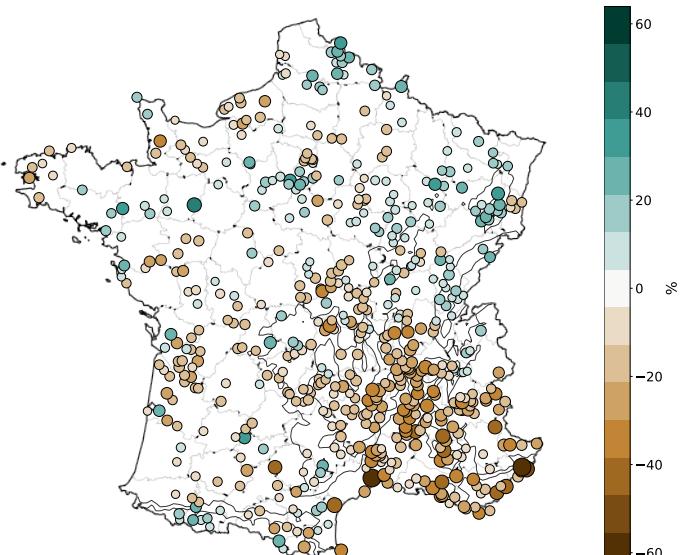
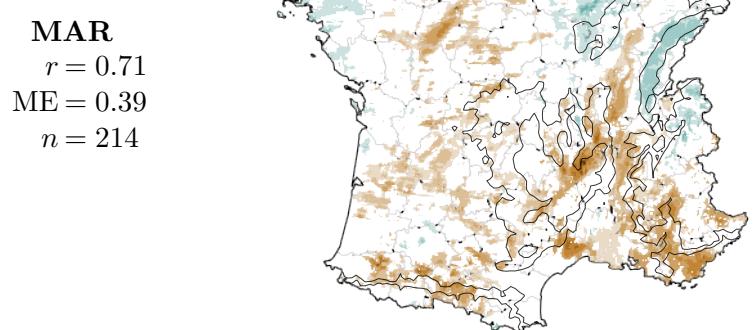
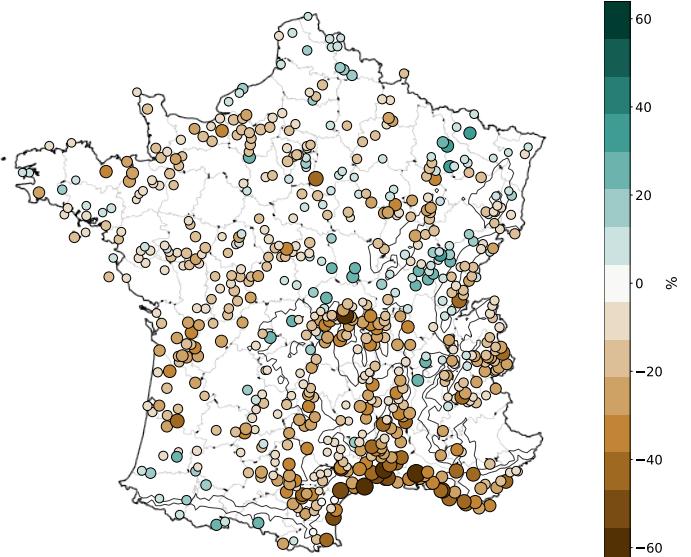
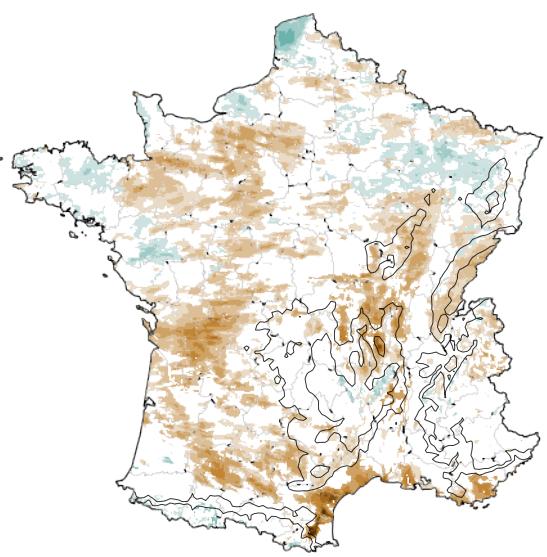
**DEC**  
 $r = 0.51$   
ME = -0.02  
 $n = 1692$



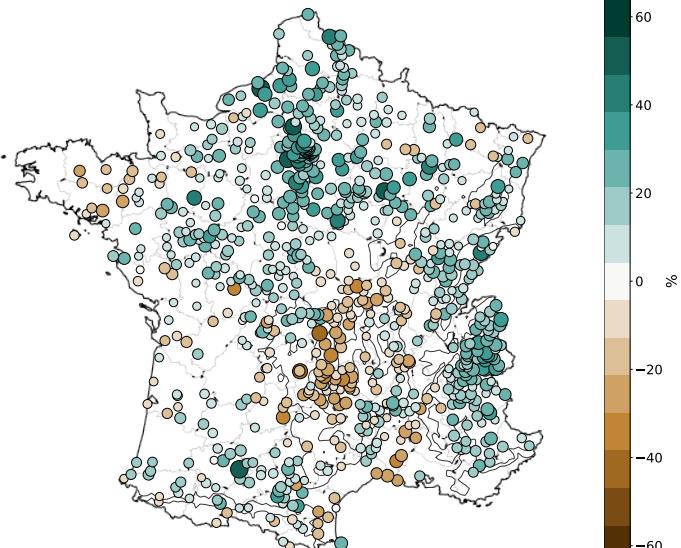
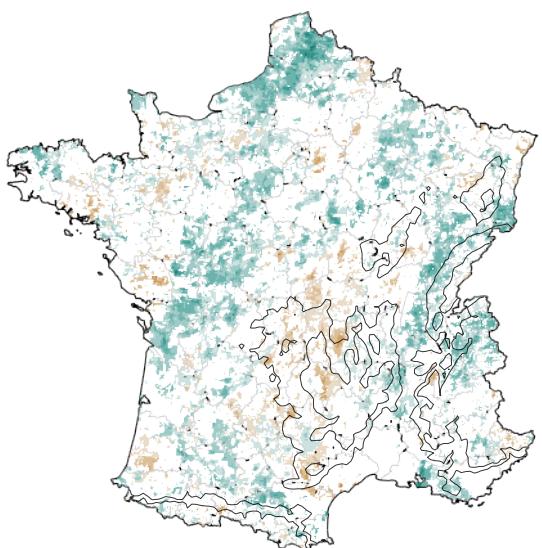
#### 4.1.2.2 Tendances significatives

**JAN**  
 $r = 0.70$   
ME = -2.68  
 $n = 271$

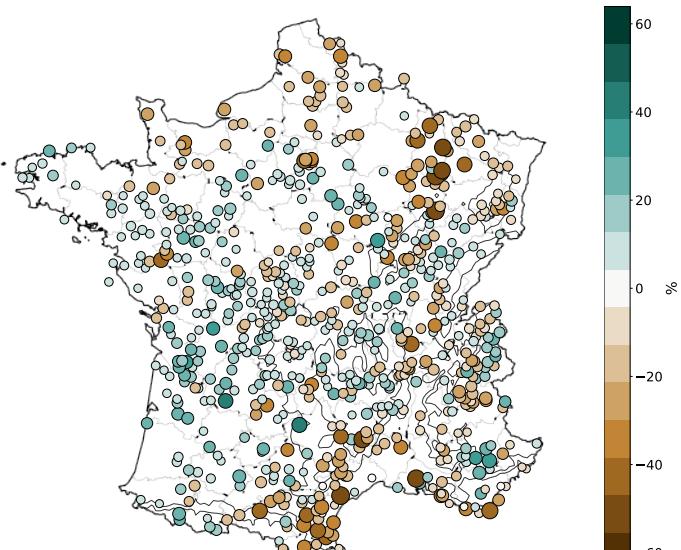
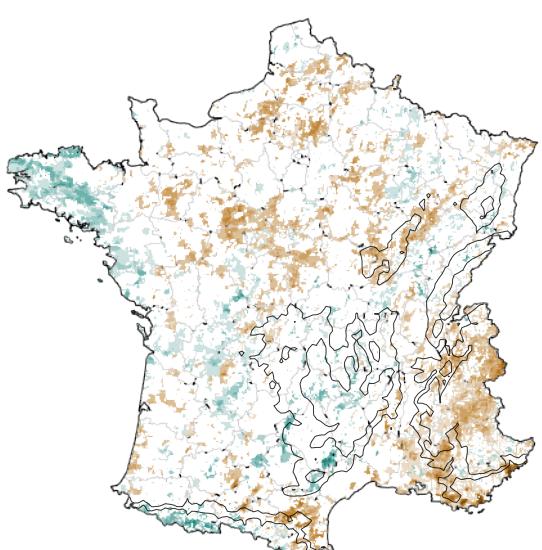




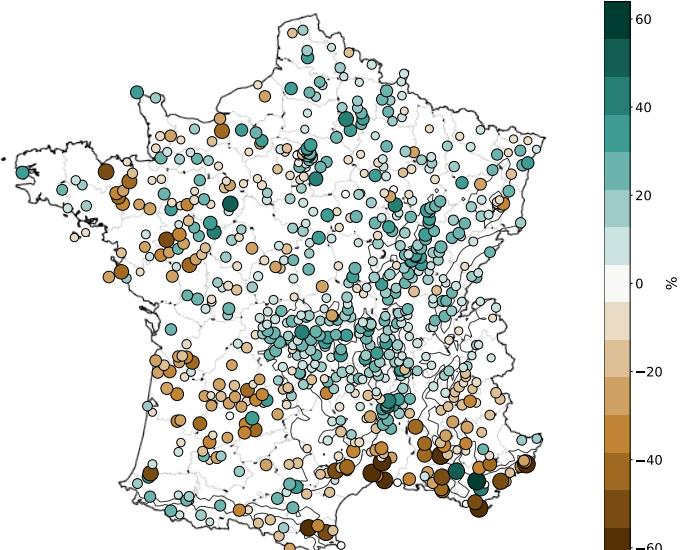
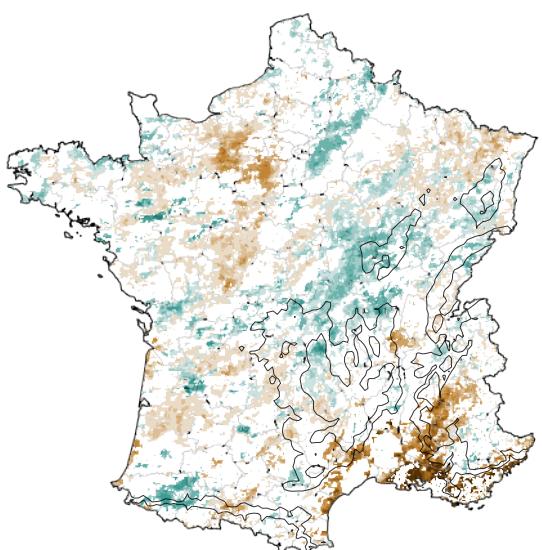
**MAI**  
 $r = 0.41$   
ME = -3.32  
 $n = 315$



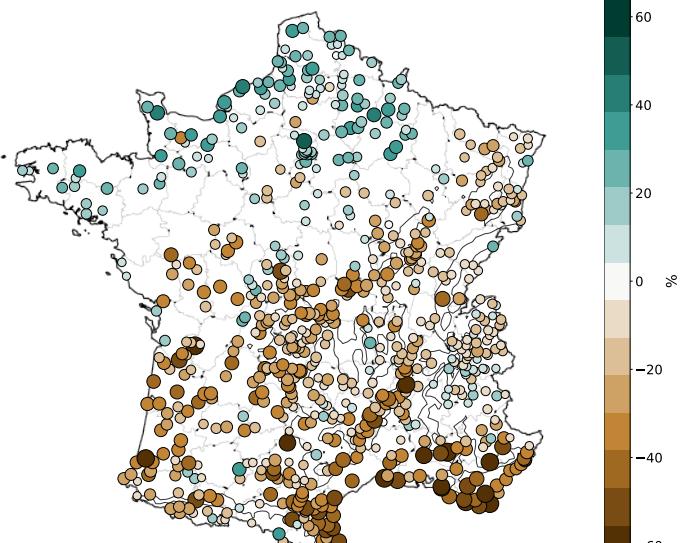
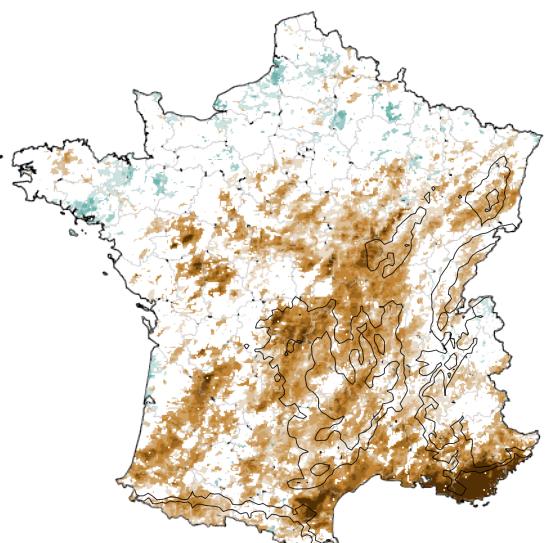
**JUI**  
 $r = 0.17$   
ME = -6.57  
 $n = 230$



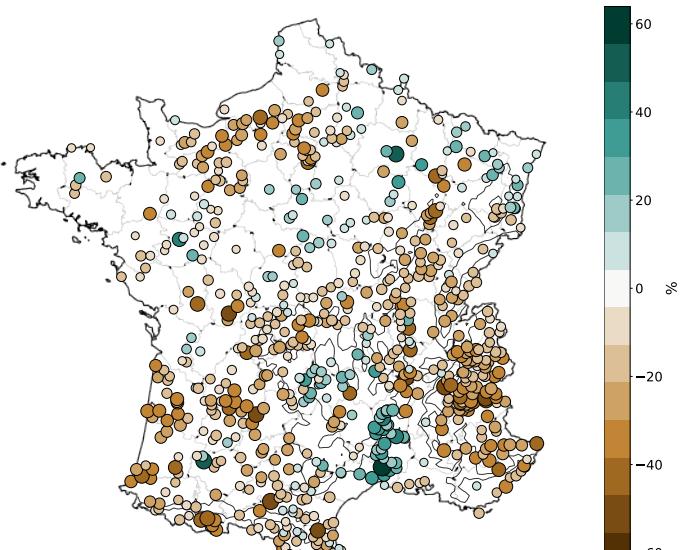
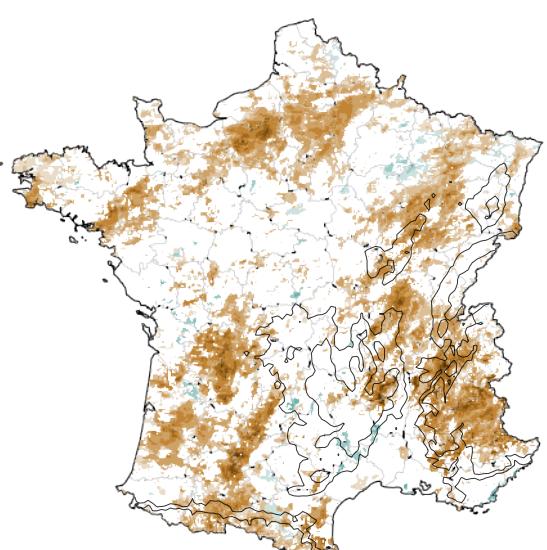
**JUILL**  
 $r = 0.41$   
ME = -3.30  
 $n = 325$



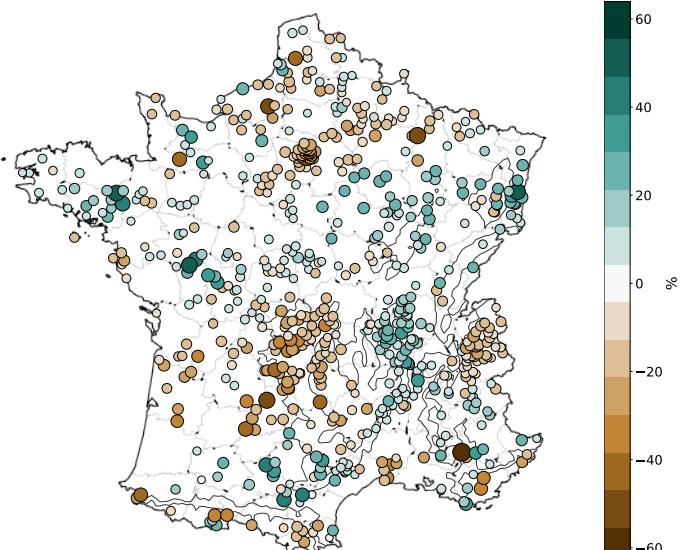
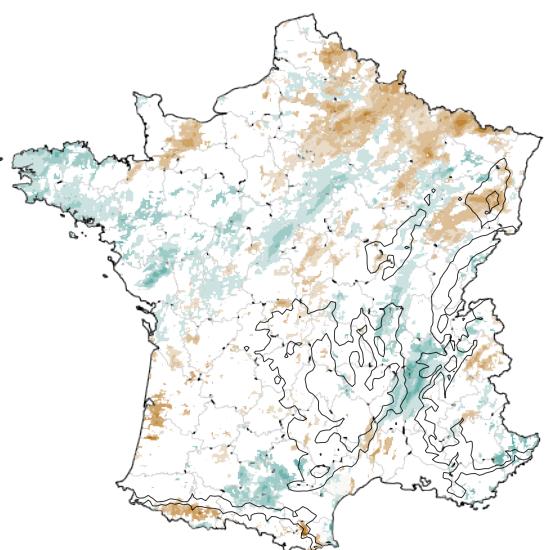
**AOU**  
 $r = 0.52$   
ME = -6.75  
 $n = 419$

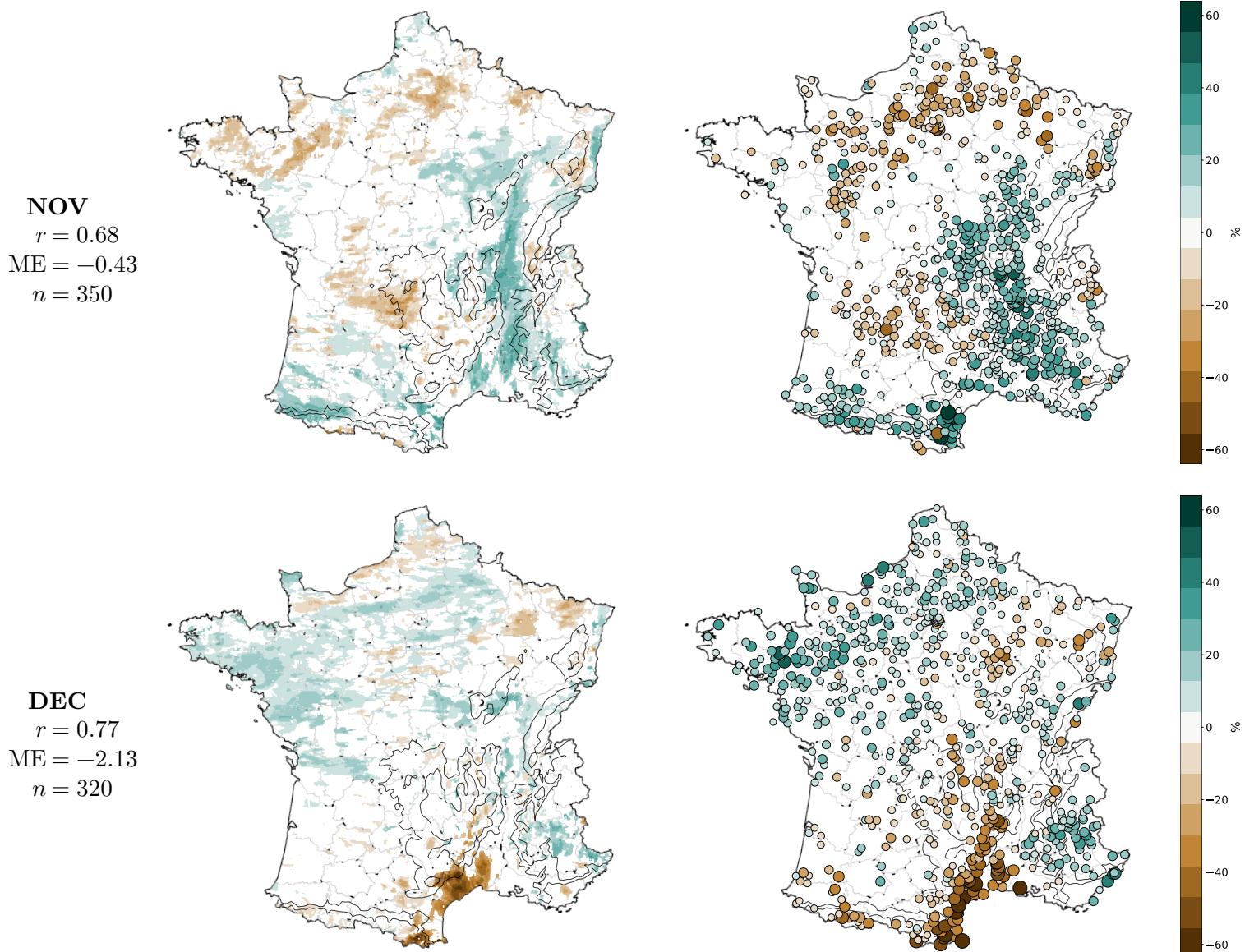


**SEP**  
 $r = 0.29$   
ME = -5.07  
 $n = 334$



**OCT**  
 $r = 0.36$   
ME = 0.03  
 $n = 243$

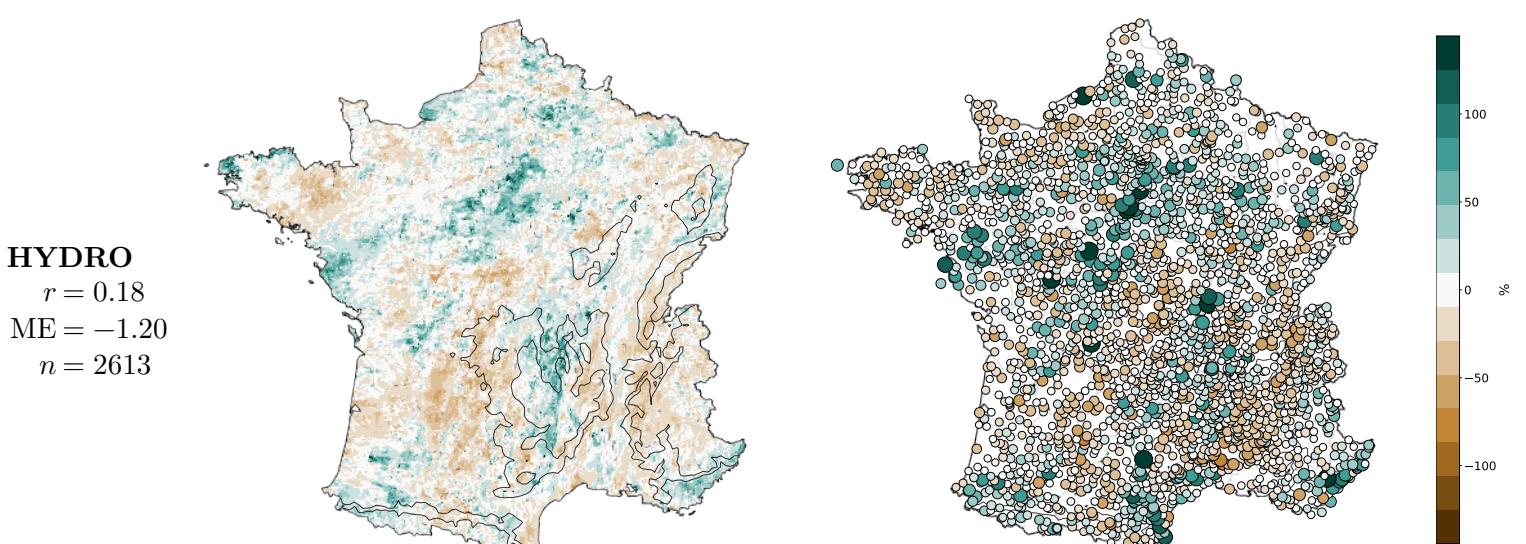




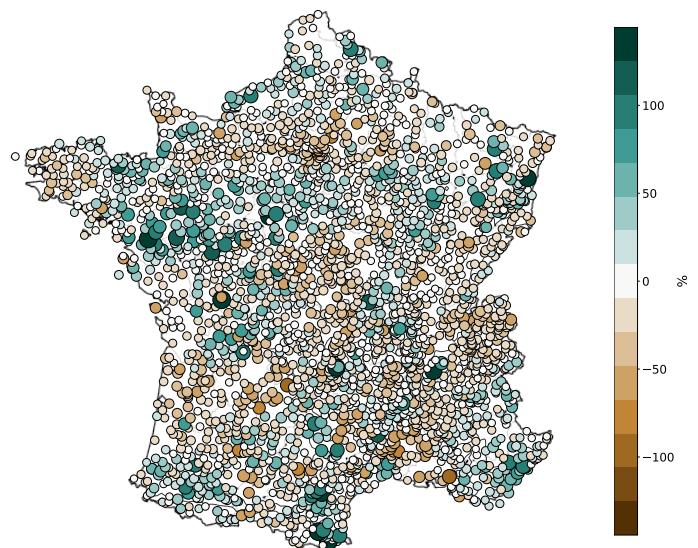
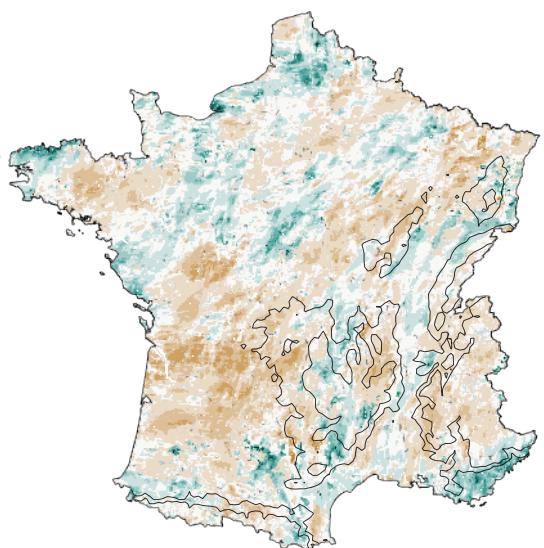
## 4.2 Données journalières (1990-2022)

### 4.2.1 Par saison

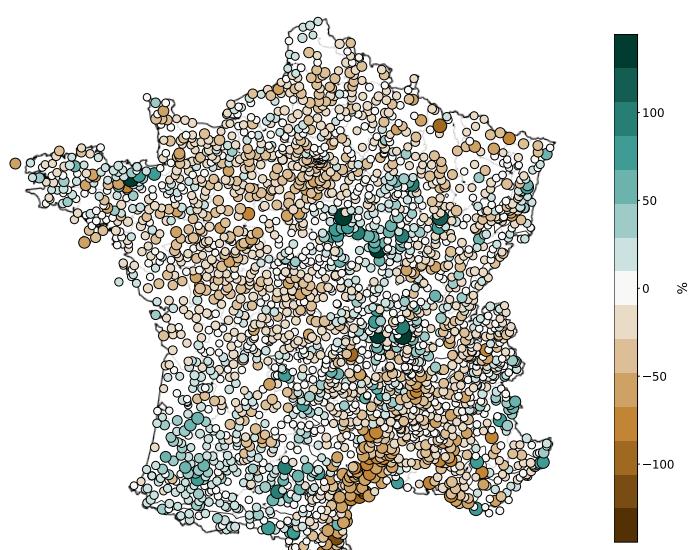
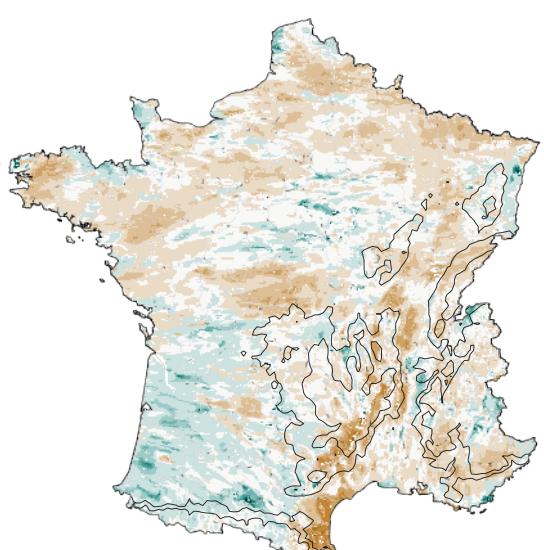
#### 4.2.1.1 Toutes tendances



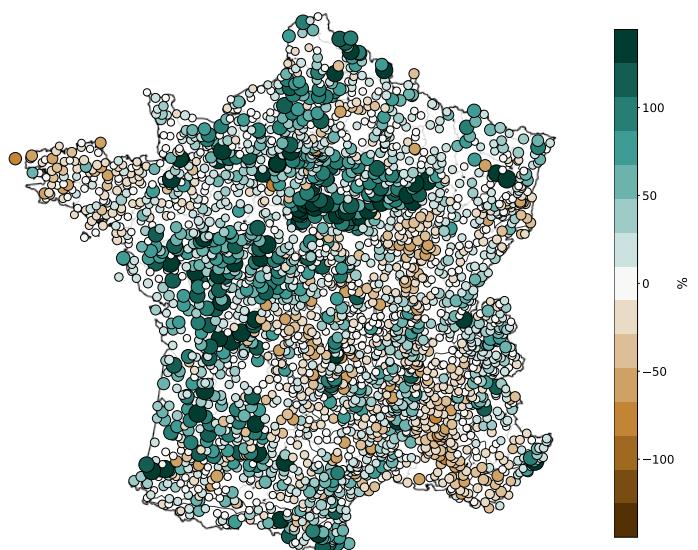
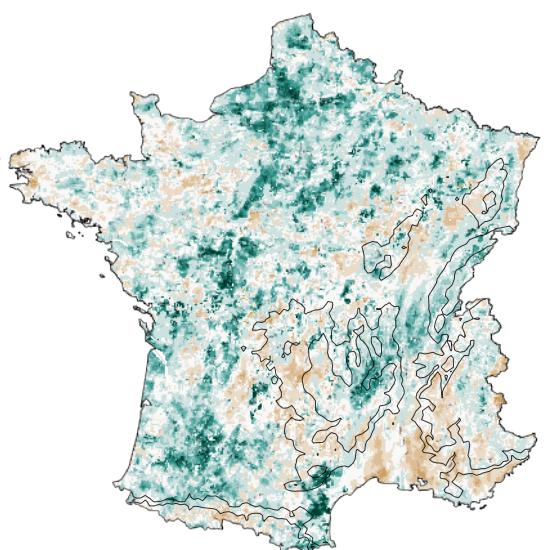
**SON**  
 $r = 0.13$   
ME = -1.93  
 $n = 2719$

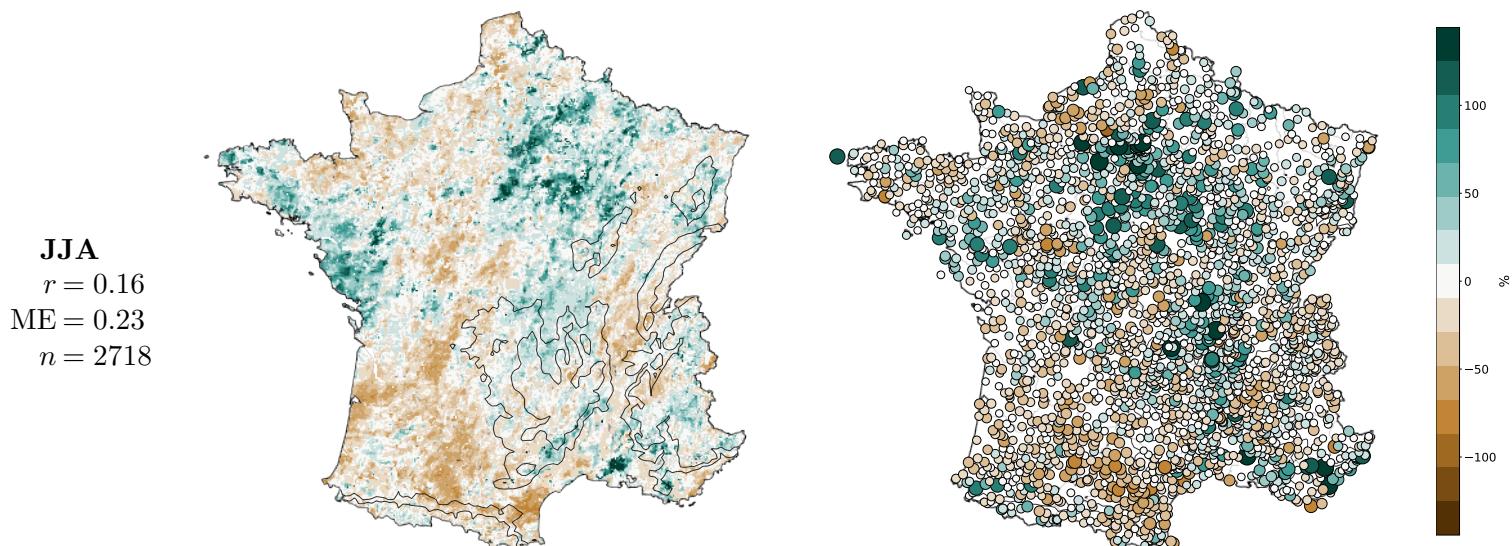


**DJF**  
 $r = 0.29$   
ME = -0.09  
 $n = 2663$

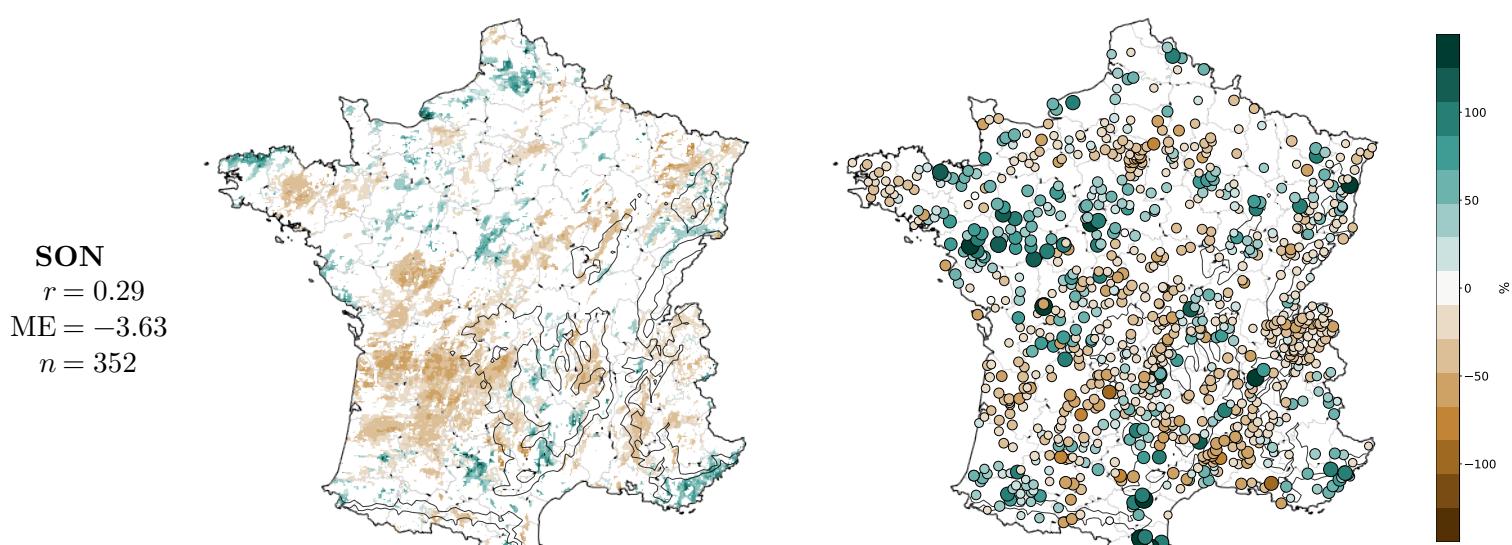
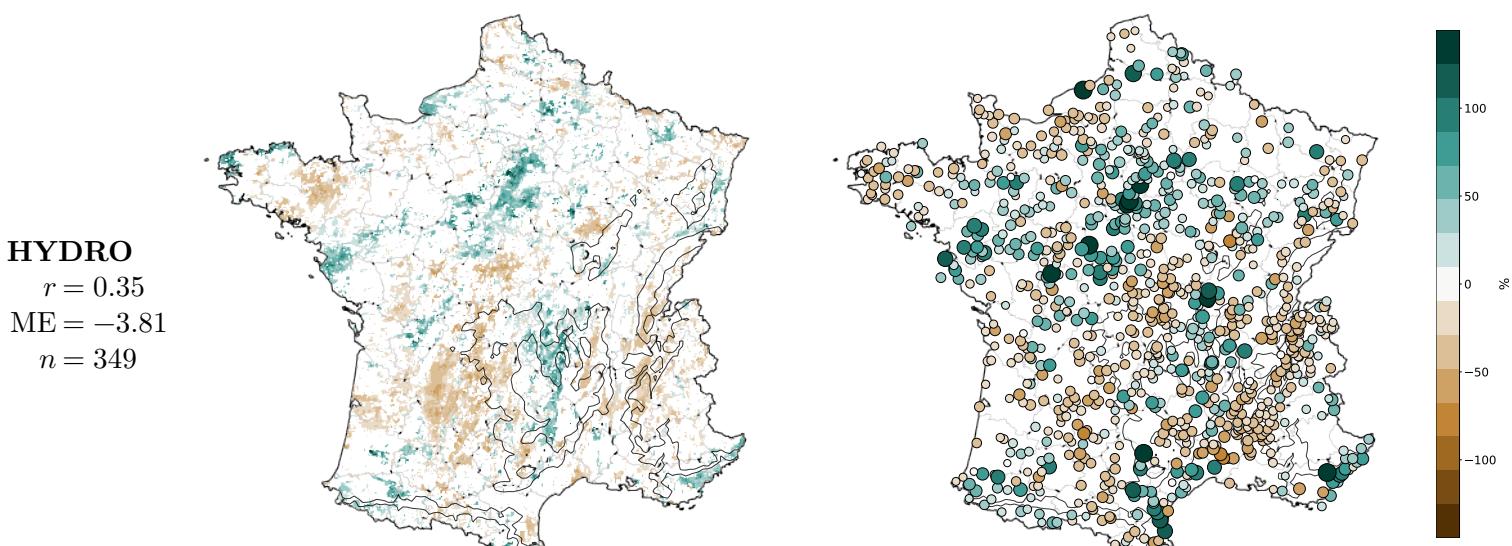


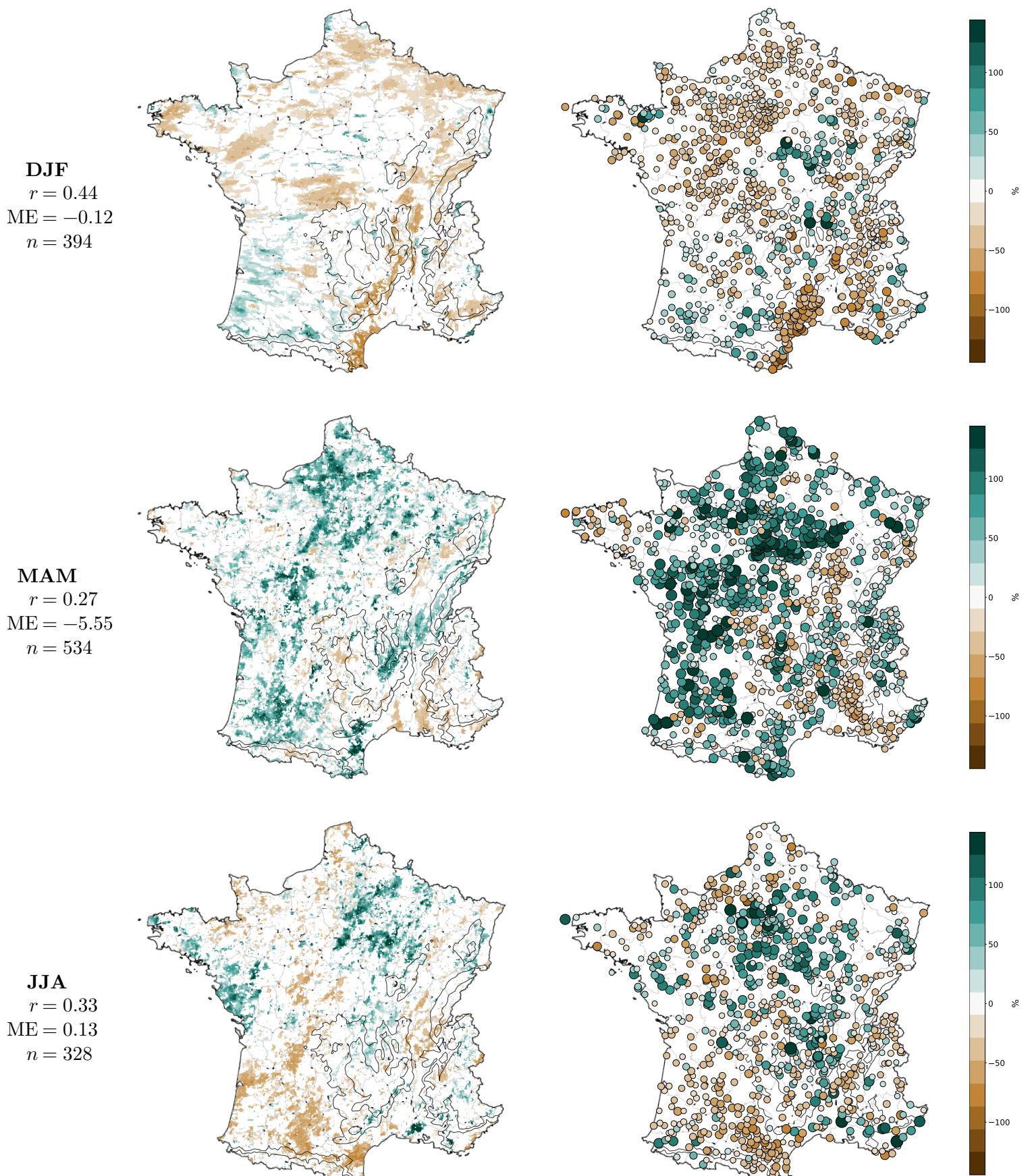
**MAM**  
 $r = 0.21$   
ME = -1.47  
 $n = 2729$





#### 4.2.1.2 Tendances significatives

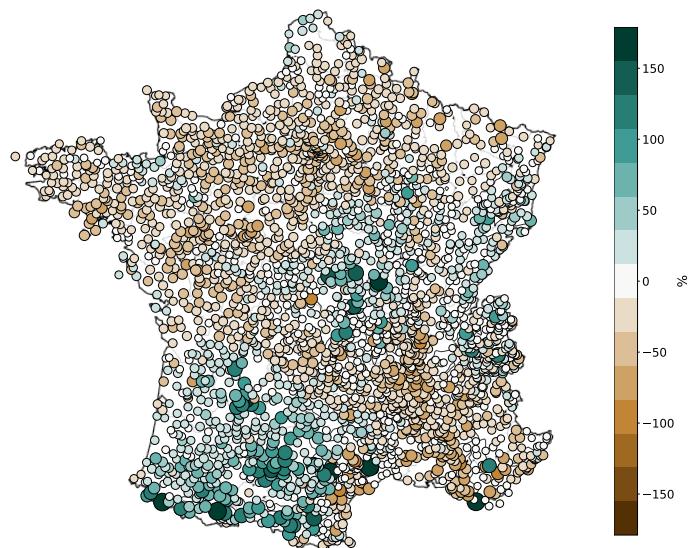
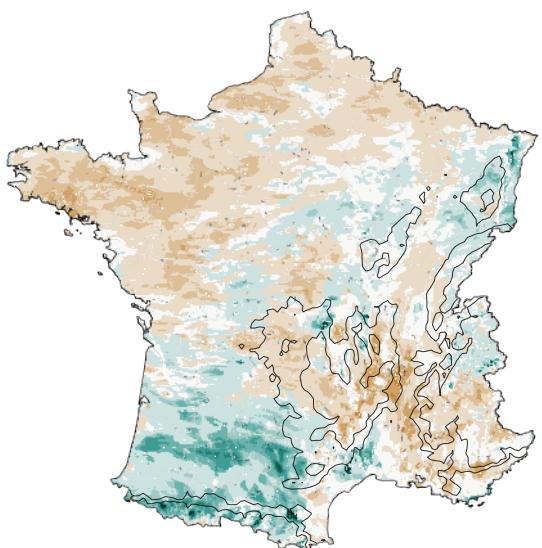




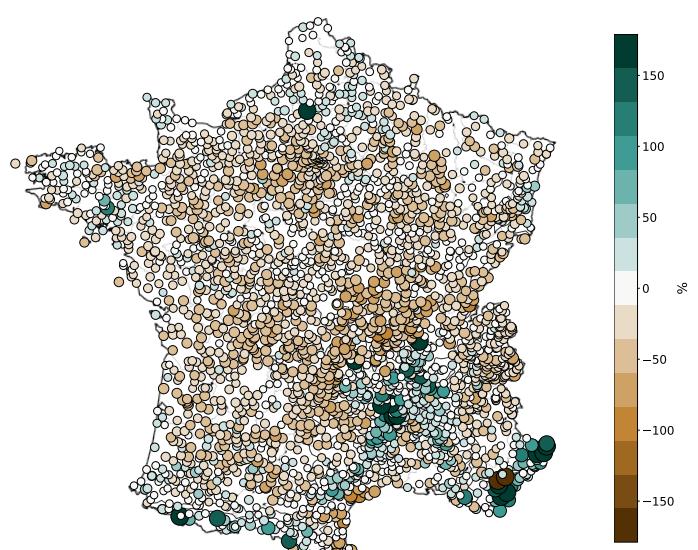
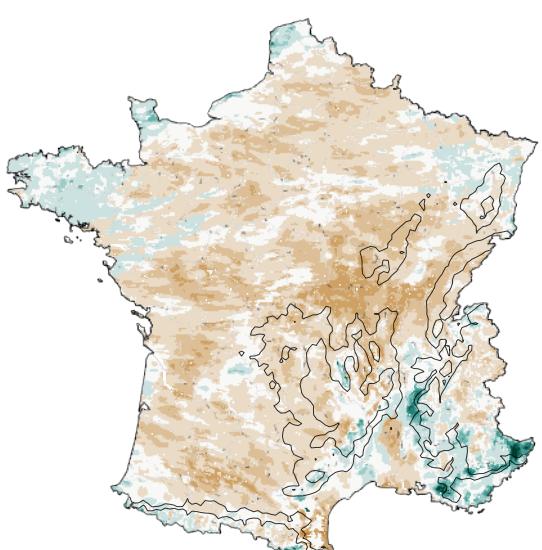
#### 4.2.2 Par mois

##### 4.2.2.1 Toutes tendances

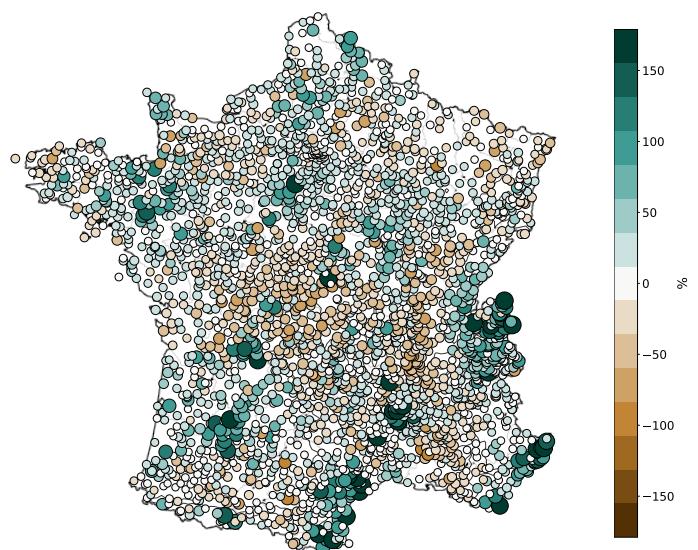
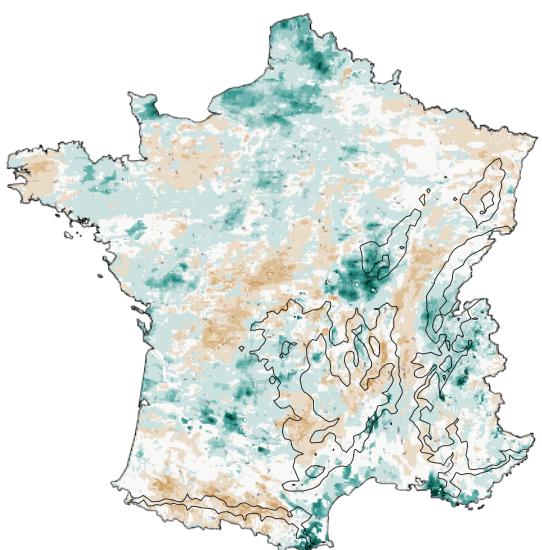
**JAN**  
 $r = 0.47$   
ME = 1.44  
 $n = 2800$

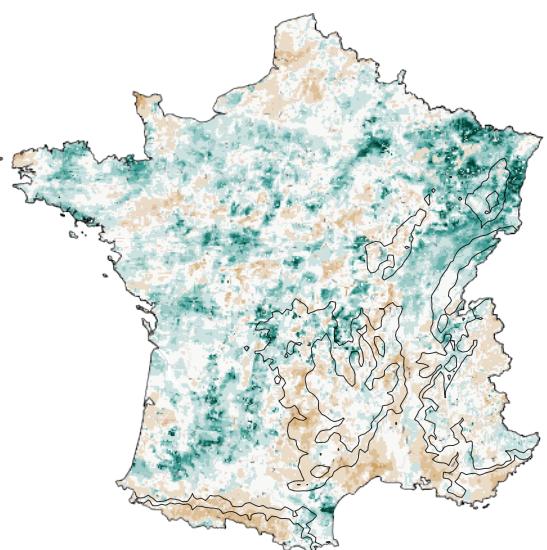


**FEV**  
 $r = 0.02$   
ME = 4.62  
 $n = 2793$

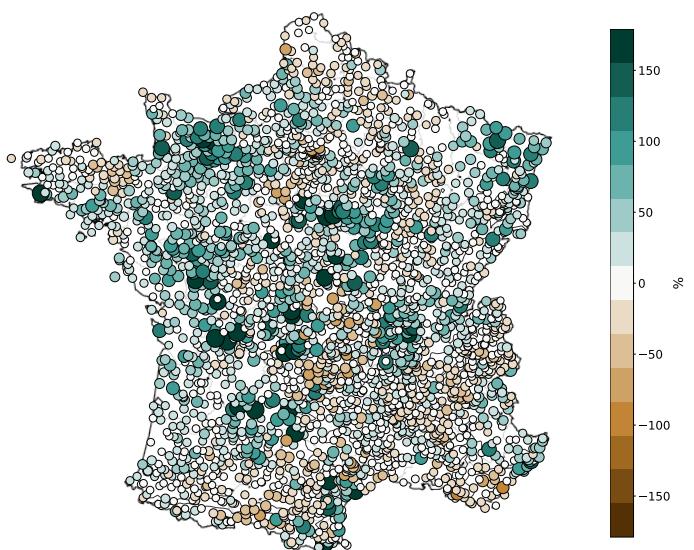


**MAR**  
 $r = 0.21$   
ME = -0.78  
 $n = 2793$

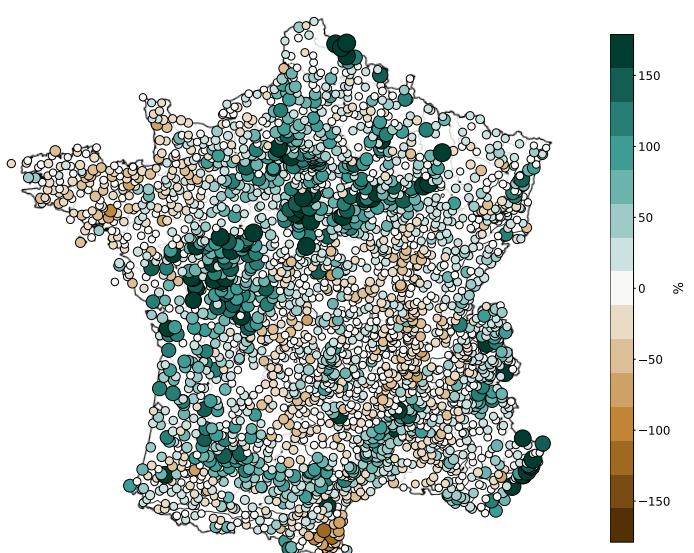
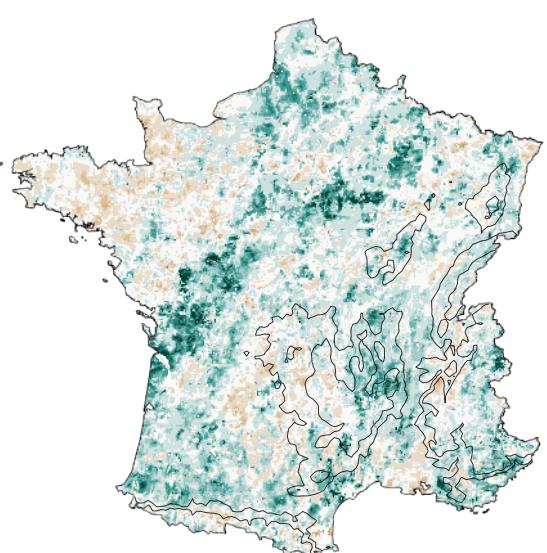




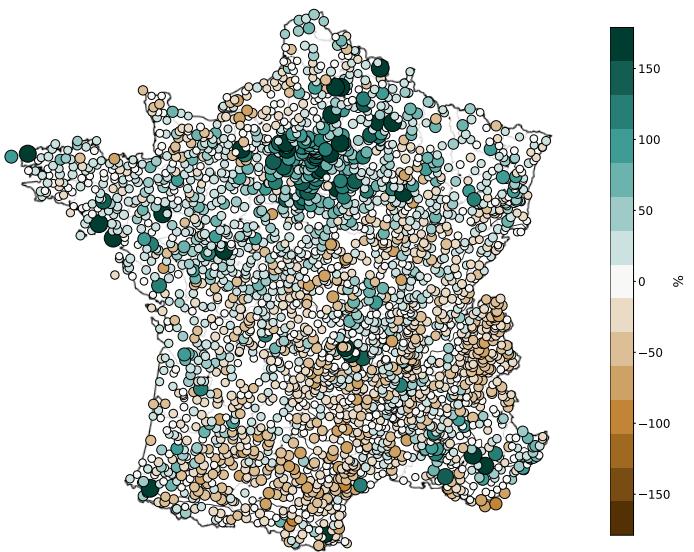
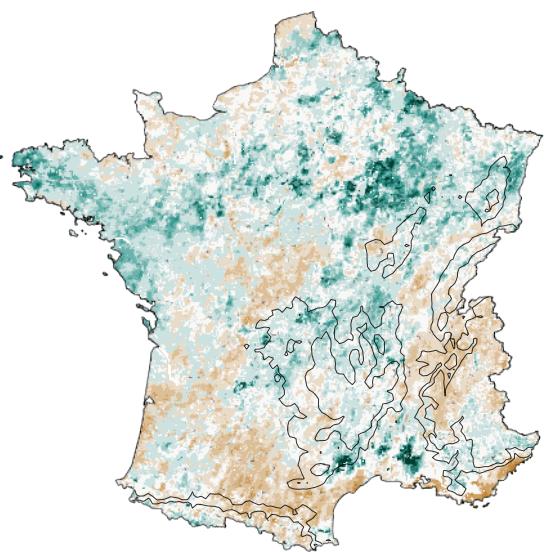
**AVR**  
 $r = 0.16$   
ME =  $-3.43$   
 $n = 2765$



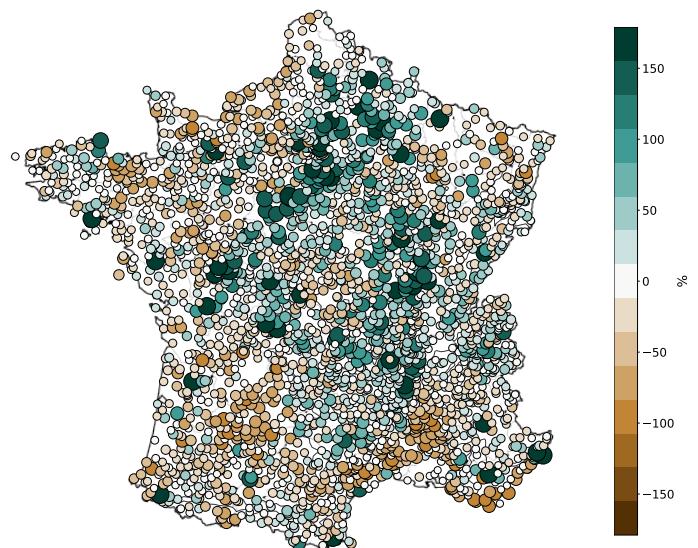
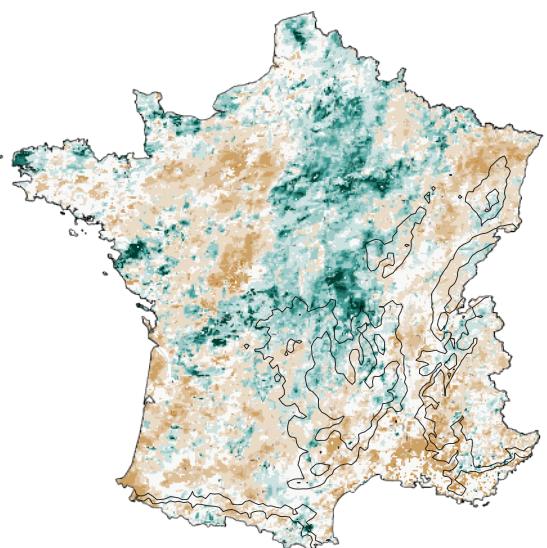
**MAI**  
 $r = 0.18$   
ME =  $-0.37$   
 $n = 2745$



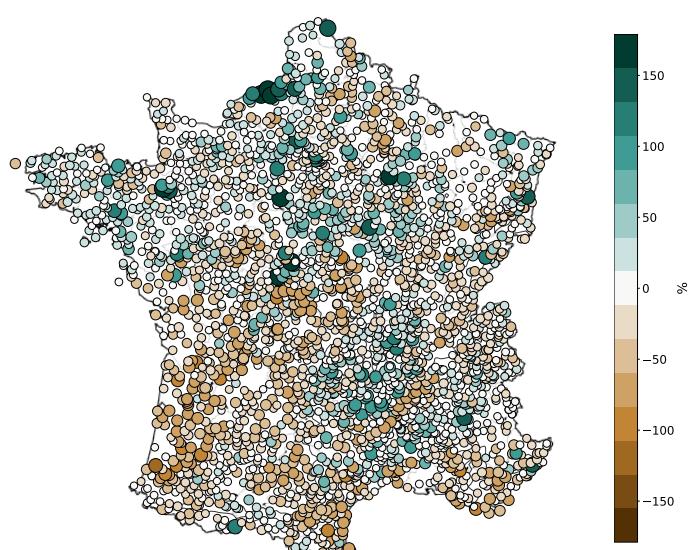
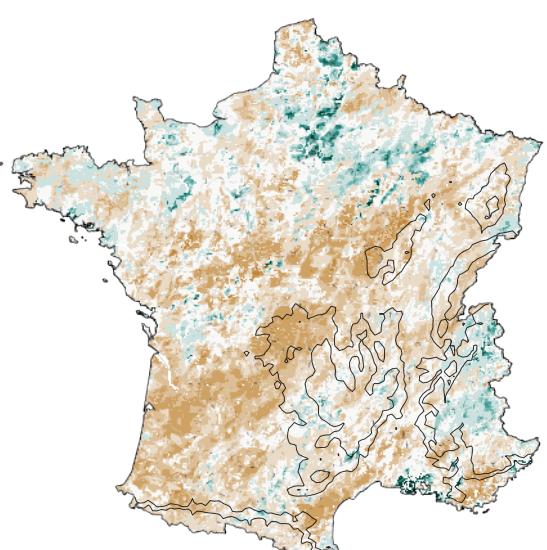
**JUI**  
 $r = 0.19$   
ME =  $3.14$   
 $n = 2751$



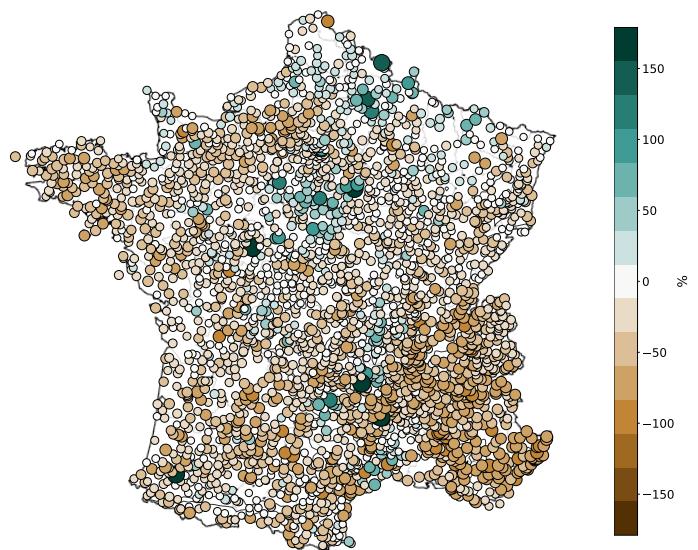
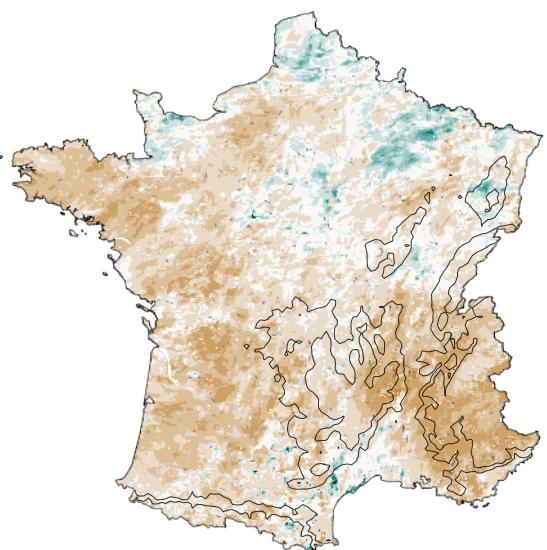
**JUILL**  
 $r = 0.12$   
ME = -0.35  
 $n = 2748$

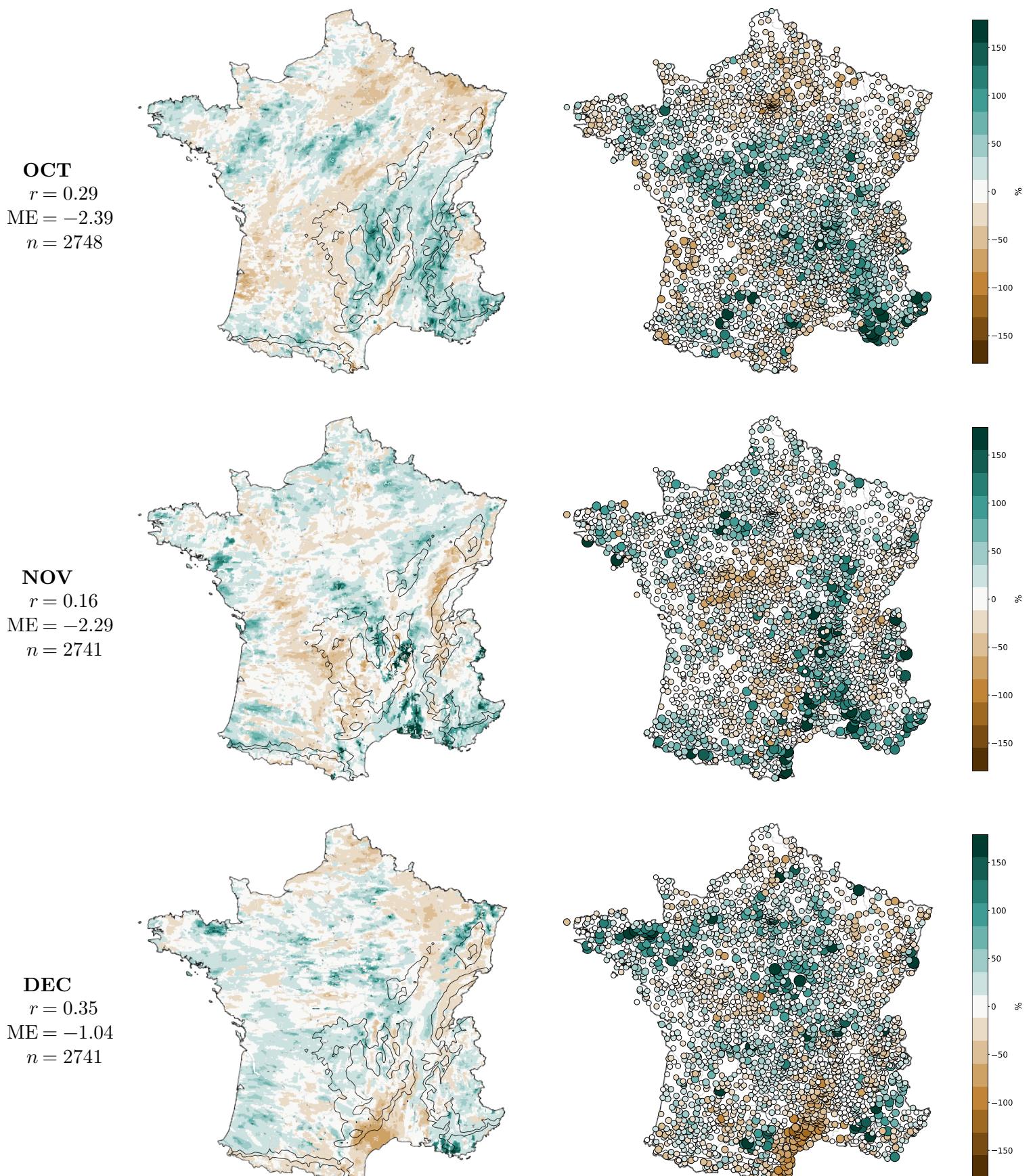


**AOU**  
 $r = 0.11$   
ME = -8.89  
 $n = 2747$

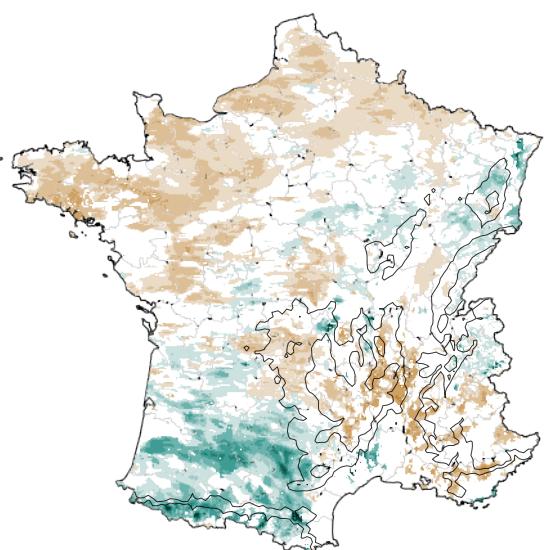


**SEP**  
 $r = 0.31$   
ME = -1.60  
 $n = 2755$

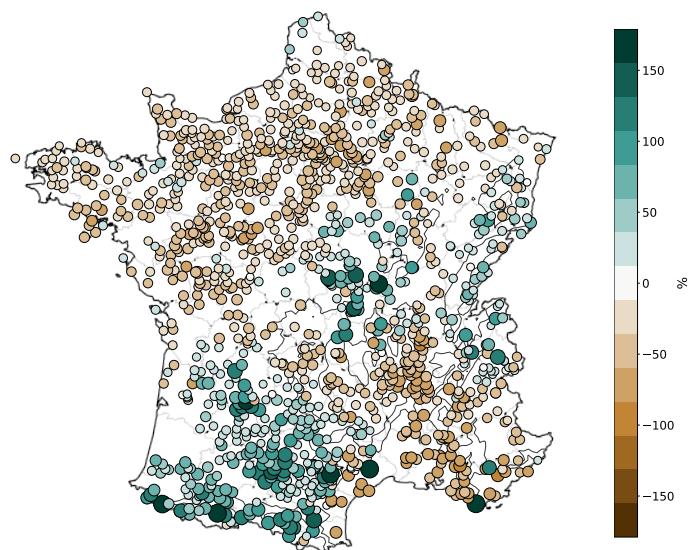




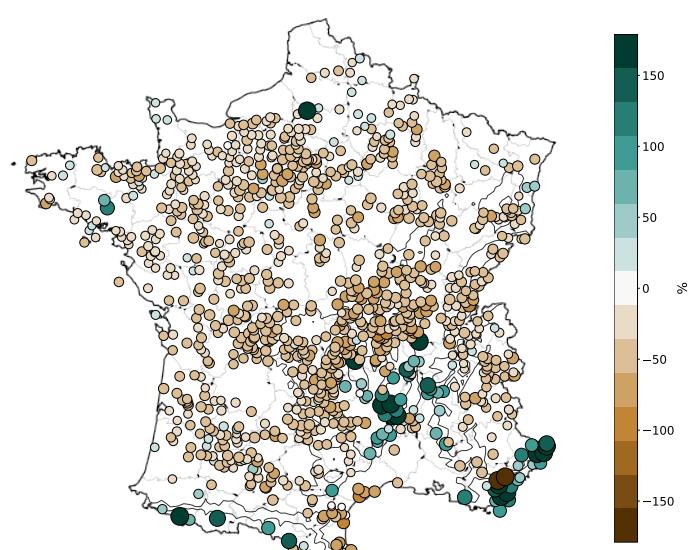
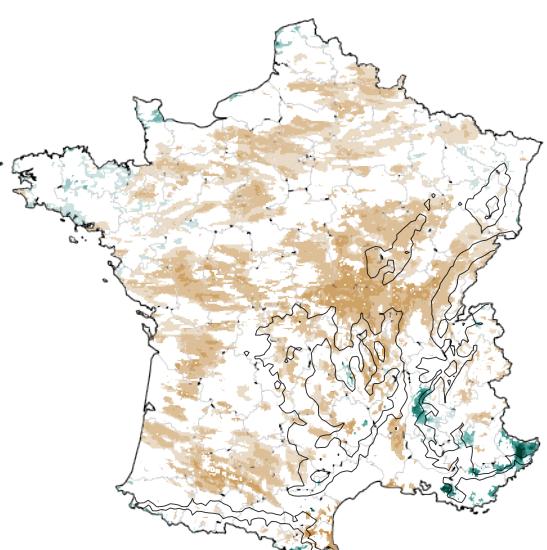
#### 4.2.2.2 Tendances significatives



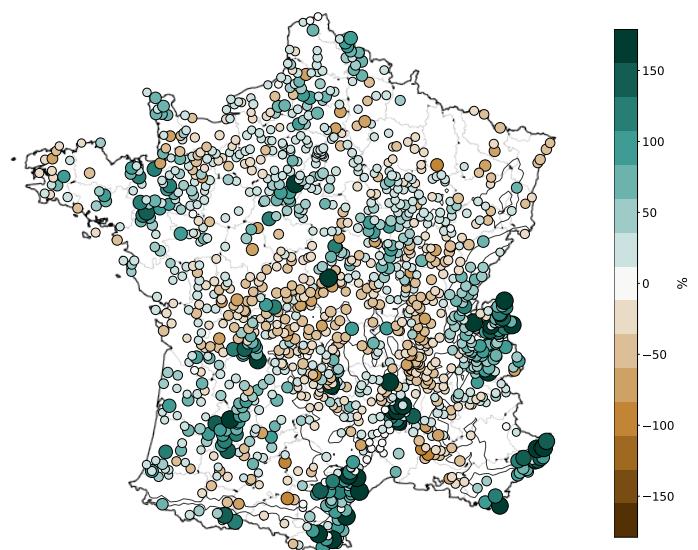
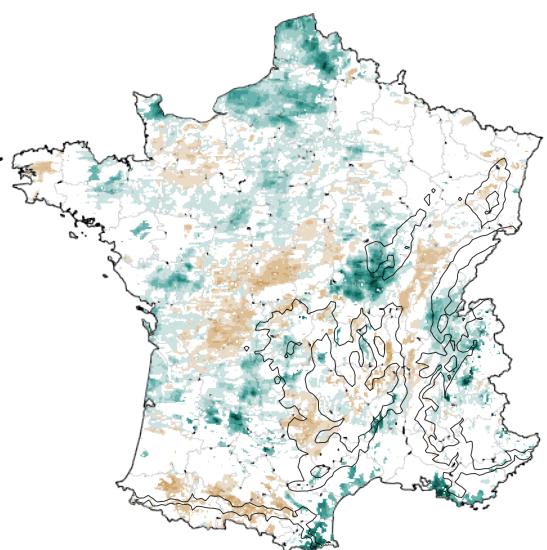
**JAN**  
 $r = 0.69$   
ME =  $-3.44$   
 $n = 736$



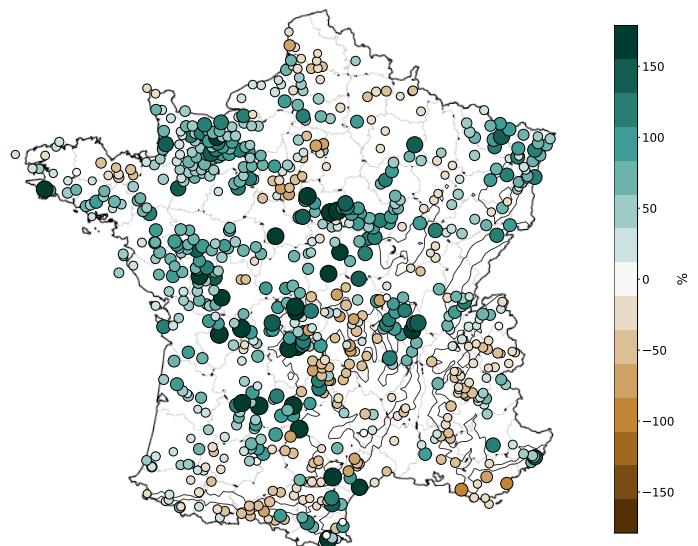
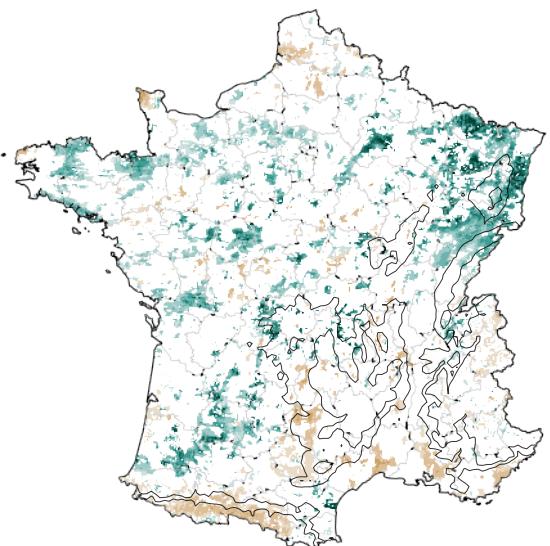
**FEV**  
 $r = 0.60$   
ME =  $-1.53$   
 $n = 515$



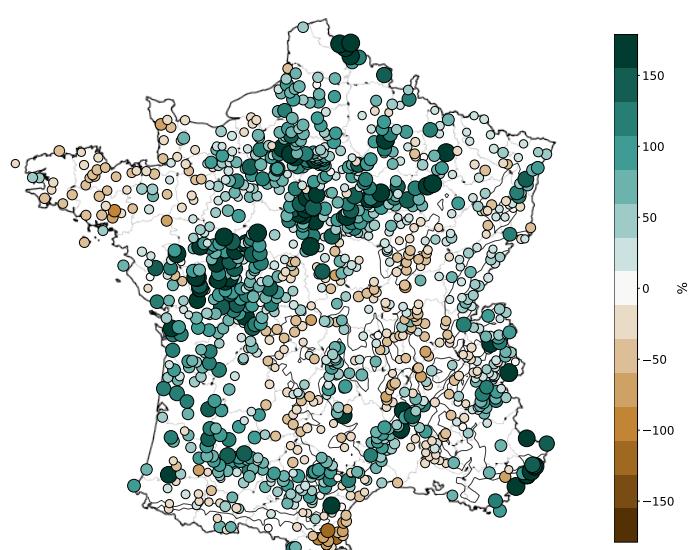
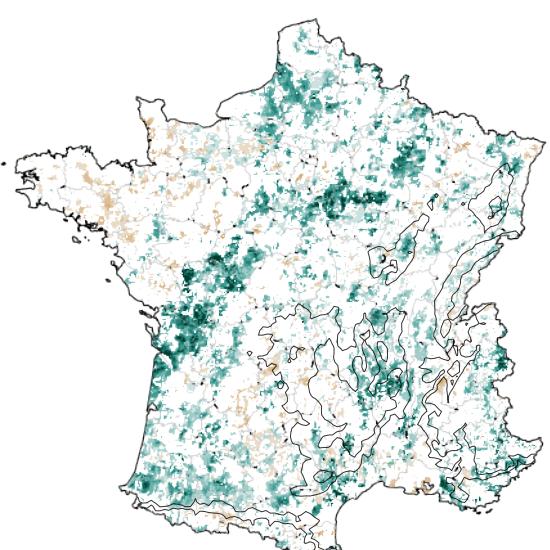
**MAR**  
 $r = 0.37$   
ME =  $1.47$   
 $n = 687$



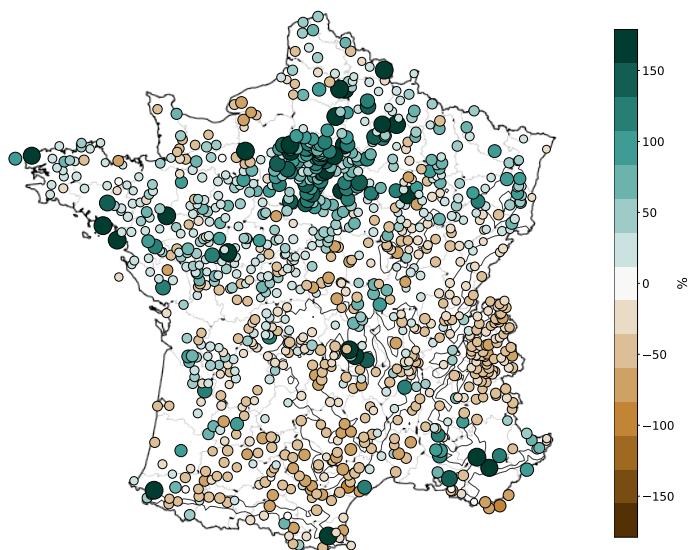
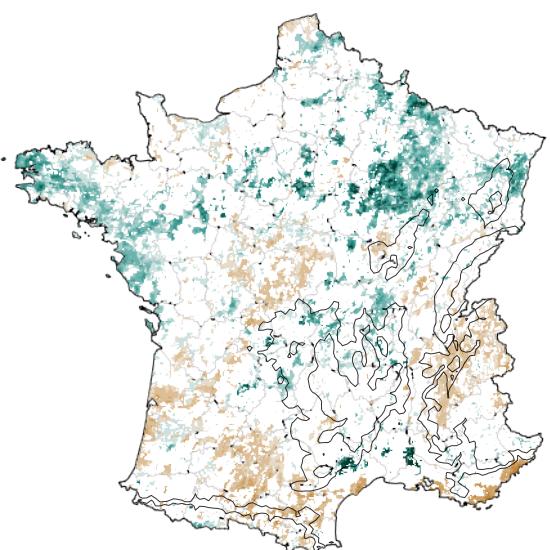
**AVR**  
 $r = 0.43$   
ME = 2.22  
 $n = 218$

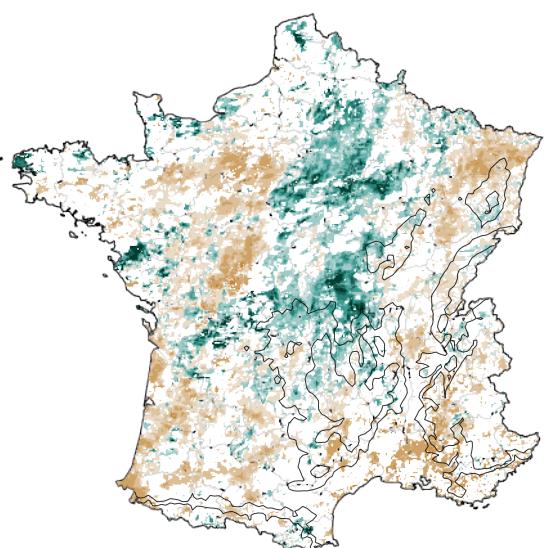


**MAI**  
 $r = 0.34$   
ME = 3.92  
 $n = 410$

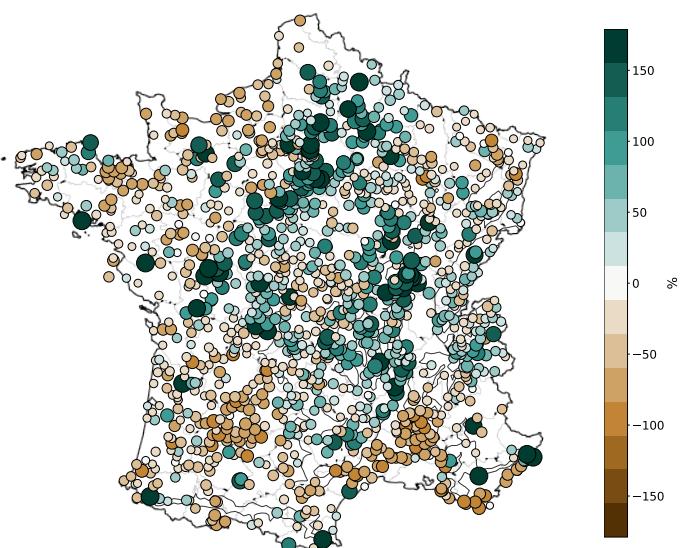


**JUI**  
 $r = 0.41$   
ME = 2.19  
 $n = 370$

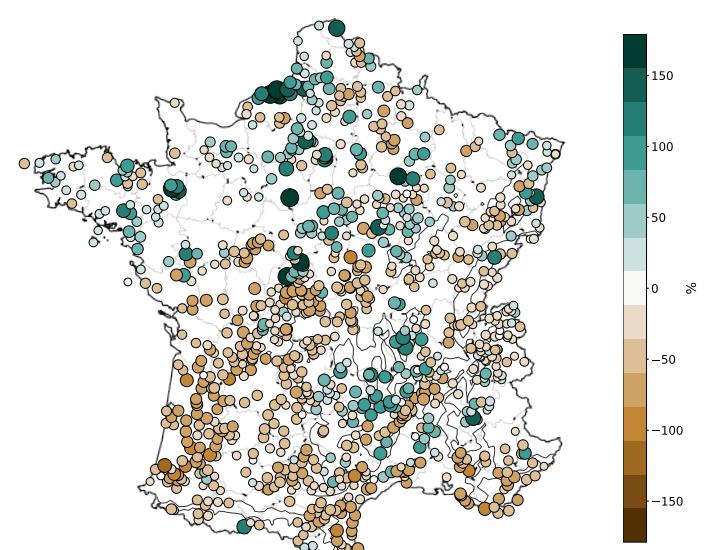
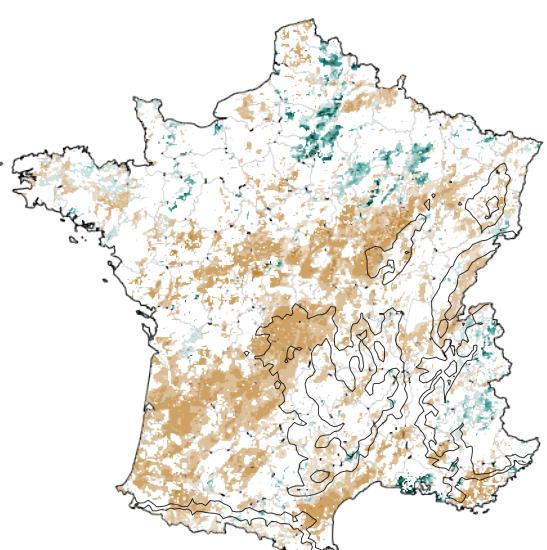




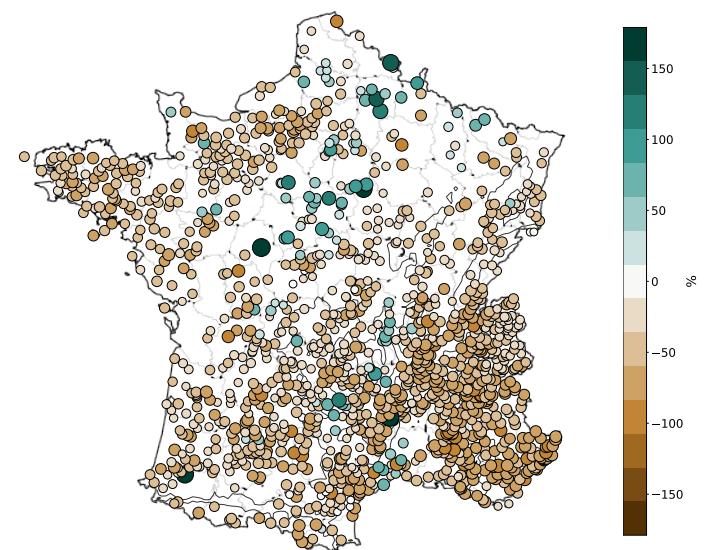
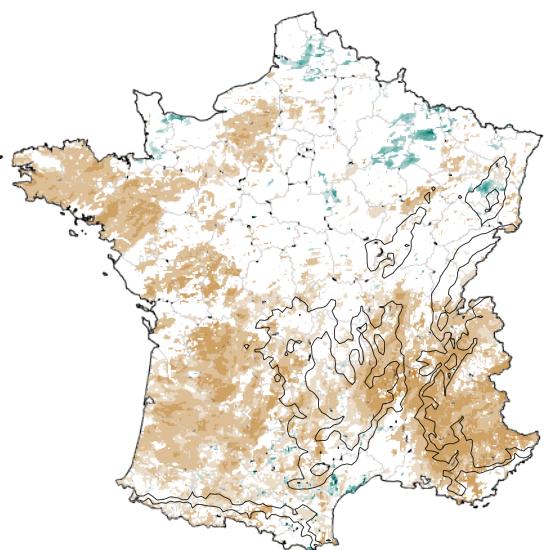
**JUILL**  
 $r = 0.17$   
ME = -2.92  
 $n = 699$

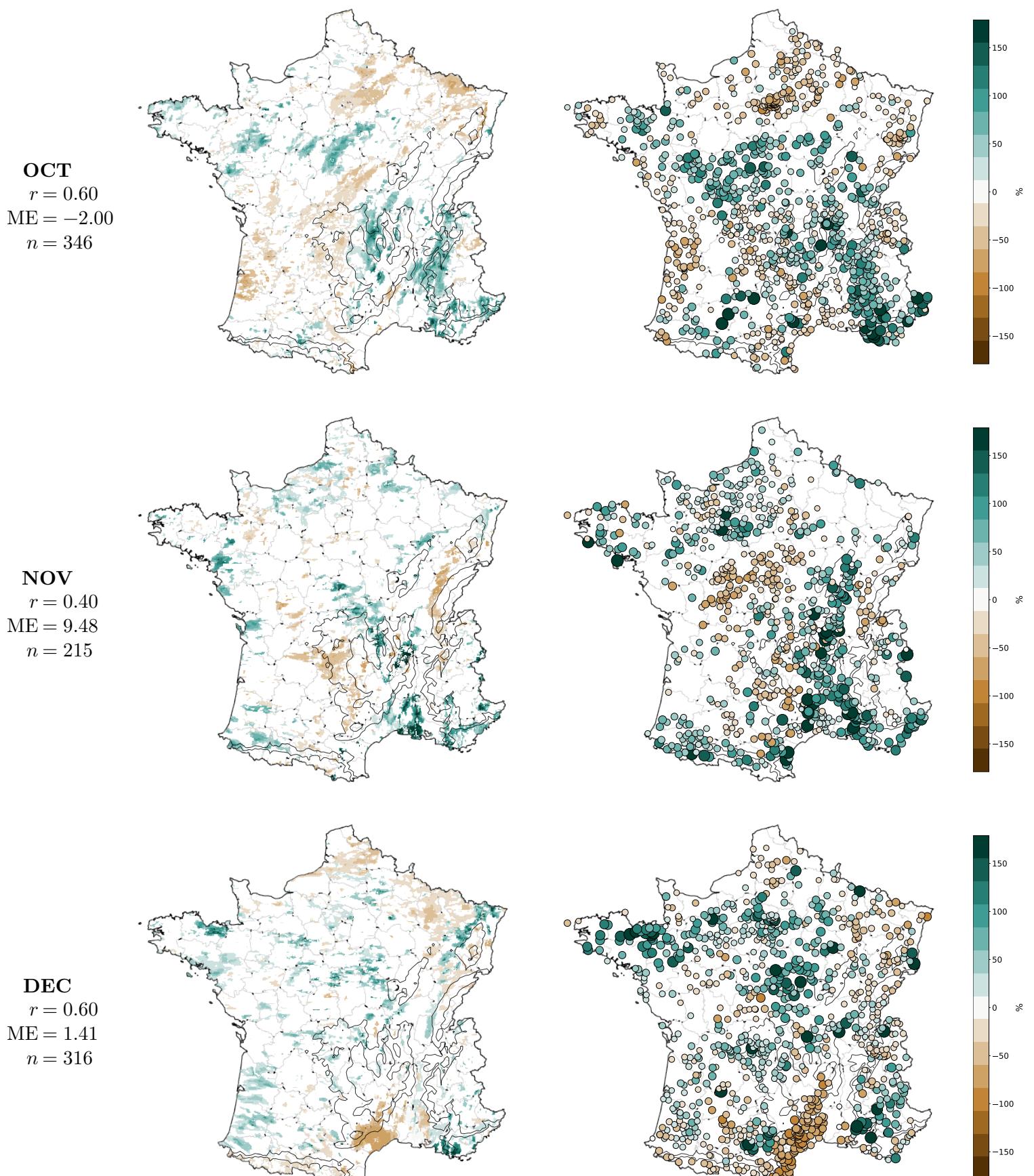


**AOU**  
 $r = 0.18$   
ME = -15.0<sup>5</sup>  
 $n = 463$



**SEP**  
 $r = 0.24$   
ME = 0.42  
 $n = 797$

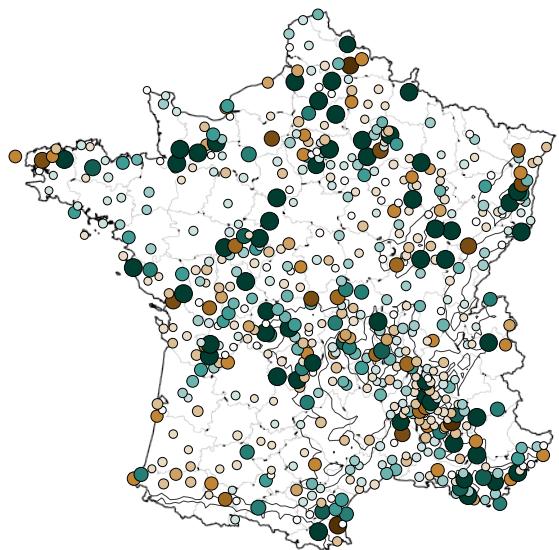
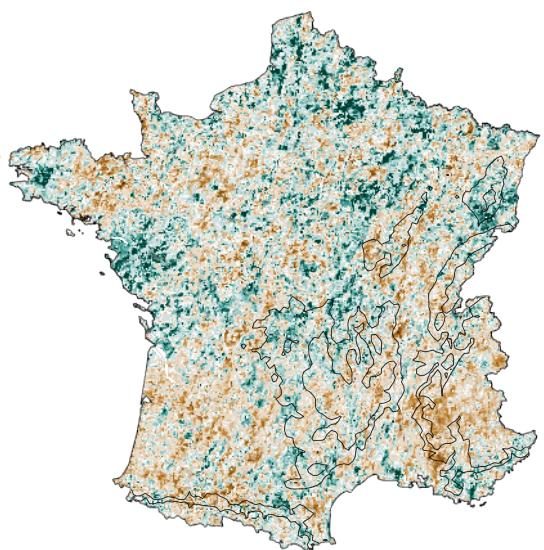
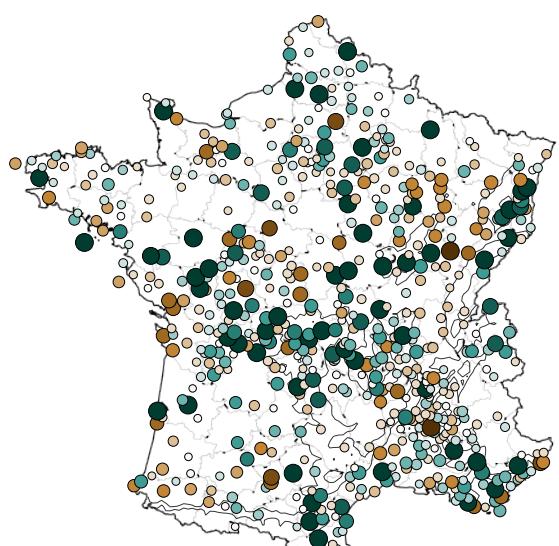
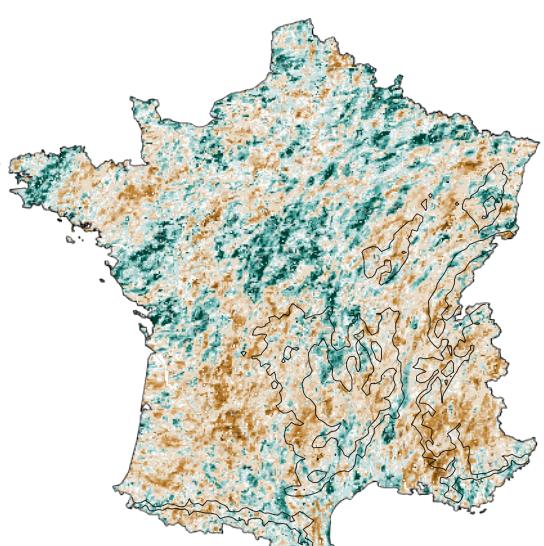
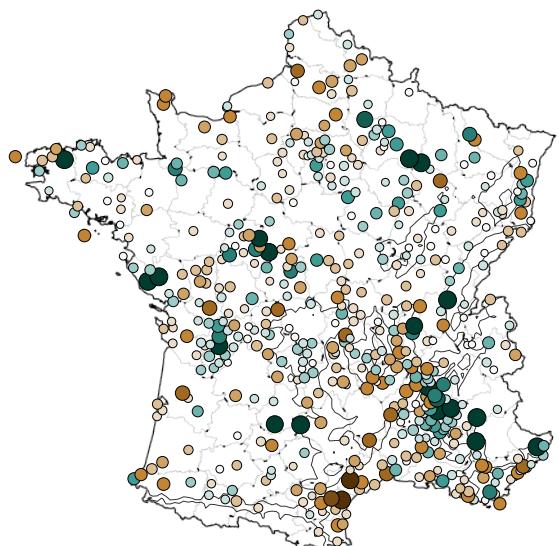
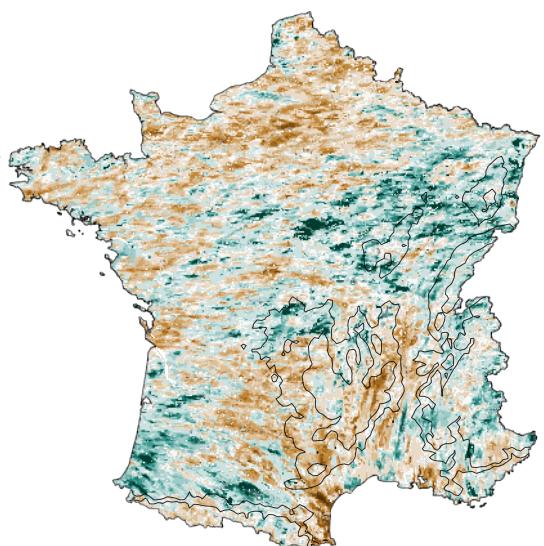


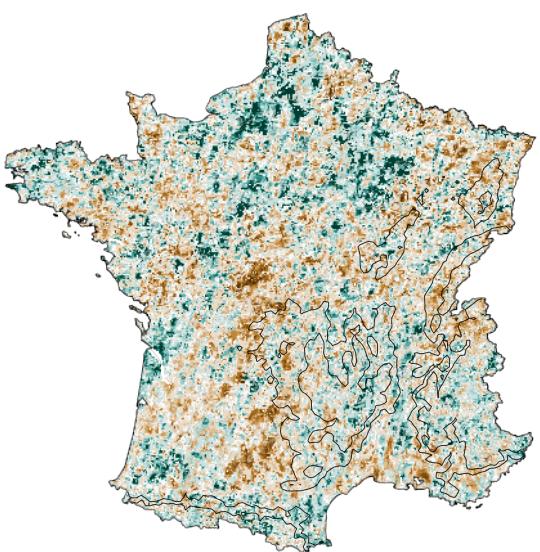


## 4.3 Données horaire (1990-2022)

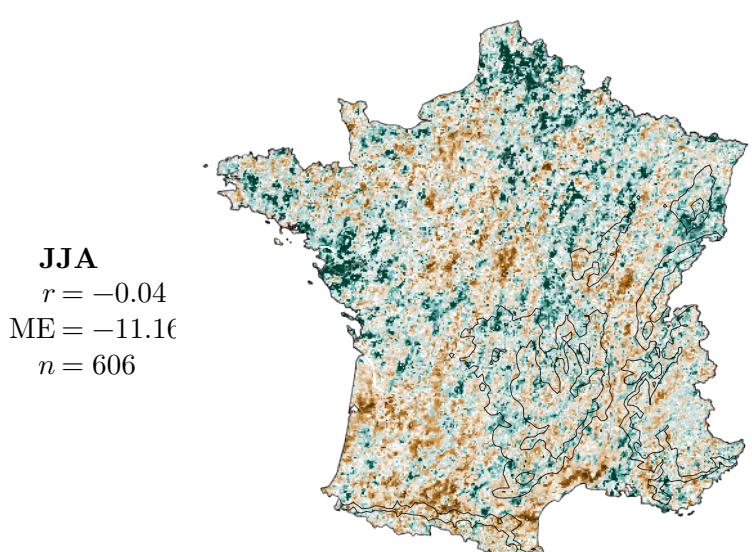
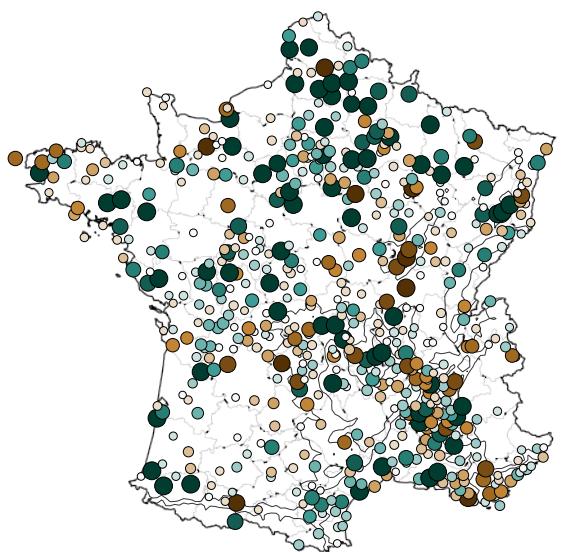
### 4.3.1 Par saison

#### 4.3.1.1 Toutes tendances

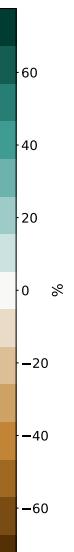
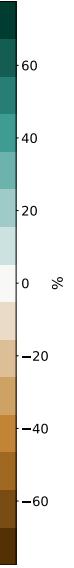
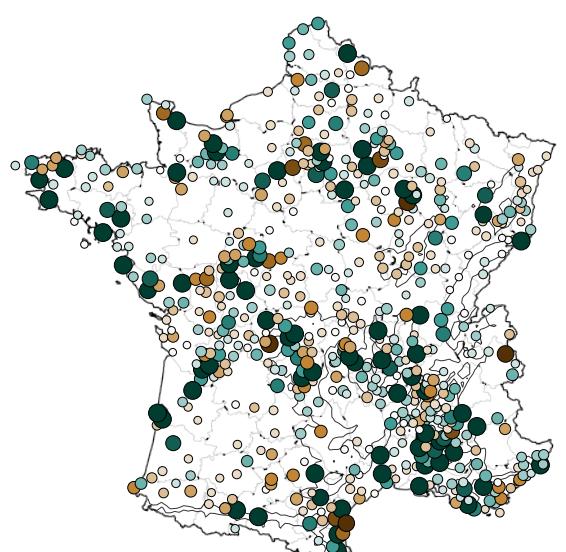
**HYDRO** $r = 0.02$ ME =  $-11.0^{\circ}$  $n = 574$ **SON** $r = 0.05$ ME =  $-9.70^{\circ}$  $n = 609$ **DJF** $r = 0.05$ ME =  $0.44^{\circ}$  $n = 511$ 



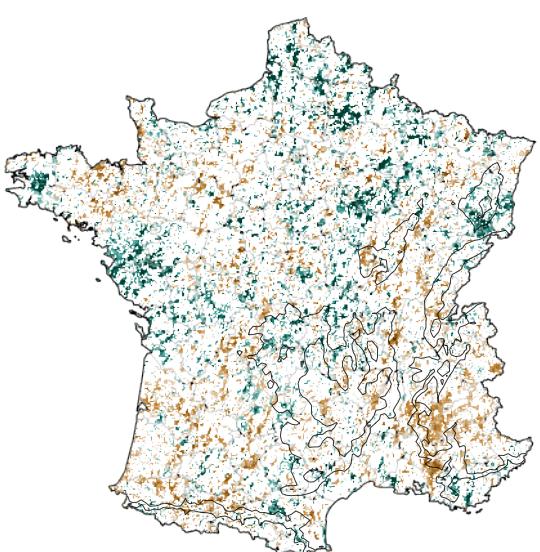
**MAM**  
 $r = -0.08$   
ME =  $-10.4\%$   
 $n = 589$



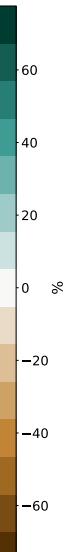
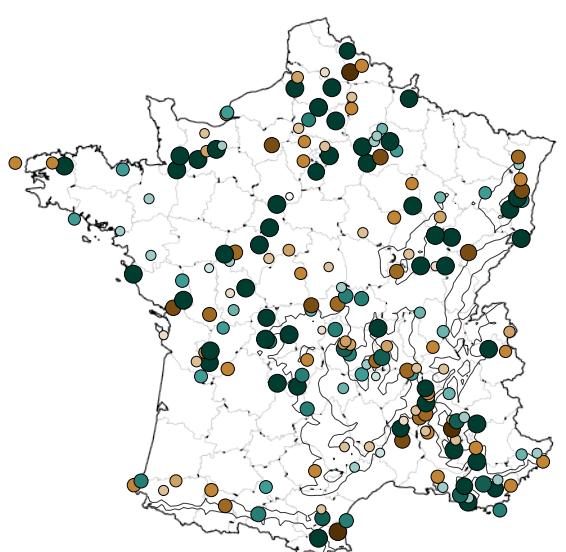
**JJA**  
 $r = -0.04$   
ME =  $-11.1\%$   
 $n = 606$

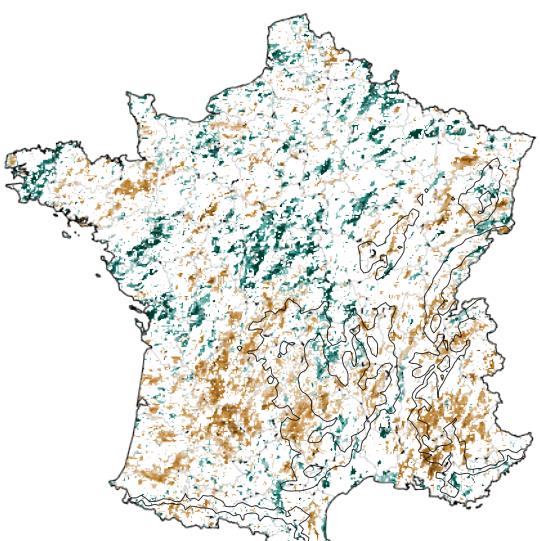


#### 4.3.1.2 Tendances significatives

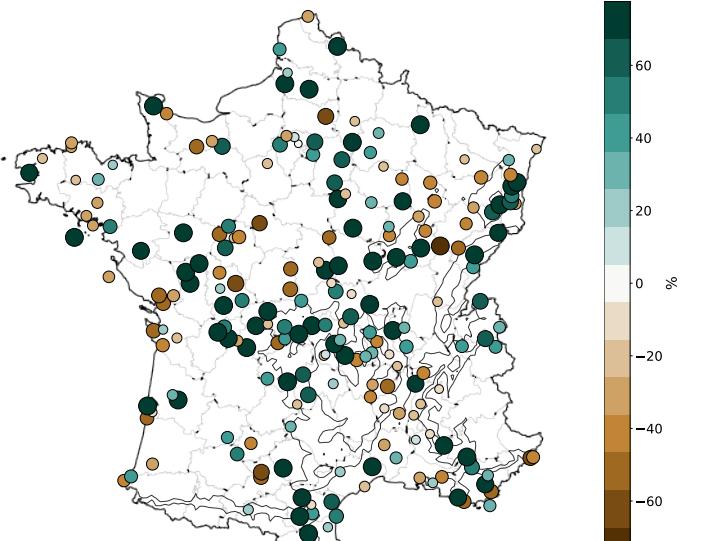


**HYDRO**  
 $r = 0.13$   
ME =  $-37.6\%$   
 $n = 68$

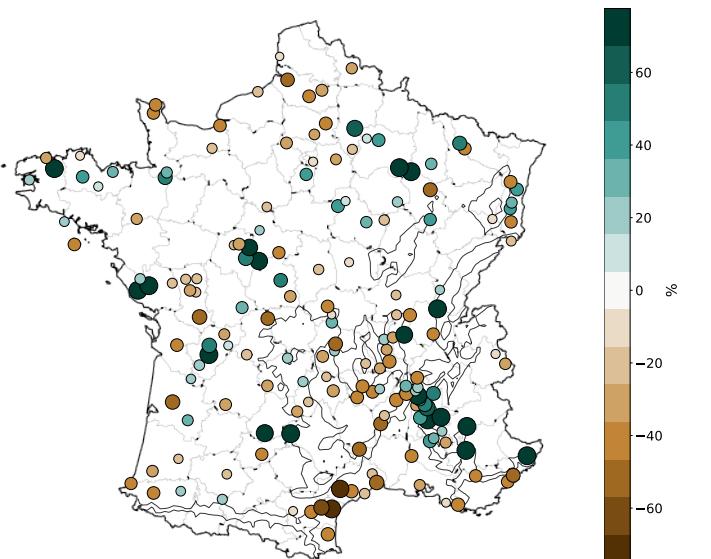
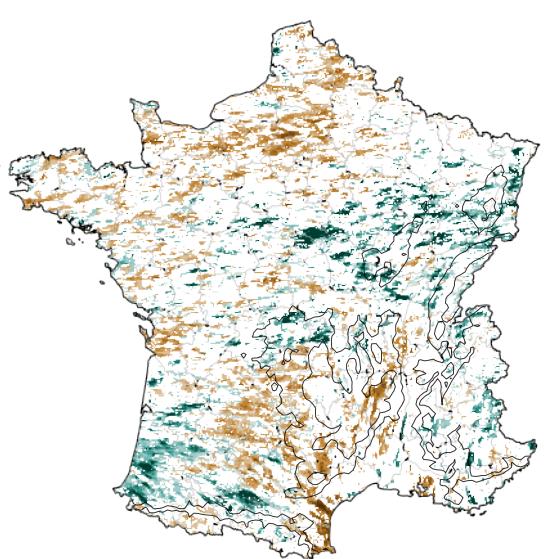




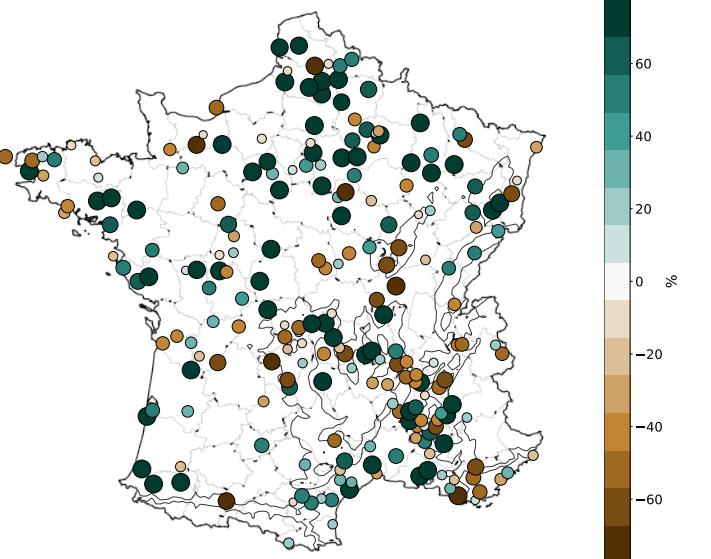
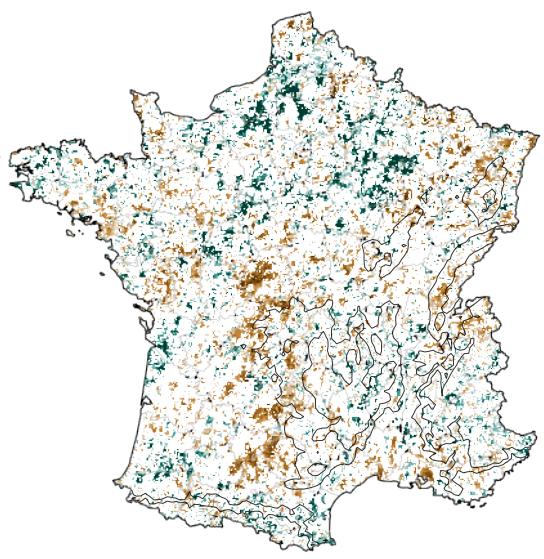
**SON**  
 $r = 0.12$   
ME = -14.46  
 $n = 81$

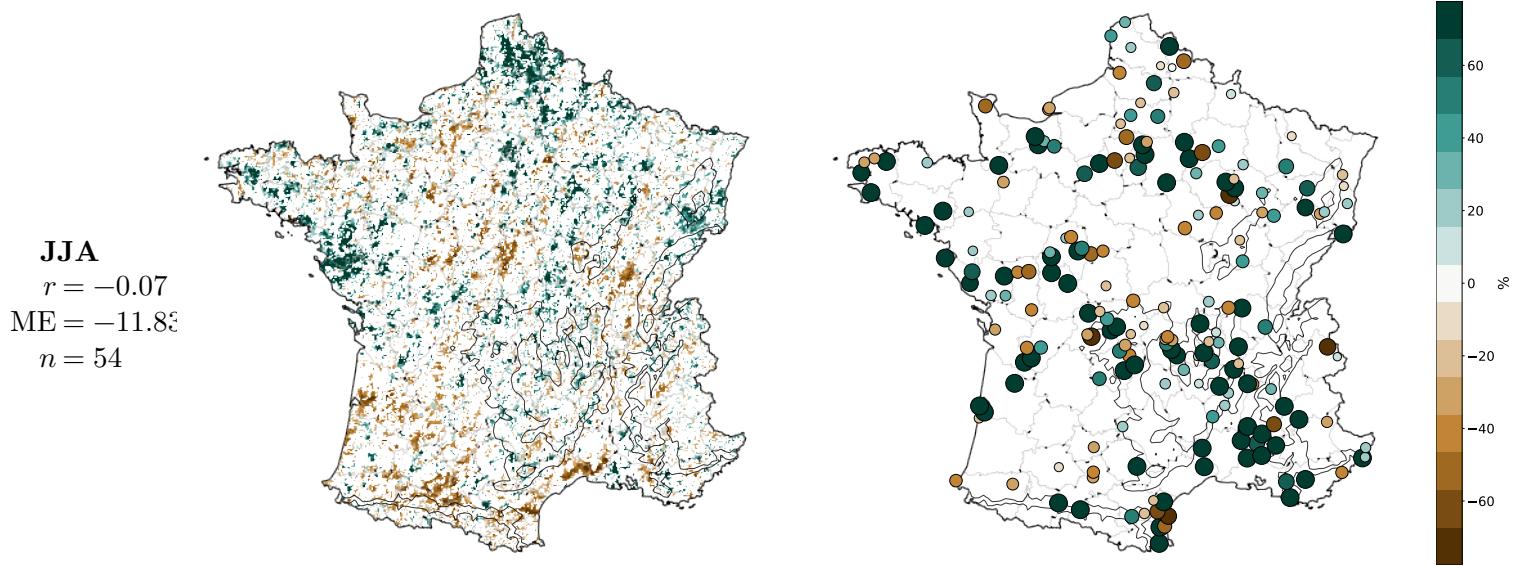


**DJF**  
 $r = 0.06$   
ME = 6.53  
 $n = 59$



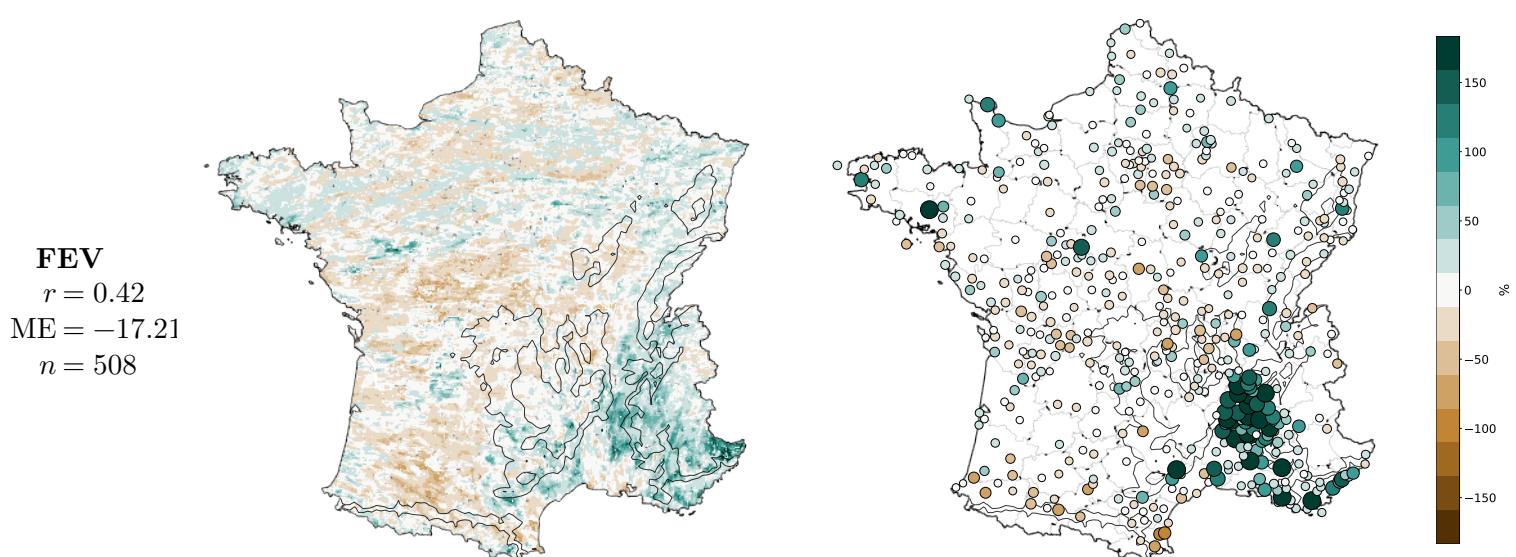
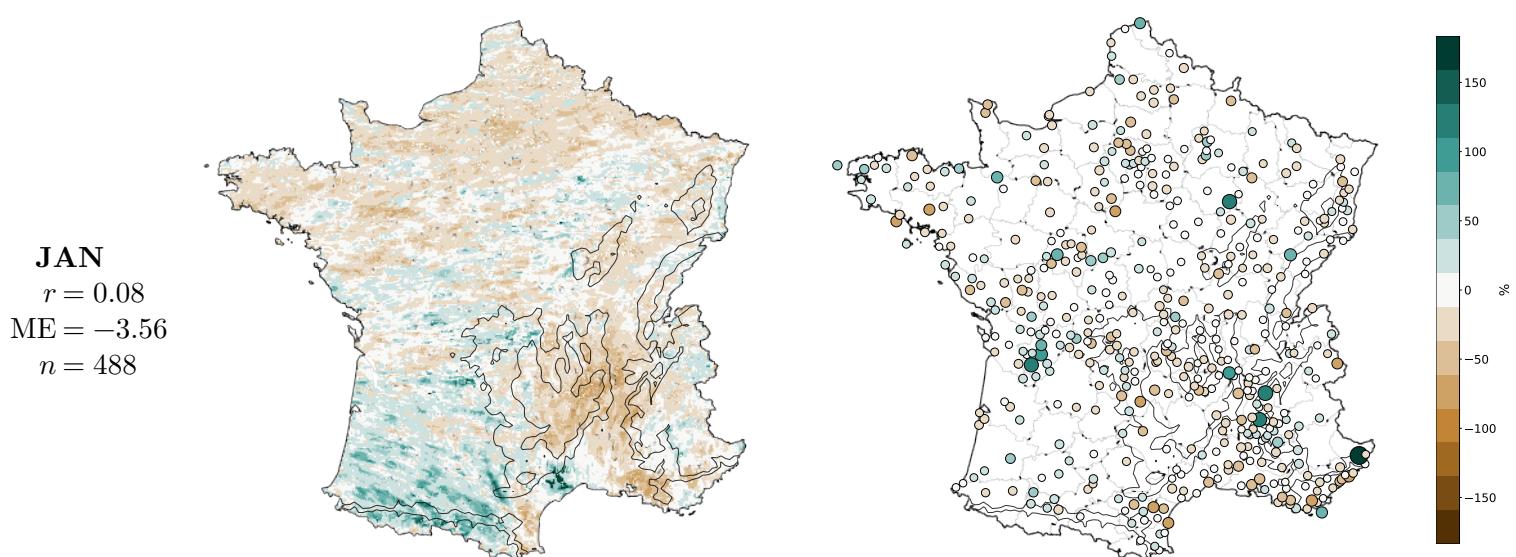
**MAM**  
 $r = -0.20$   
ME = -18.71  
 $n = 84$

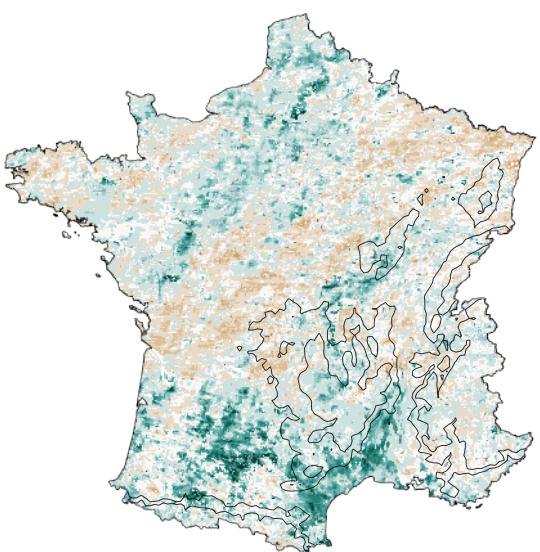




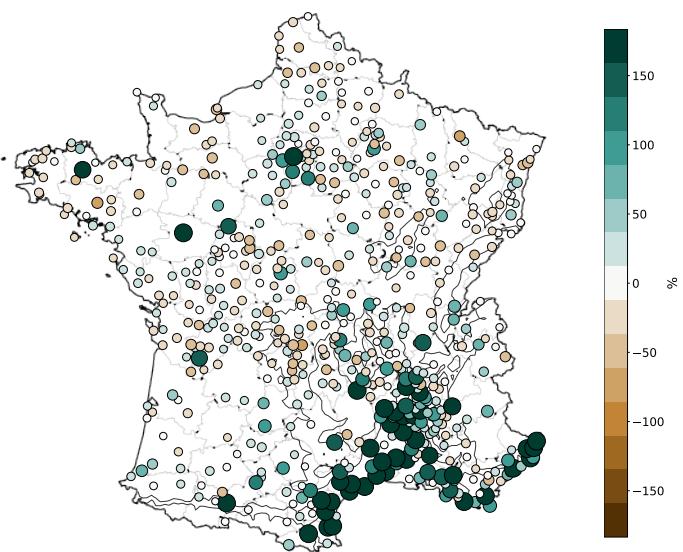
#### 4.3.2 Par mois

##### 4.3.2.1 Toutes tendances

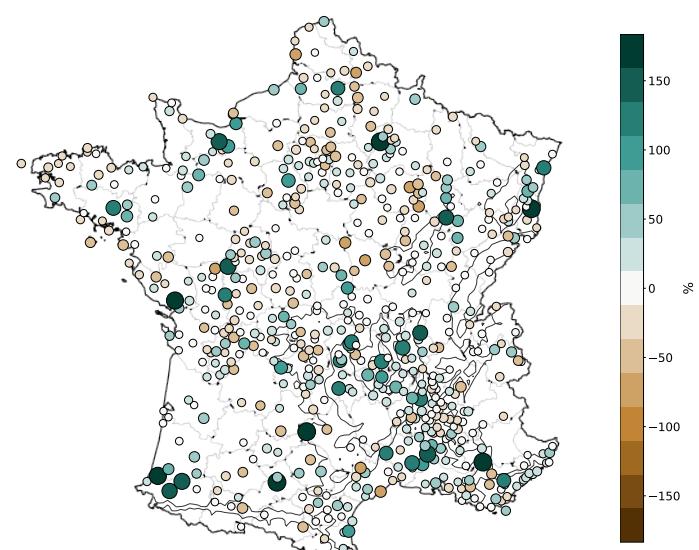
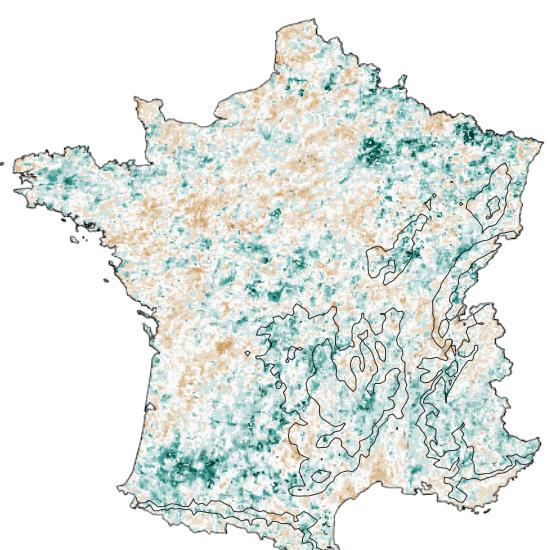




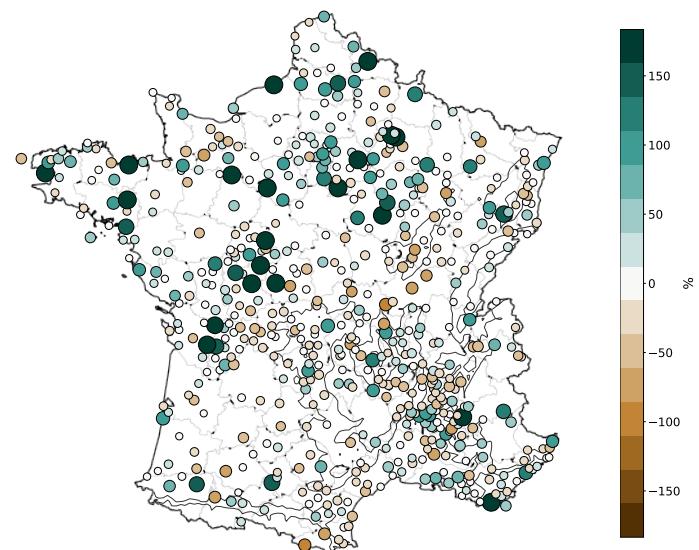
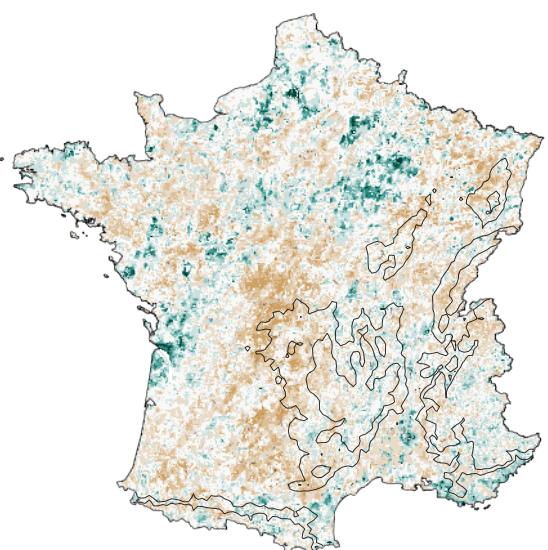
**MAR**  
 $r = 0.23$   
ME = -15.26  
 $n = 588$

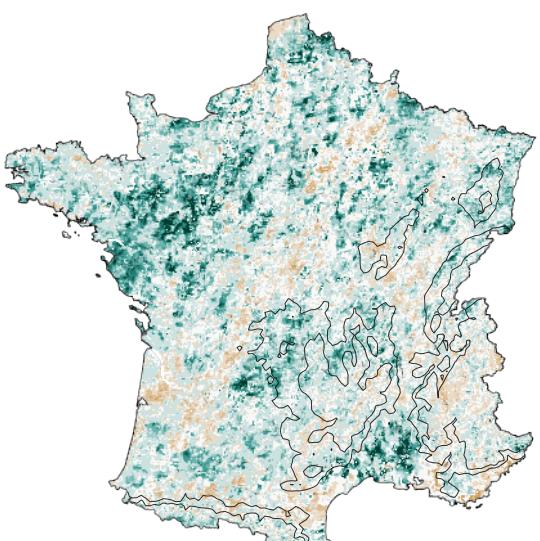


**AVR**  
 $r = 0.12$   
ME = 0.42  
 $n = 600$

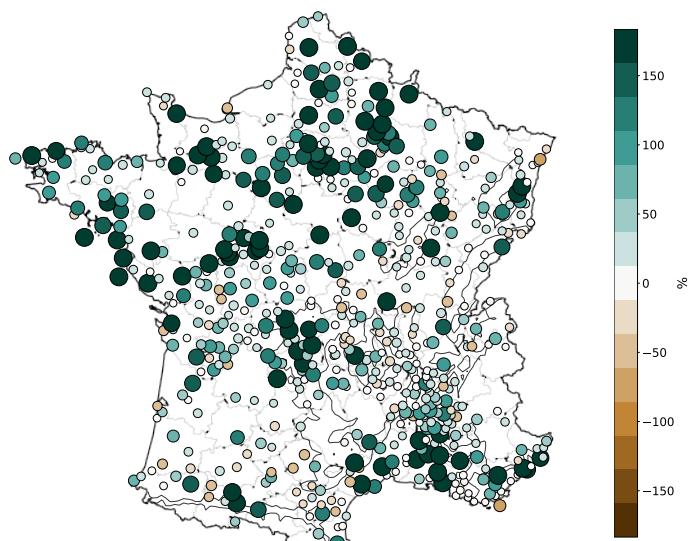


**MAI**  
 $r = 0.07$   
ME = -16.32  
 $n = 590$

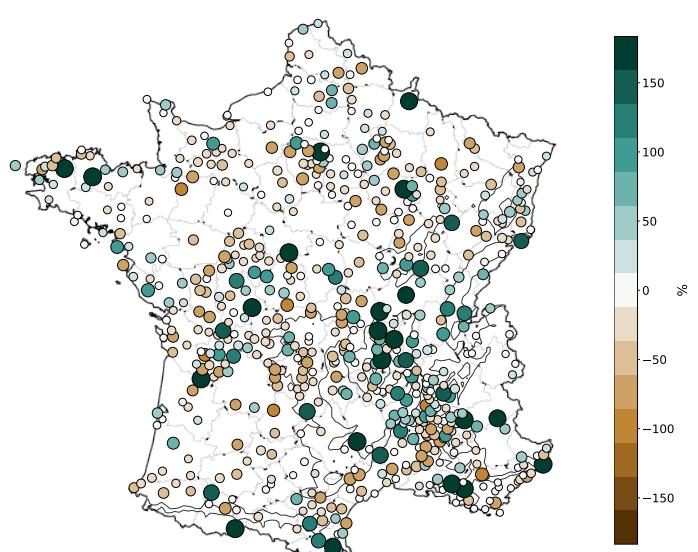
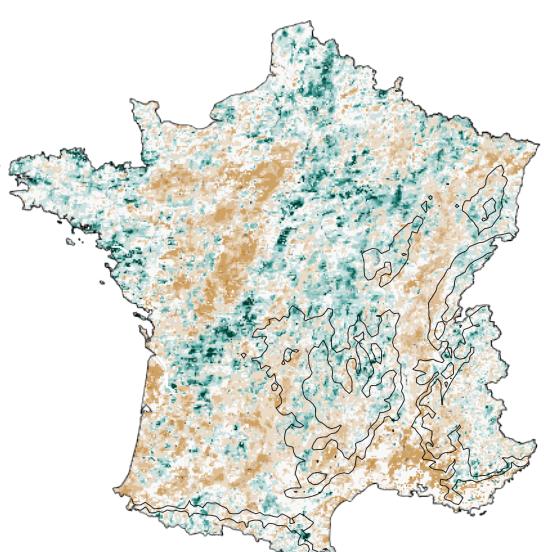




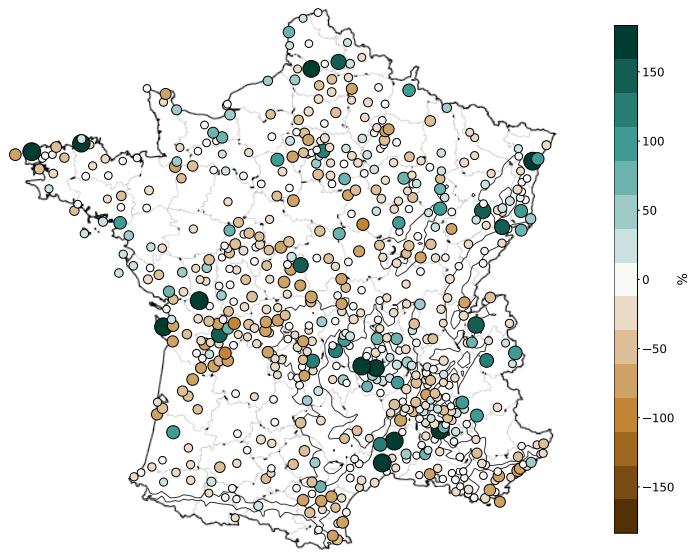
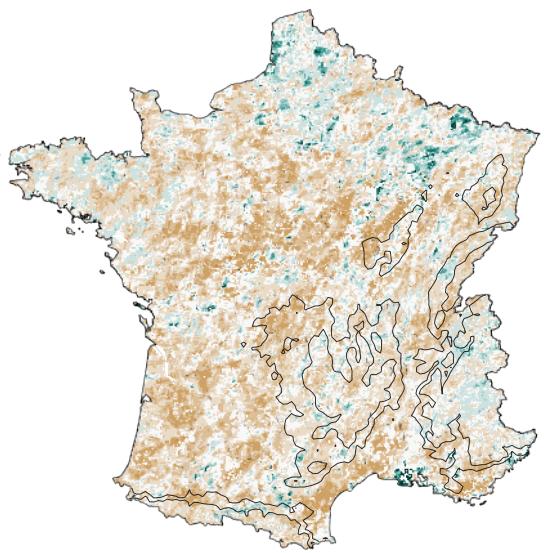
**JUI**  
 $r = 0.09$   
ME = -48.26  
 $n = 600$

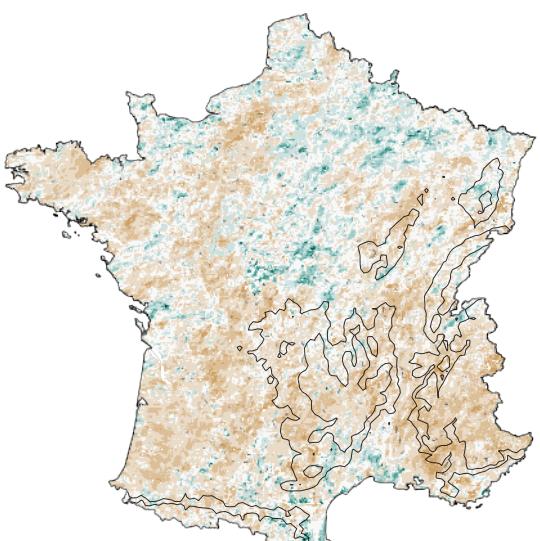


**JUILL**  
 $r = 0.03$   
ME = 1.41  
 $n = 606$

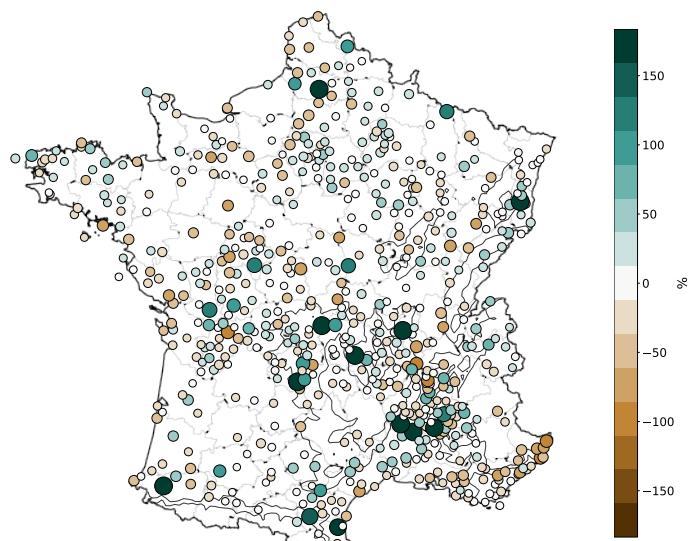


**AOU**  
 $r = 0.09$   
ME = -12.48  
 $n = 602$

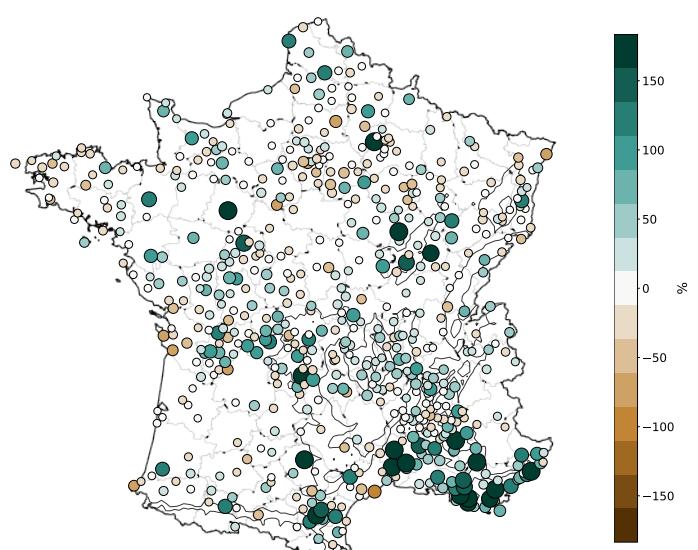
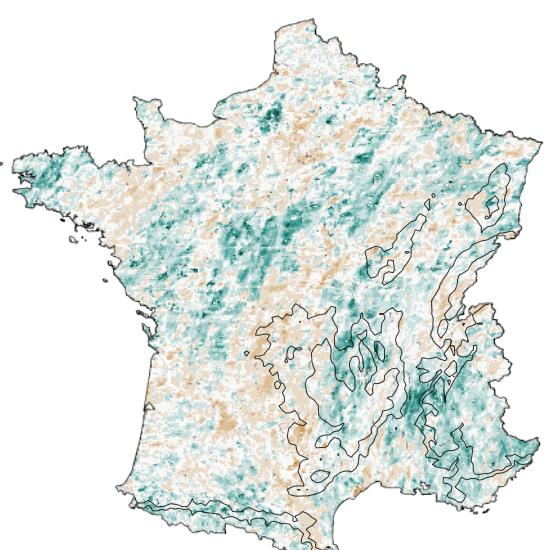




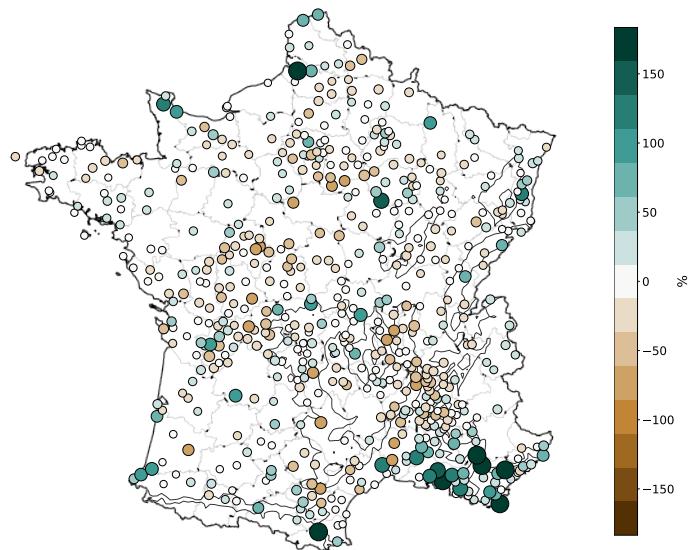
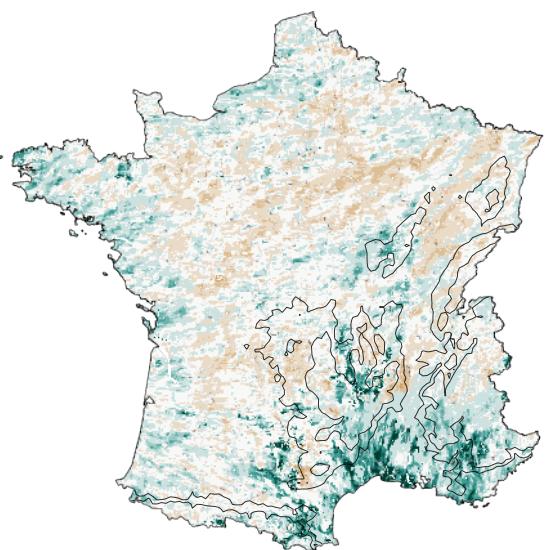
**SEP**  
 $r = 0.02$   
ME = -14.77  
 $n = 620$

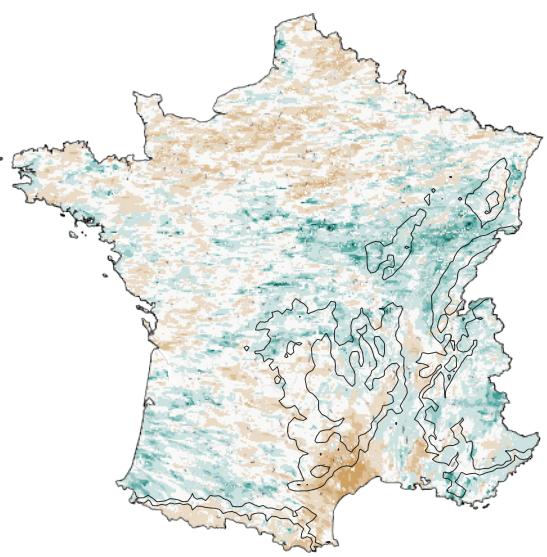


**OCT**  
 $r = 0.02$   
ME = -9.91  
 $n = 606$

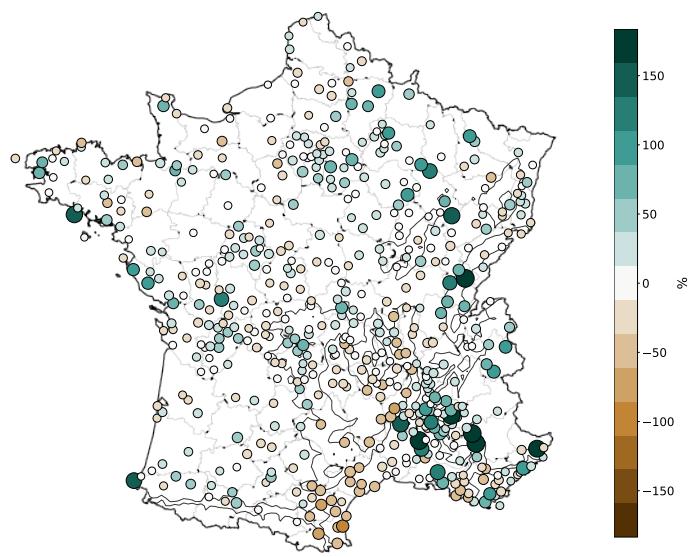


**NOV**  
 $r = 0.16$   
ME = 8.69  
 $n = 593$

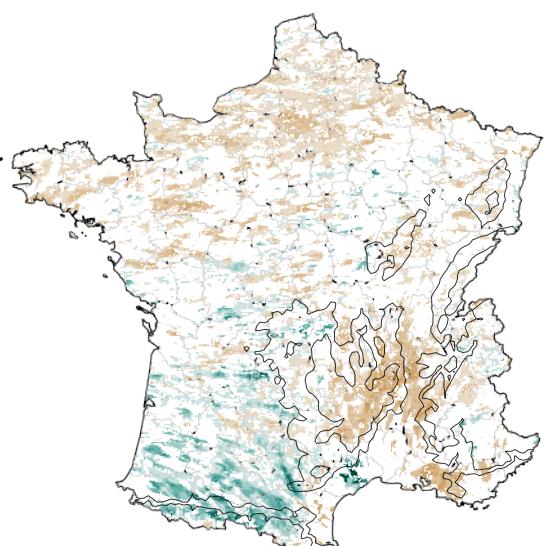




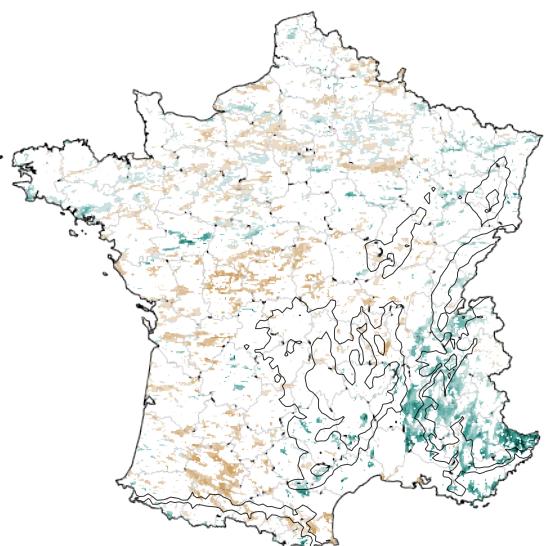
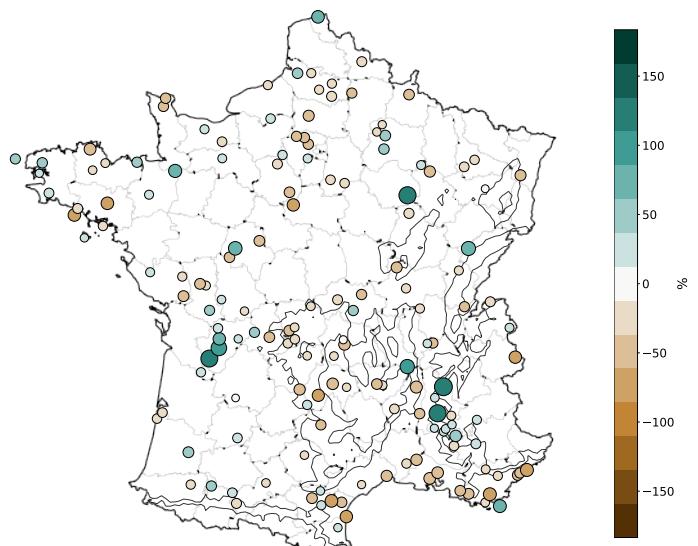
**DEC**  
 $r = 0.17$   
ME = -5.44  
 $n = 548$



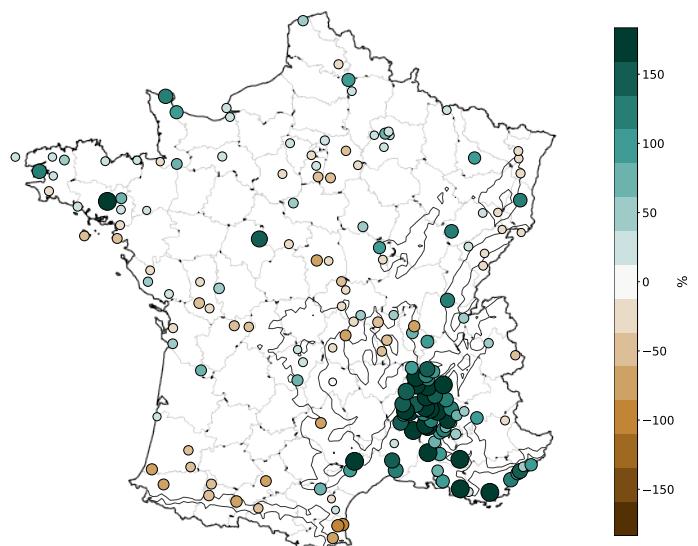
#### 4.3.2.2 Tendances significatives

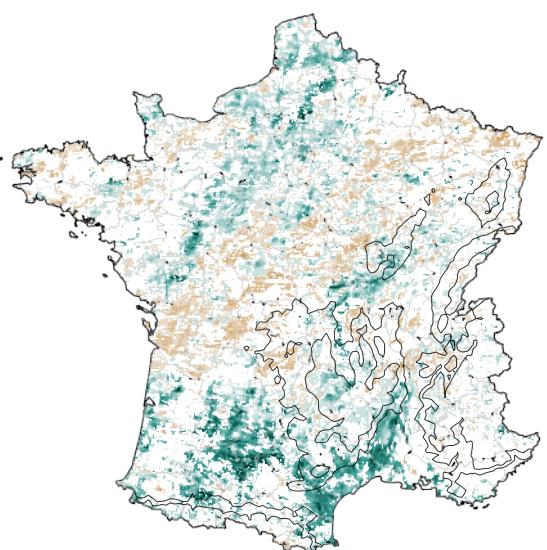


**JAN**  
 $r = 0.07$   
ME = -4.33  
 $n = 66$

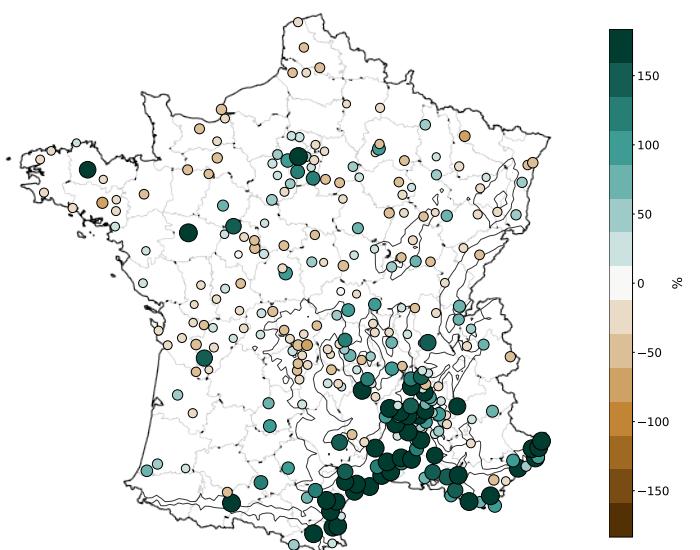


**FEV**  
 $r = 0.66$   
ME = -56.07  
 $n = 51$

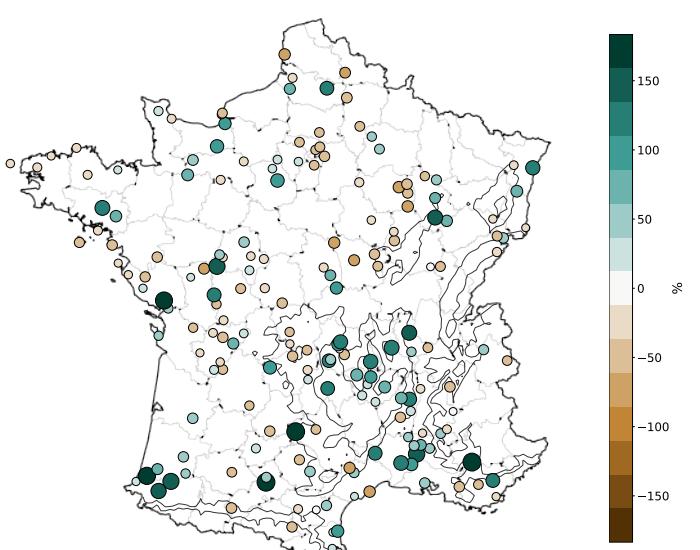
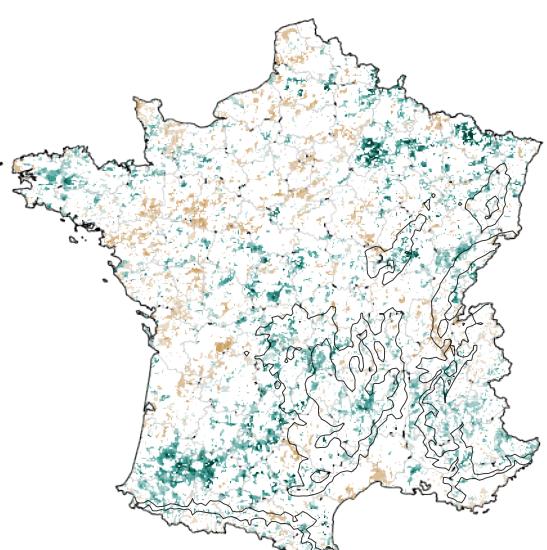




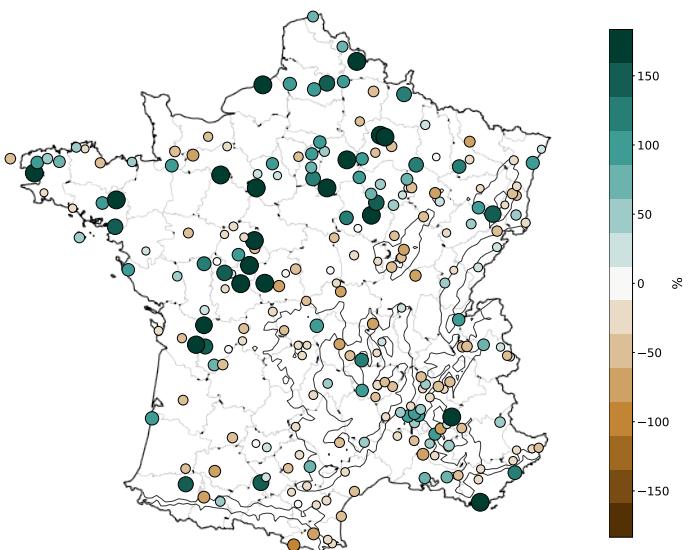
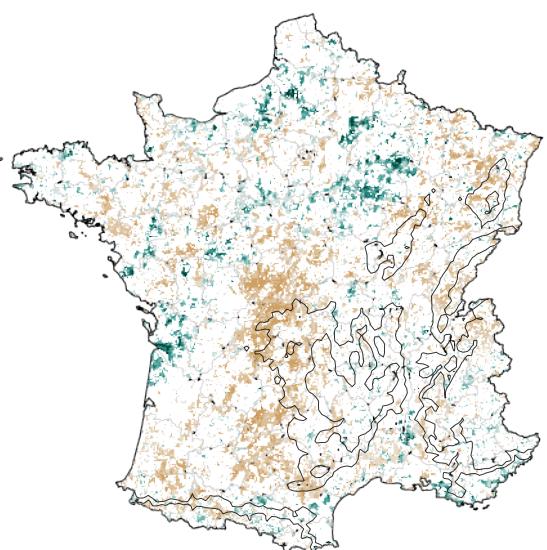
**MAR**  
 $r = 0.48$   
ME =  $-23.3\%$   
 $n = 136$

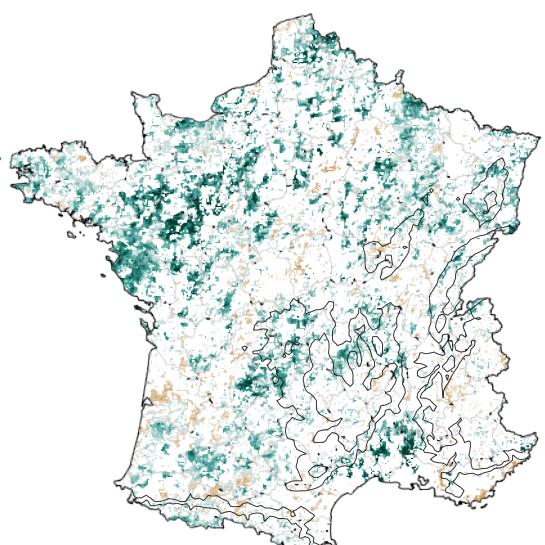


**AVR**  
 $r = 0.37$   
ME =  $21.11\%$   
 $n = 46$

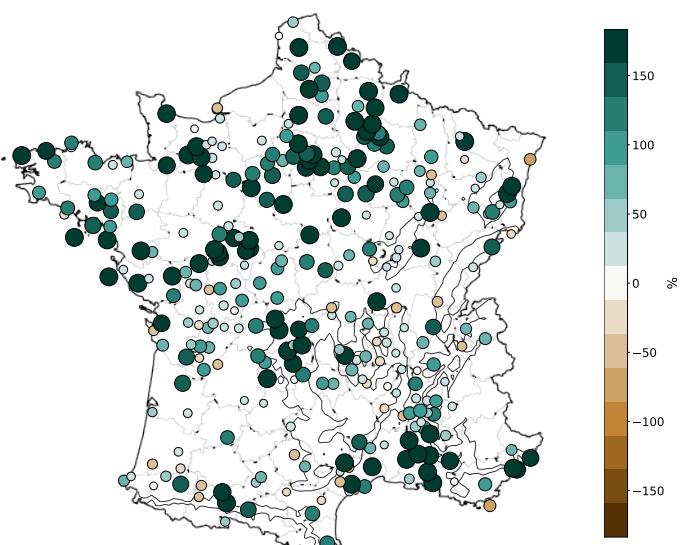


**MAI**  
 $r = -0.01$   
ME =  $-52.04\%$   
 $n = 79$

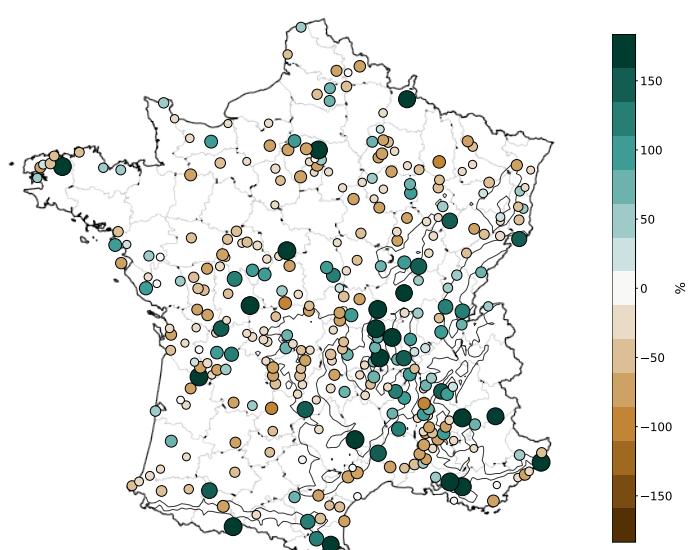
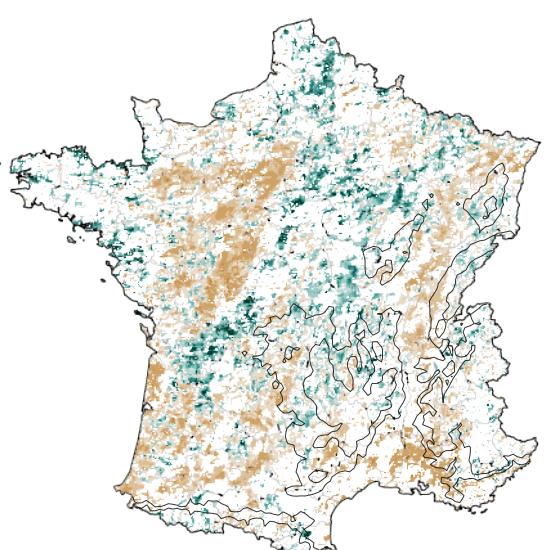




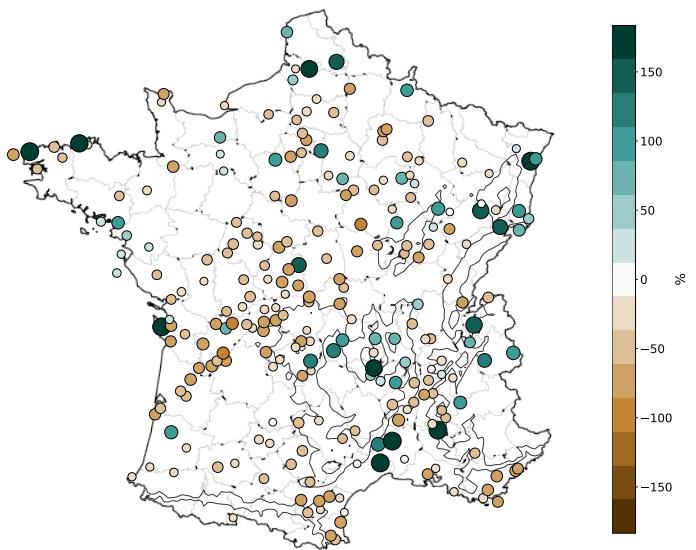
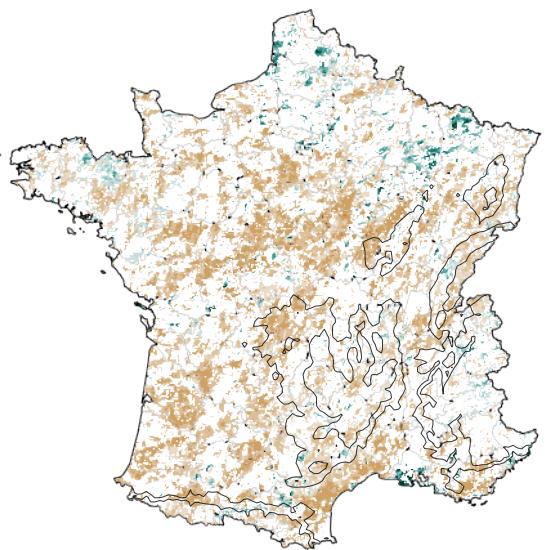
**JUI**  
 $r = 0.07$   
ME = -71.5<sup>c</sup>  
 $n = 121$

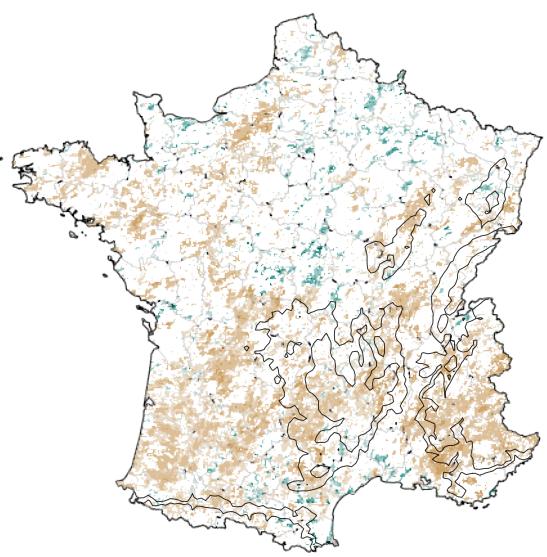


**JUILL**  
 $r = 0.02$   
ME = 8.28  
 $n = 167$

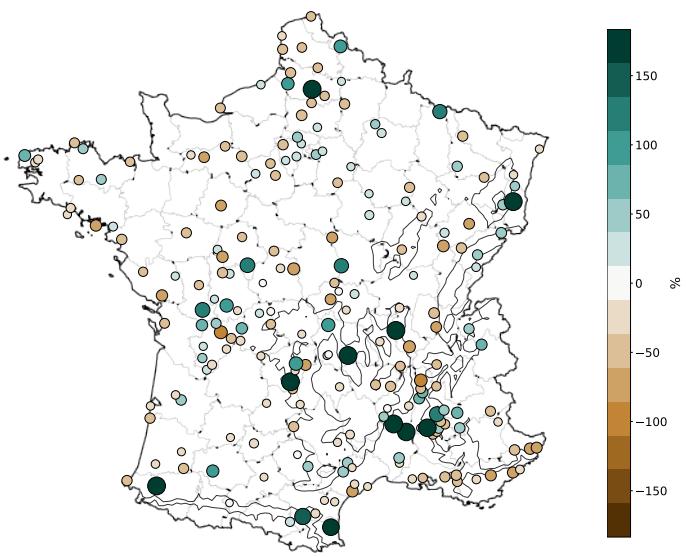


**AOU**  
 $r = 0.17$   
ME = -15.3<sup>c</sup>  
 $n = 105$

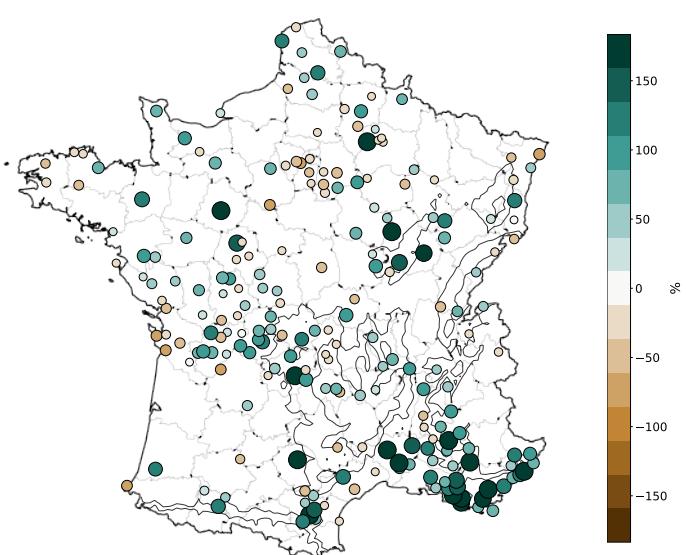
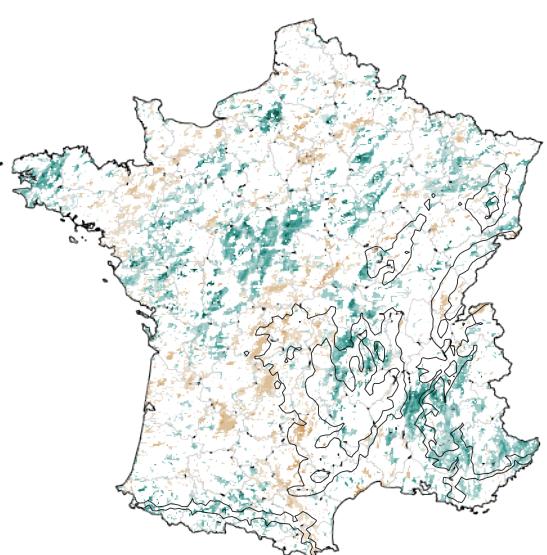




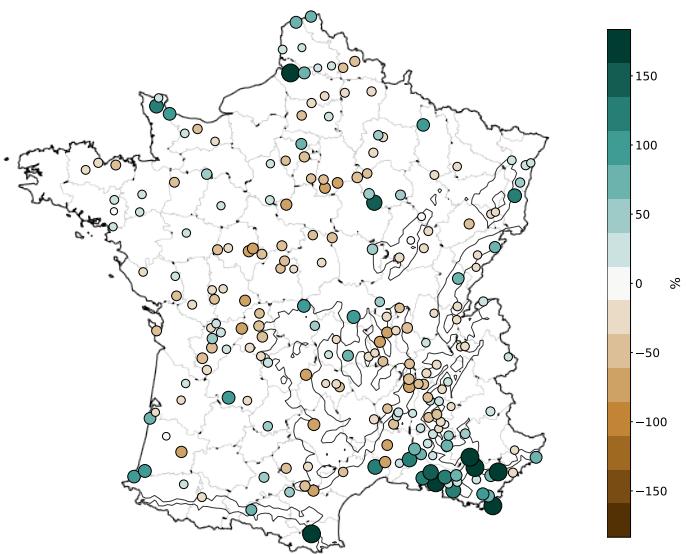
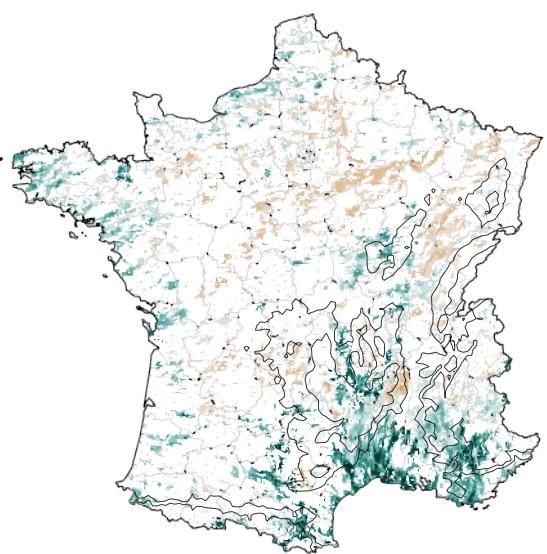
**SEP**  
 $r = -0.01$   
ME =  $-20.1\epsilon$   
 $n = 97$

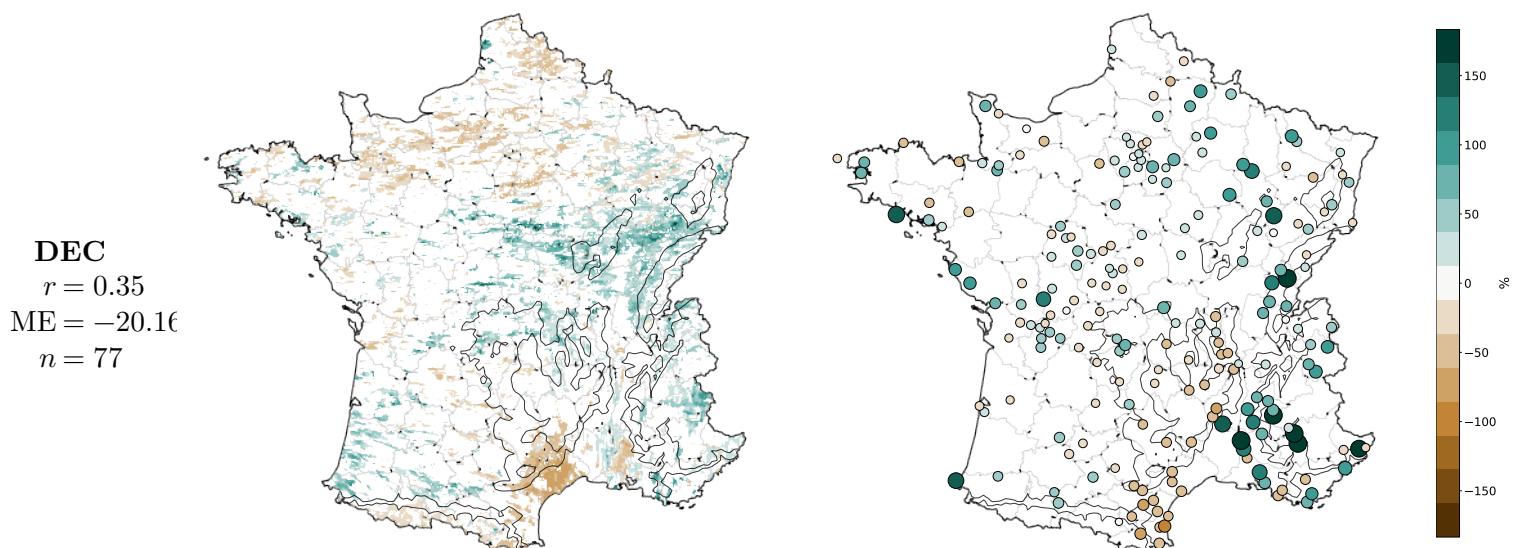


**OCT**  
 $r = 0.02$   
ME =  $-35.74$   
 $n = 85$



**NOV**  
 $r = 0.24$   
ME =  $8.65$   
 $n = 72$



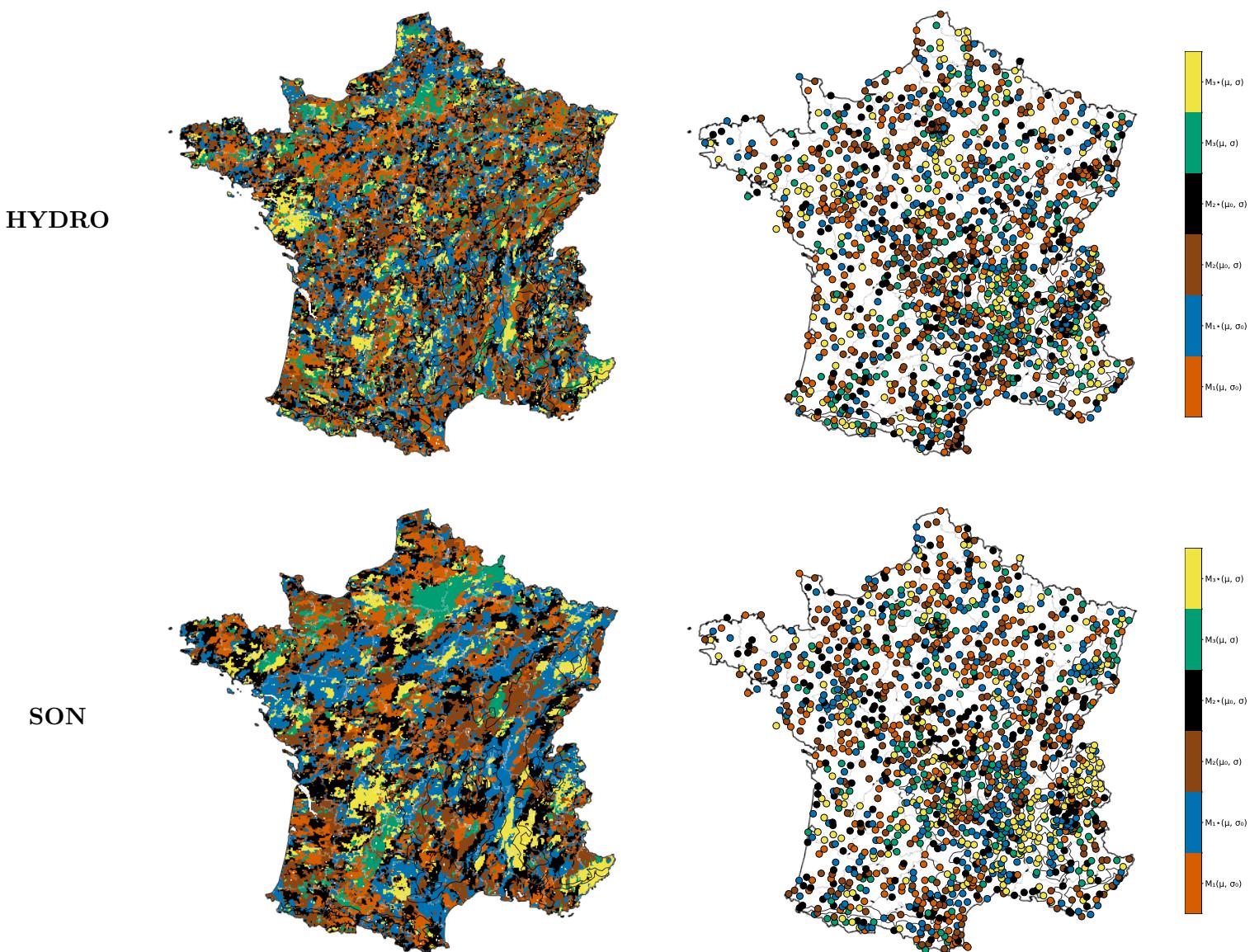


## 5 Meilleur modèle GEV

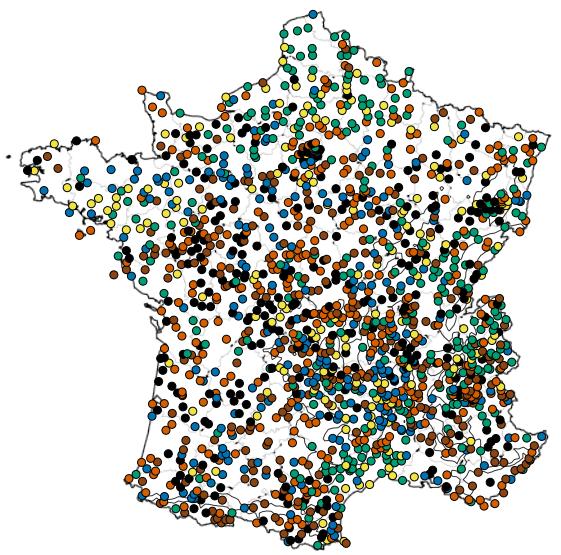
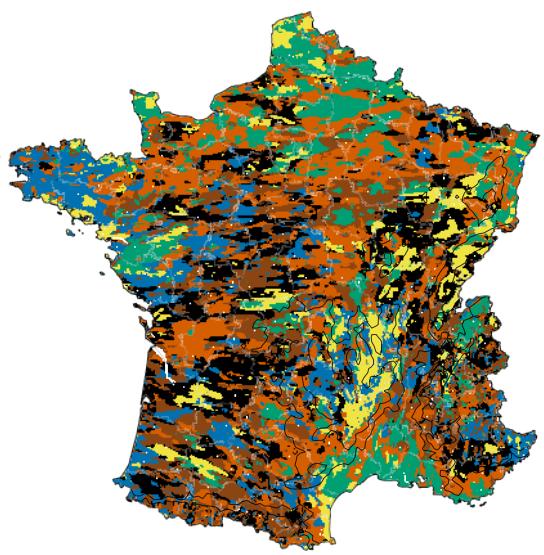
### 5.1 Données journalières (1959-2022)

#### 5.1.1 Par saison

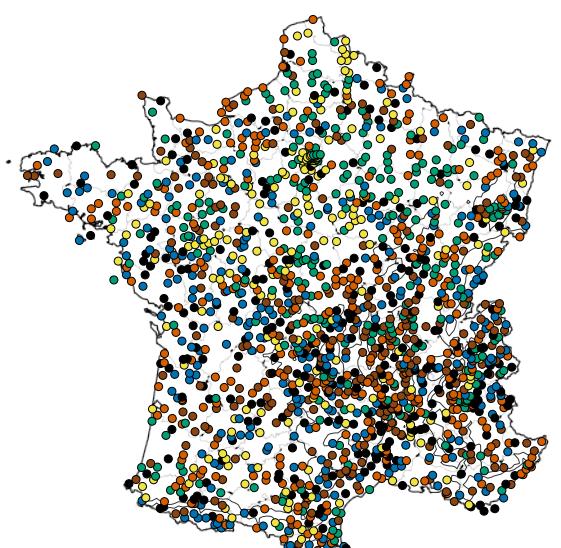
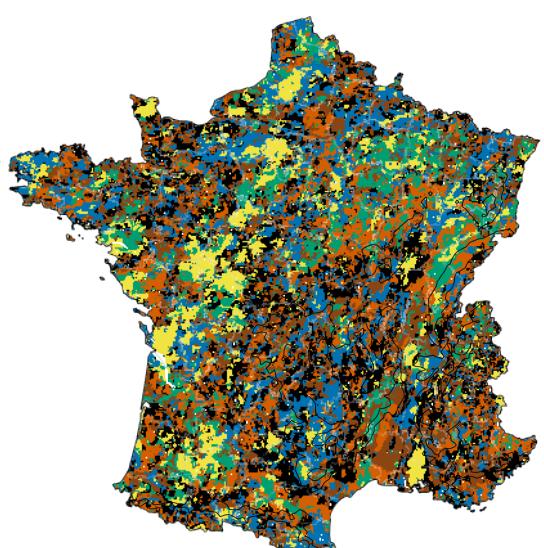
##### 5.1.1.1 Toutes tendances



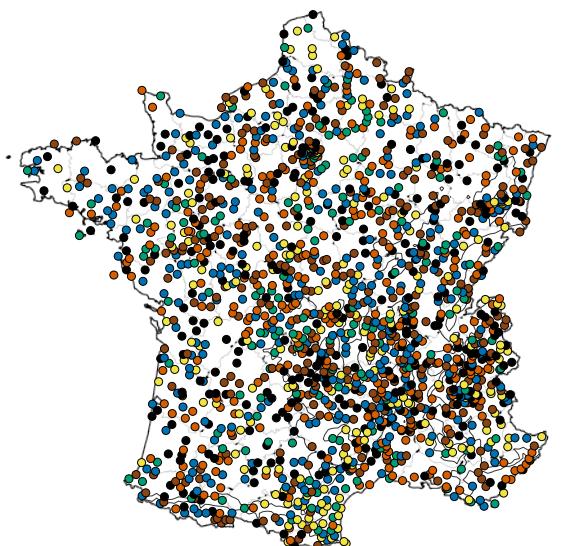
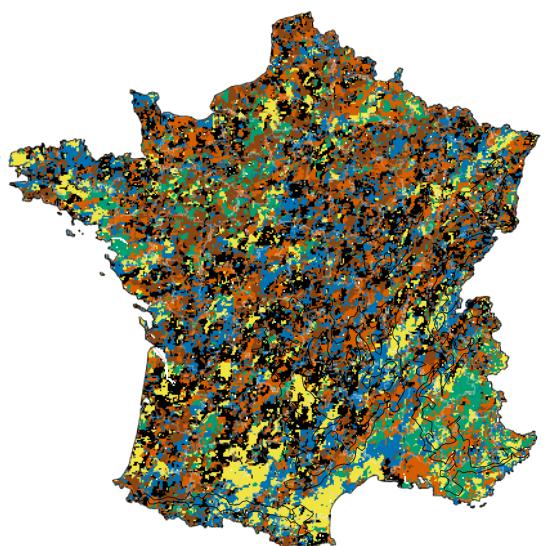
DJF



MAM

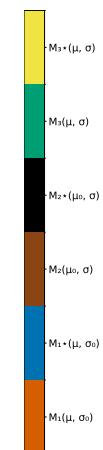
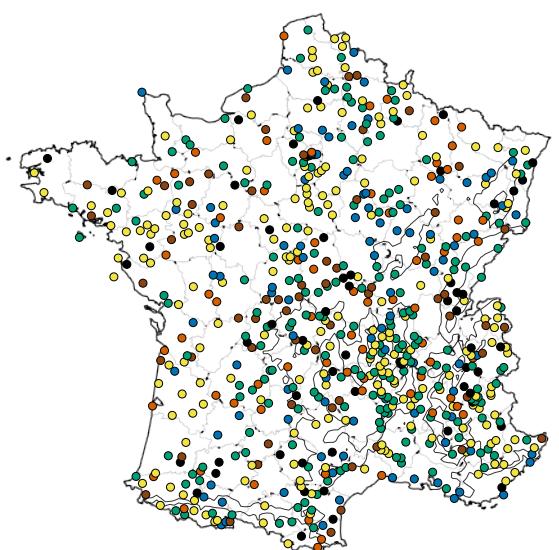
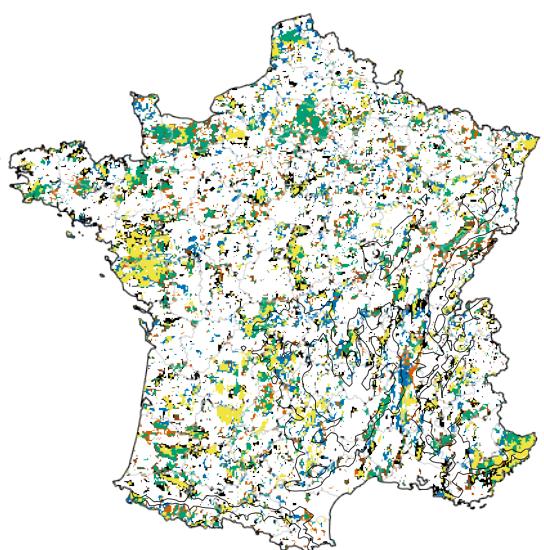


JJA

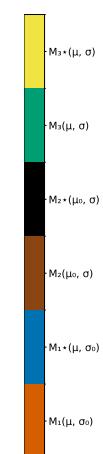
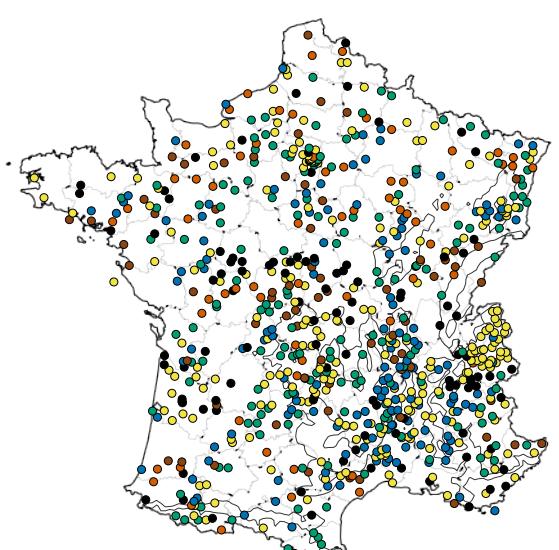
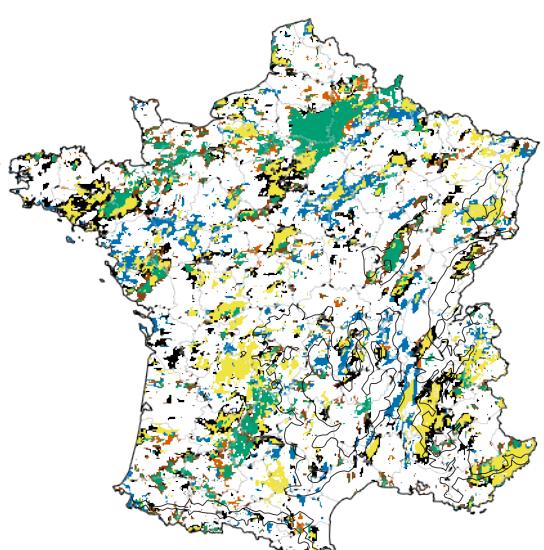


#### 5.1.1.2 Tendances significatives

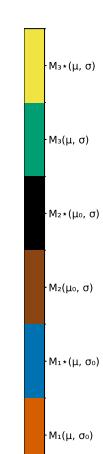
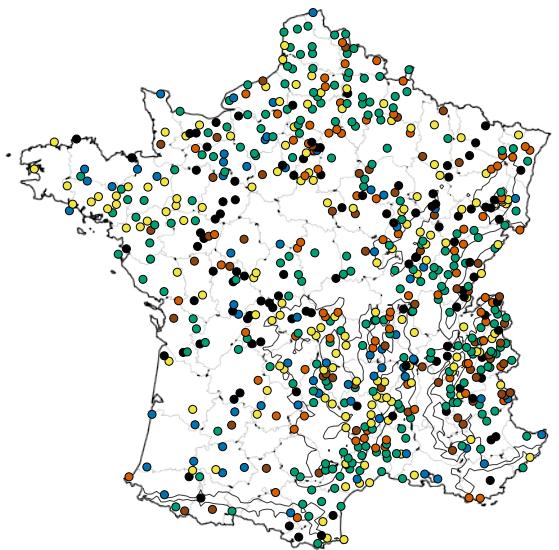
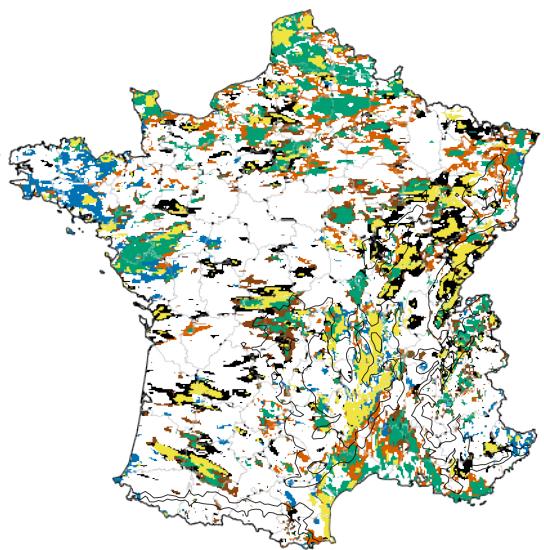
**HYDRO**



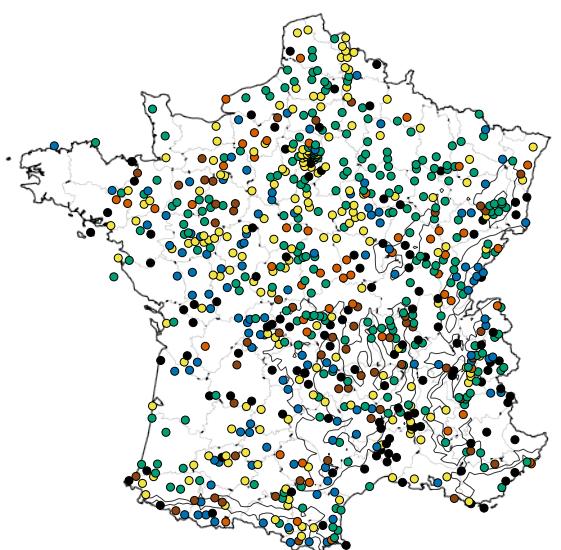
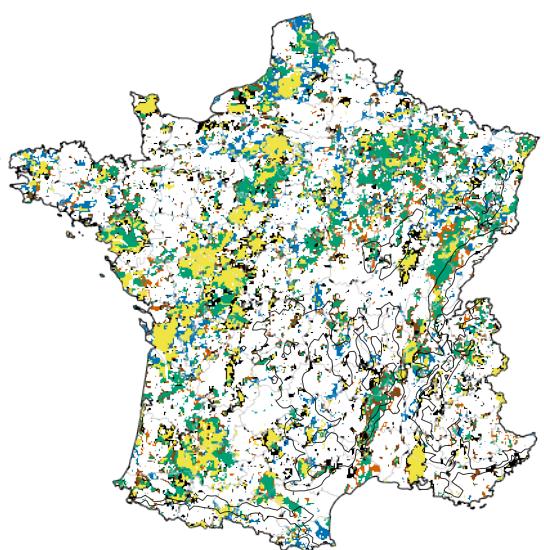
**SON**



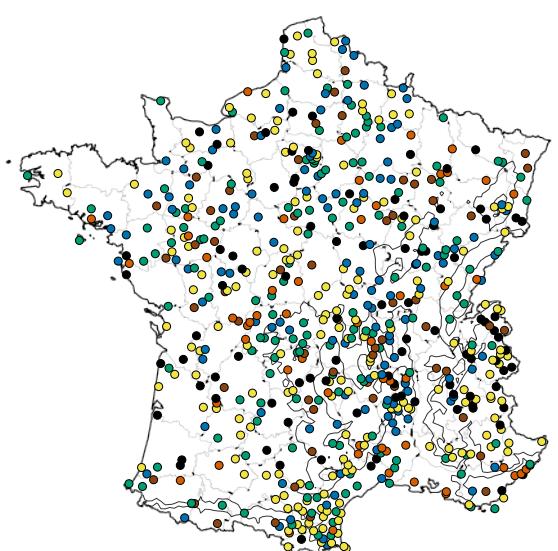
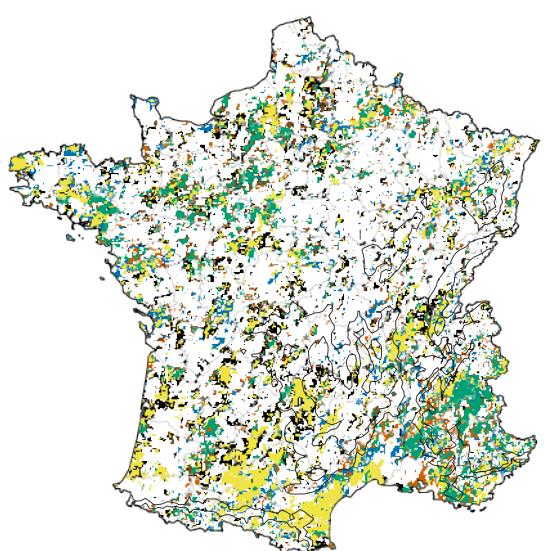
**DJF**



MAM



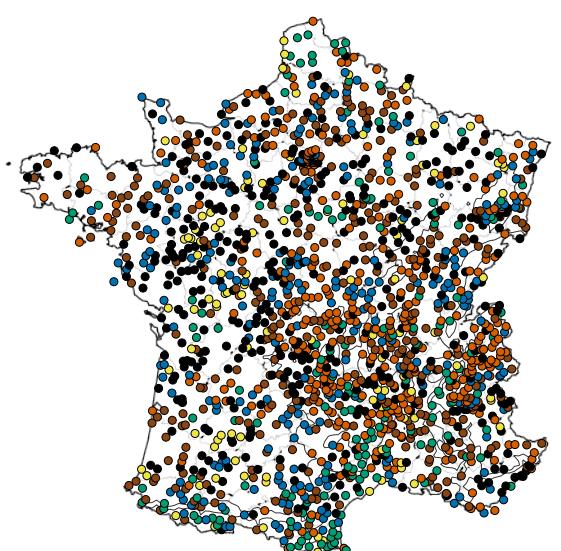
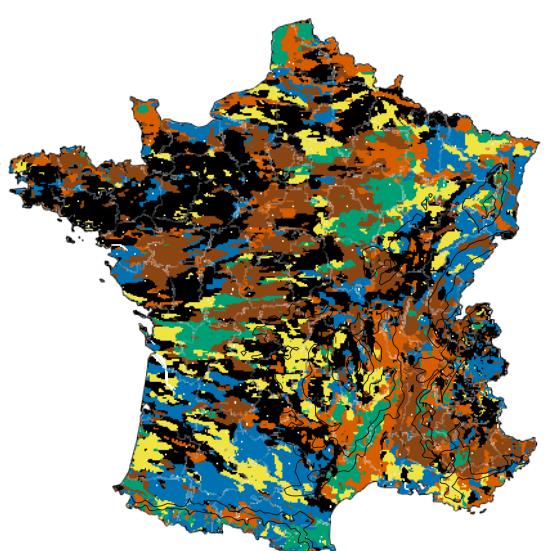
JJA



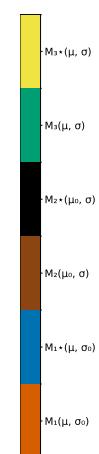
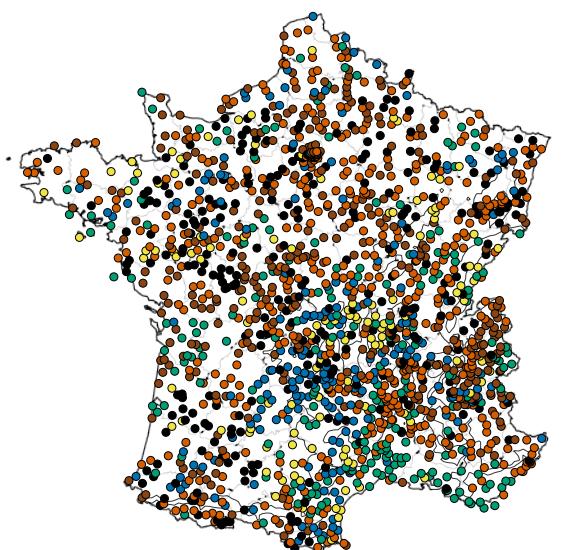
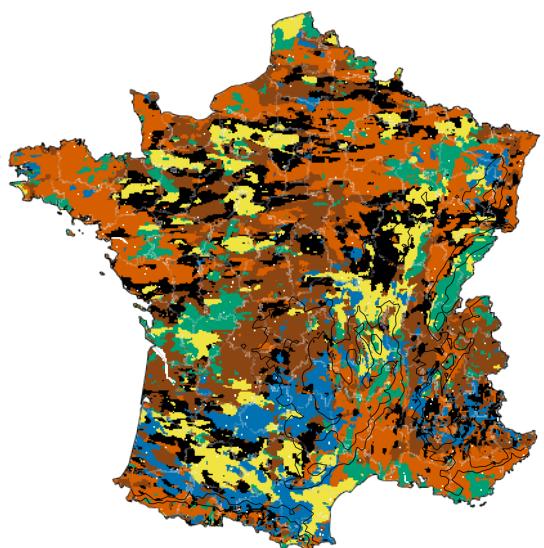
### 5.1.2 Par mois

#### 5.1.2.1 Toutes tendances

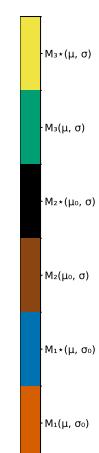
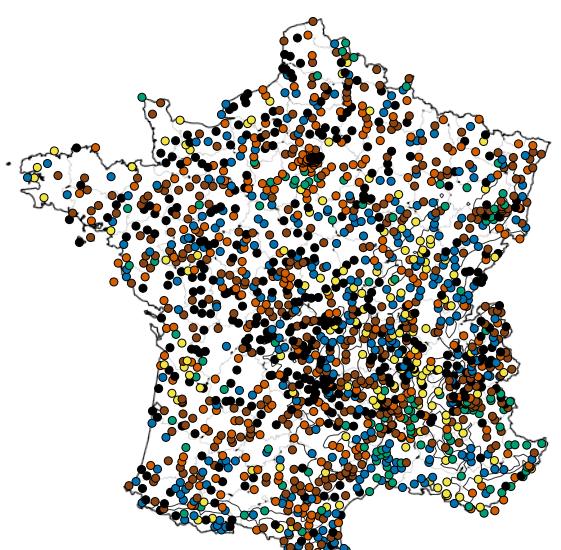
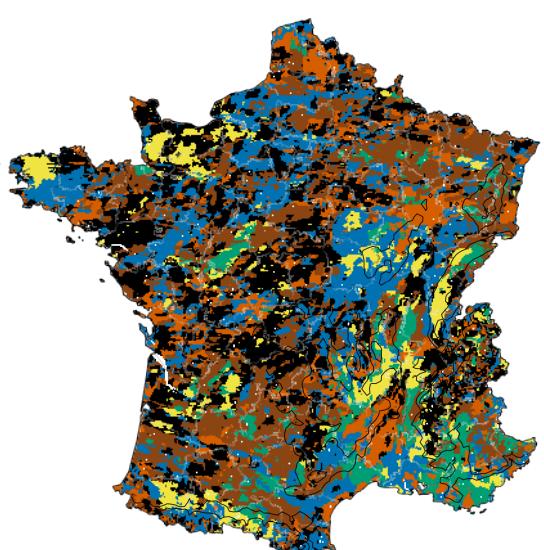
JAN



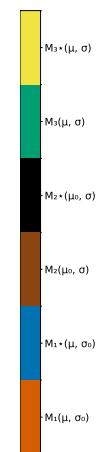
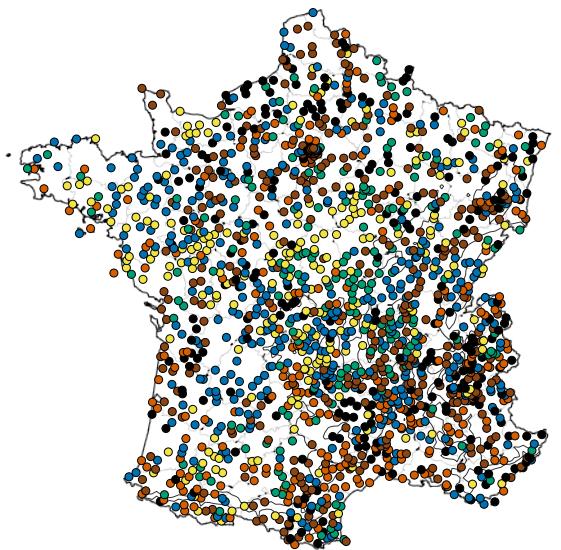
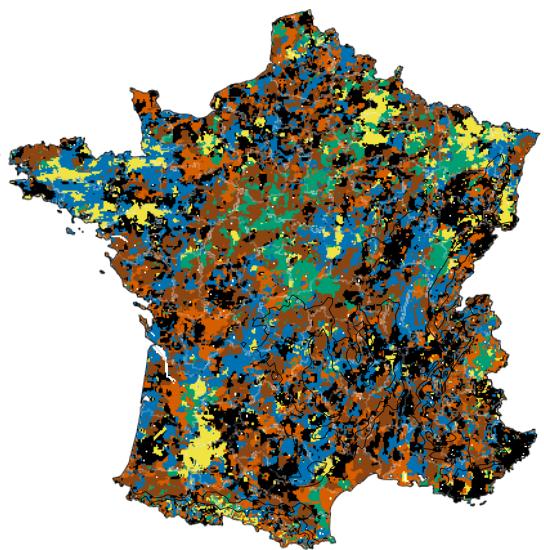
**FEV**



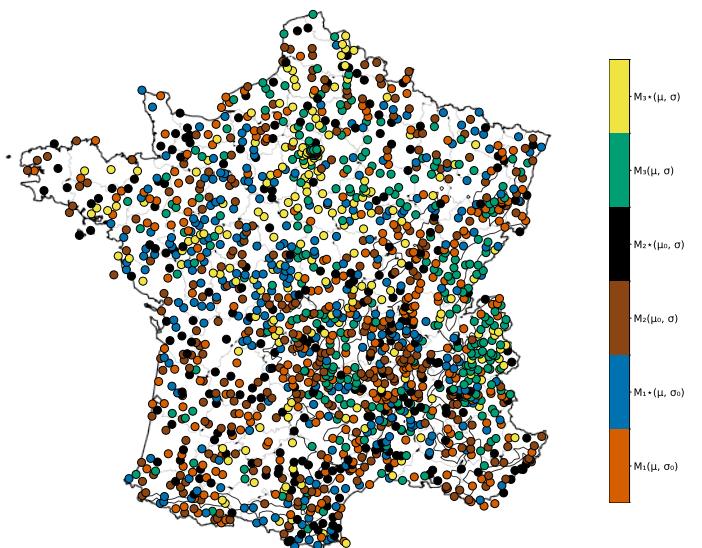
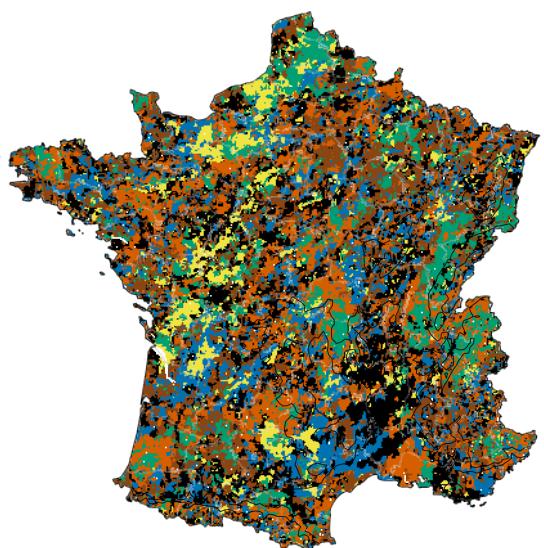
**MAR**



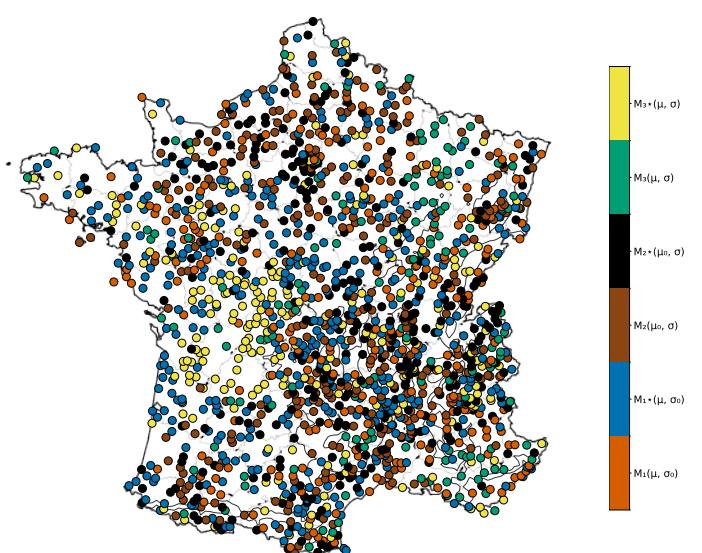
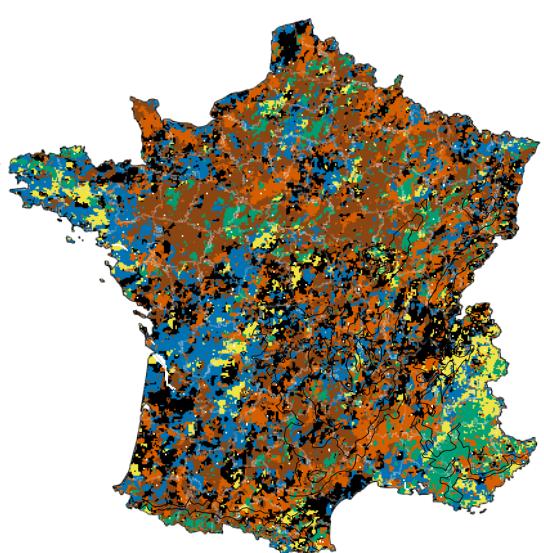
**AVR**



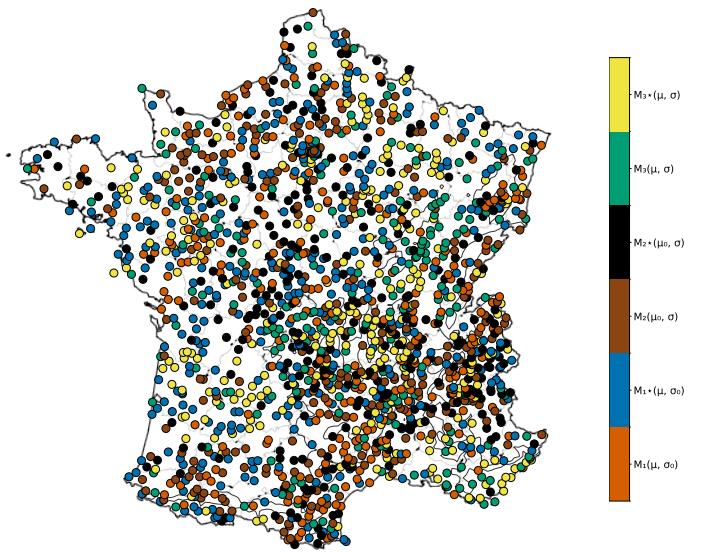
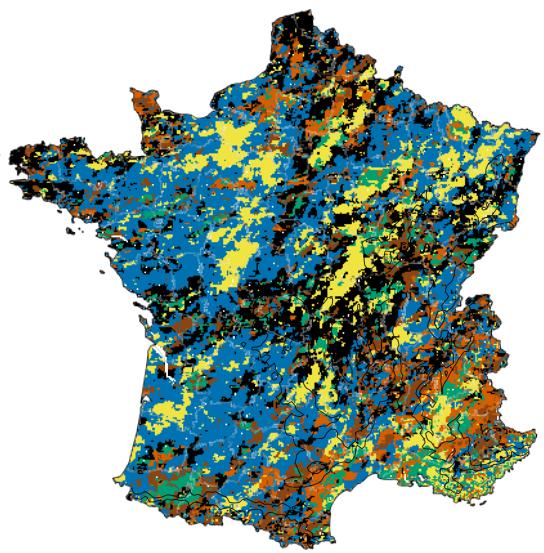
MAI



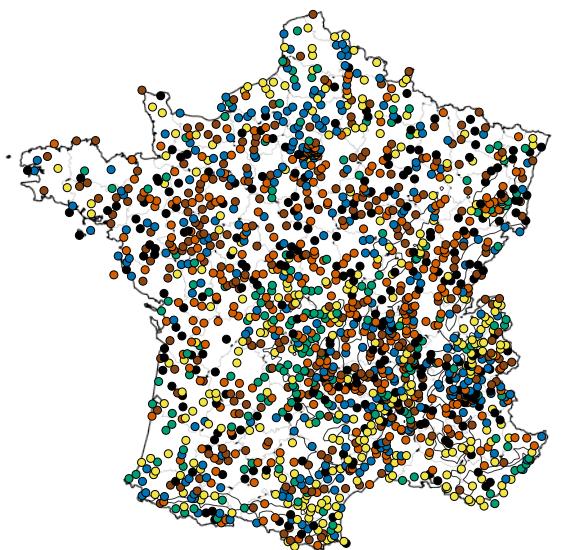
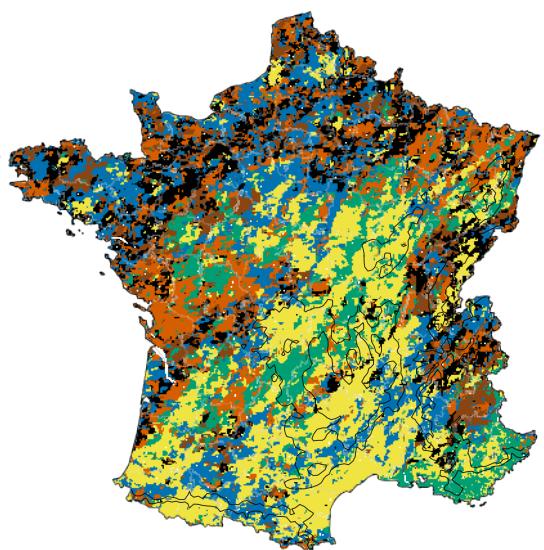
JUI



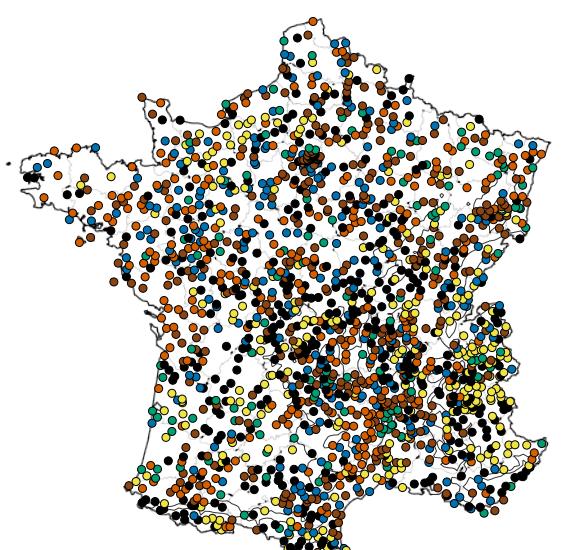
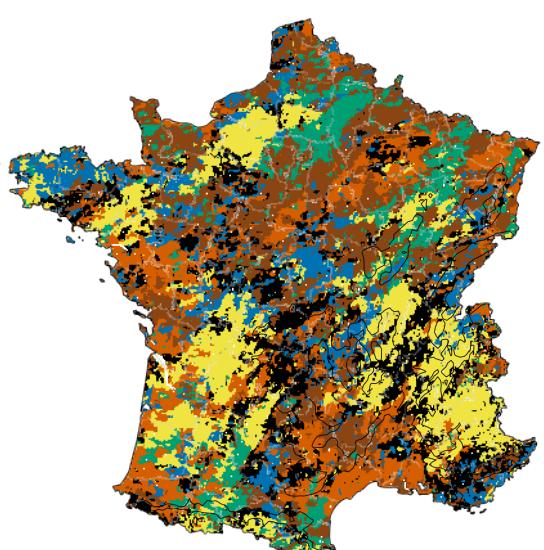
JUILL



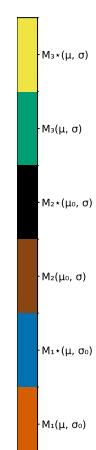
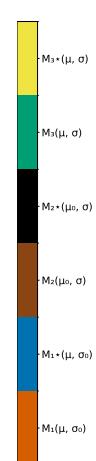
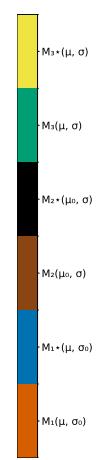
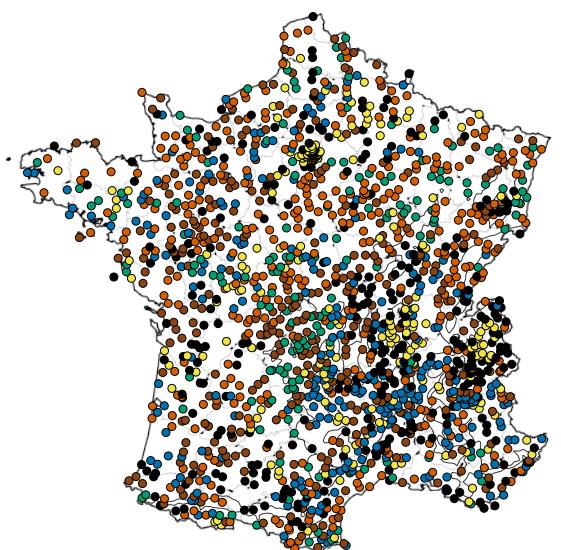
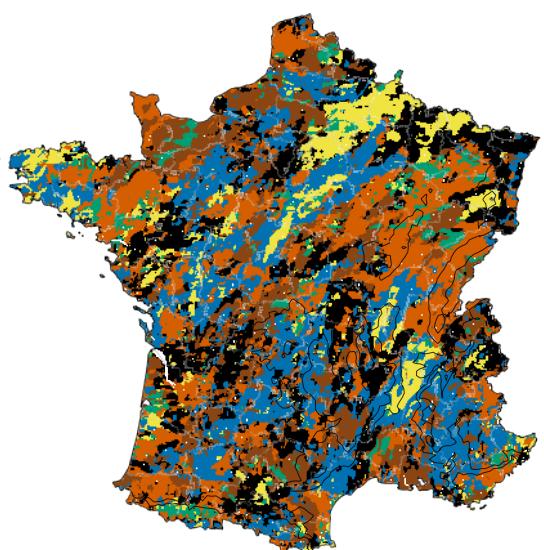
**AOU**



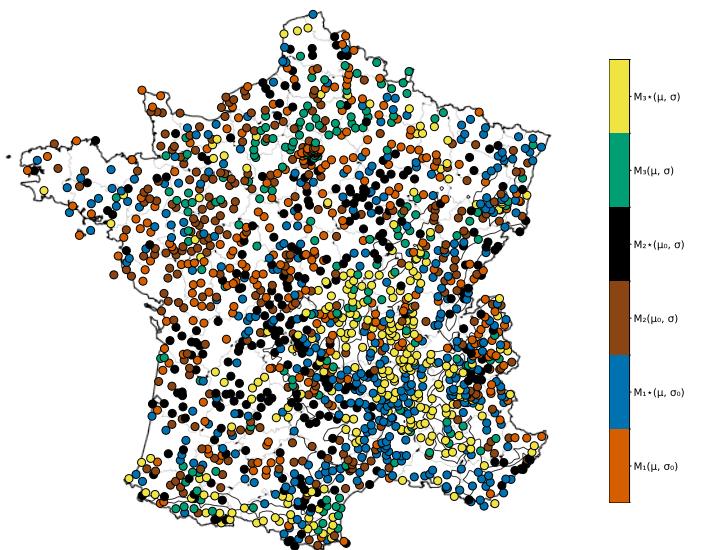
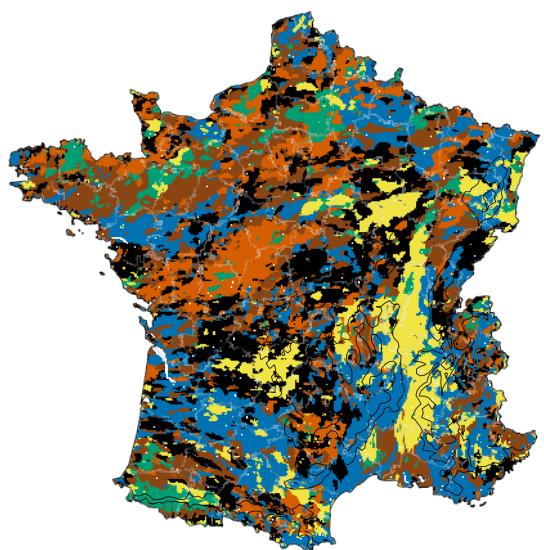
**SEP**



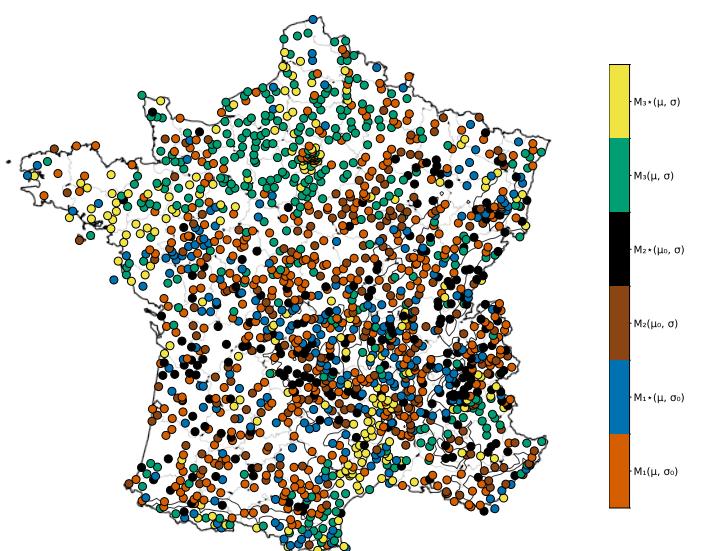
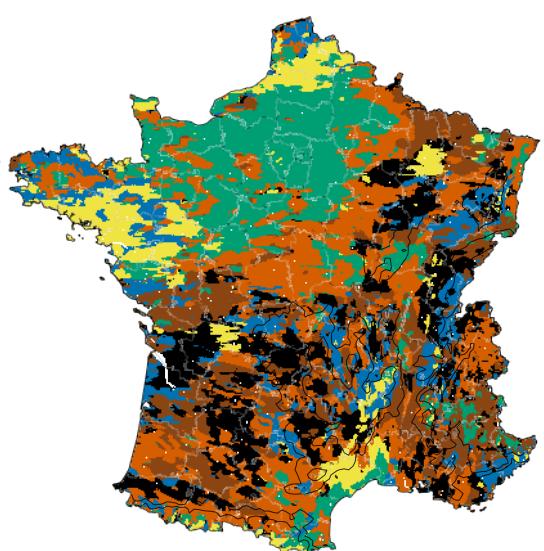
**OCT**



NOV

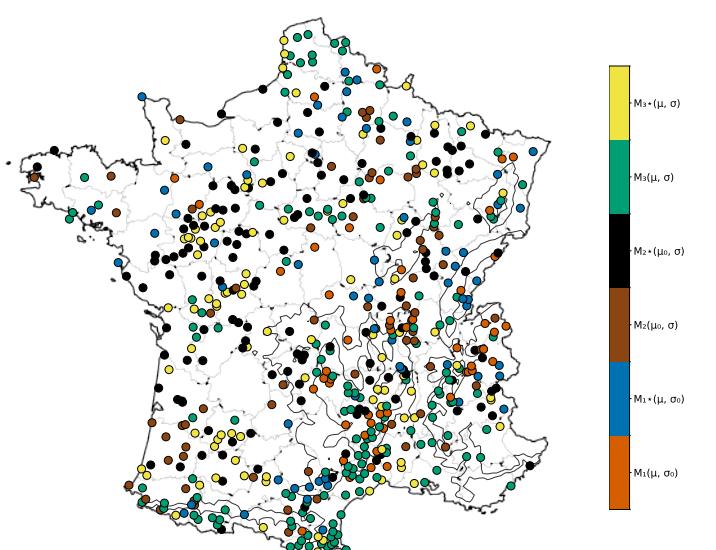
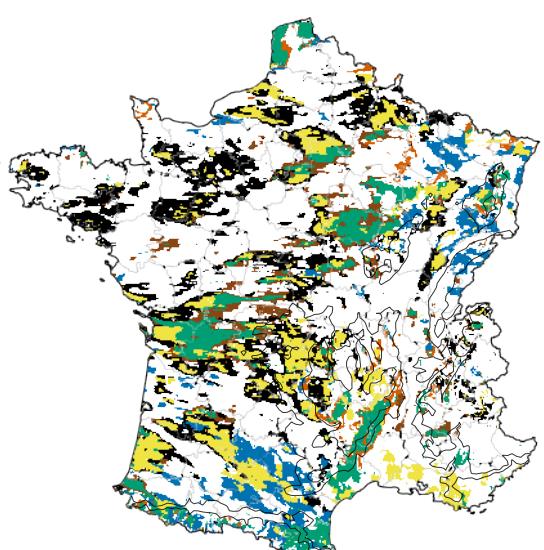


DEC

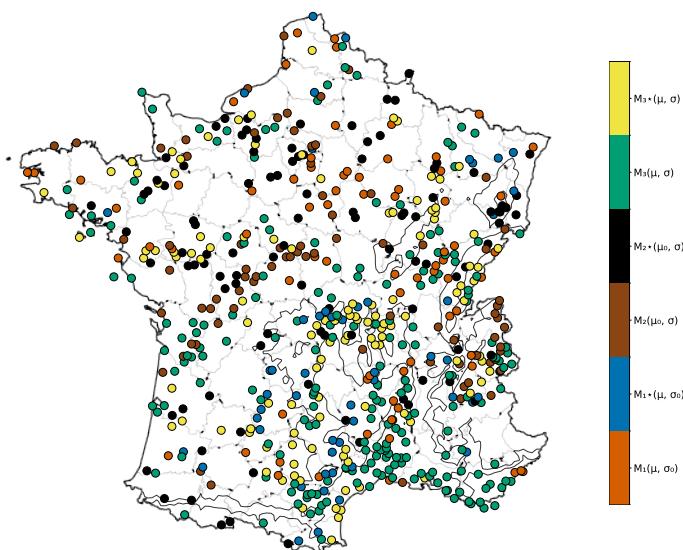
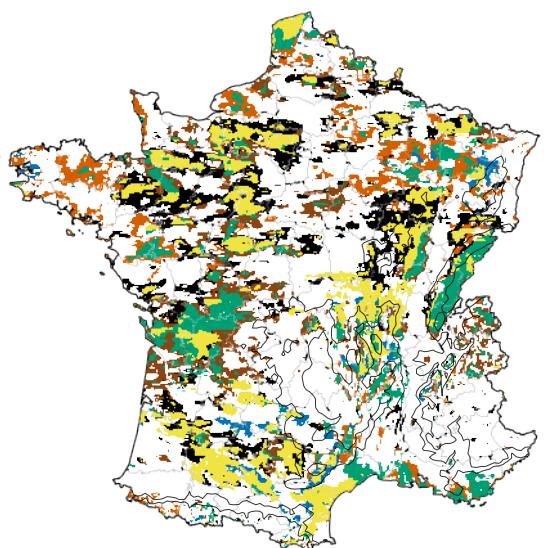


#### 5.1.2.2 Tendances significatives

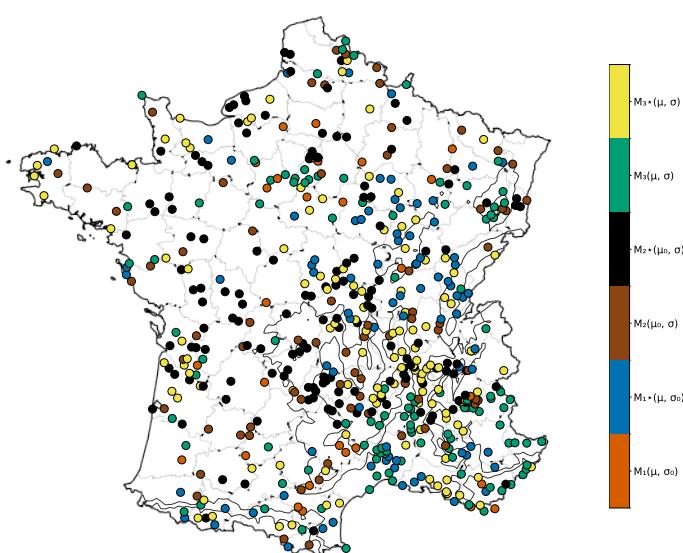
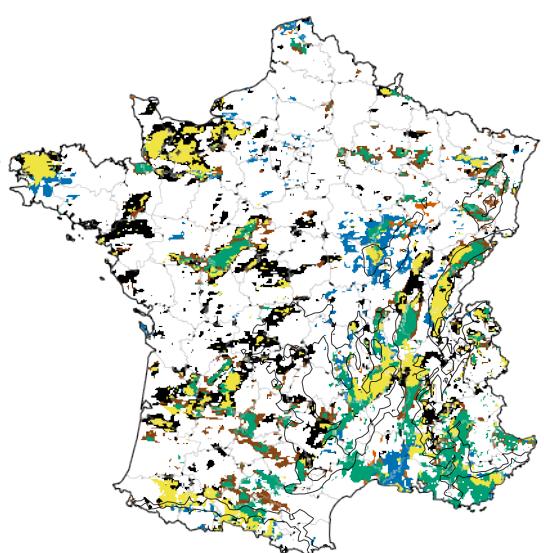
JAN



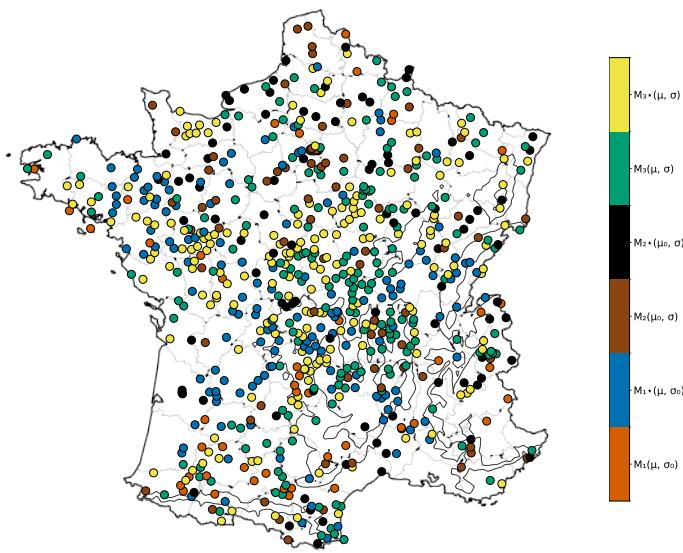
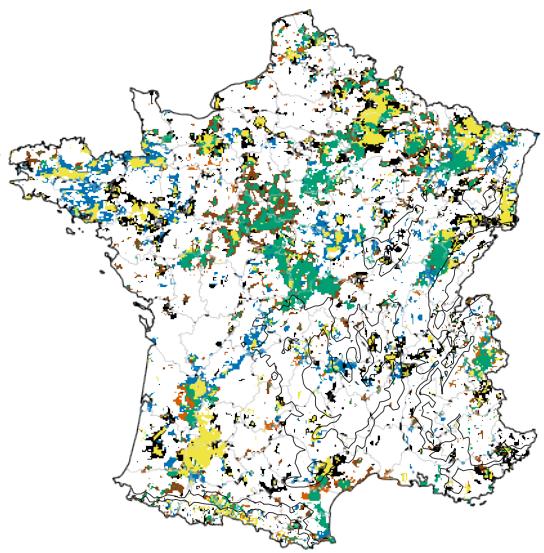
**FEV**



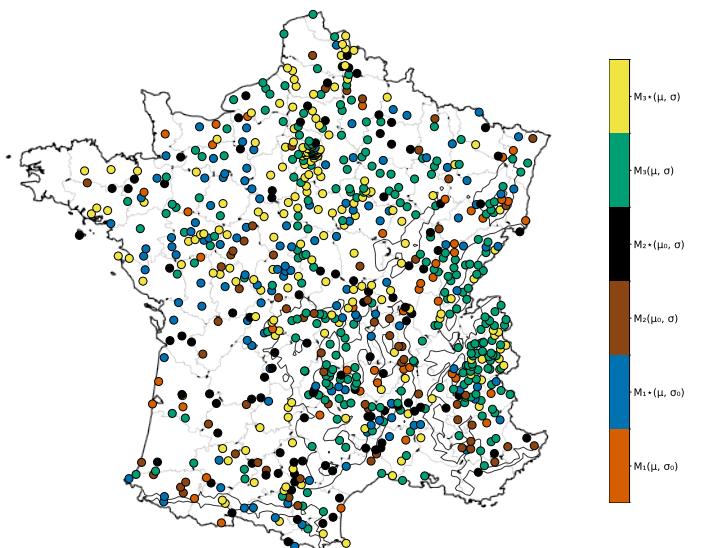
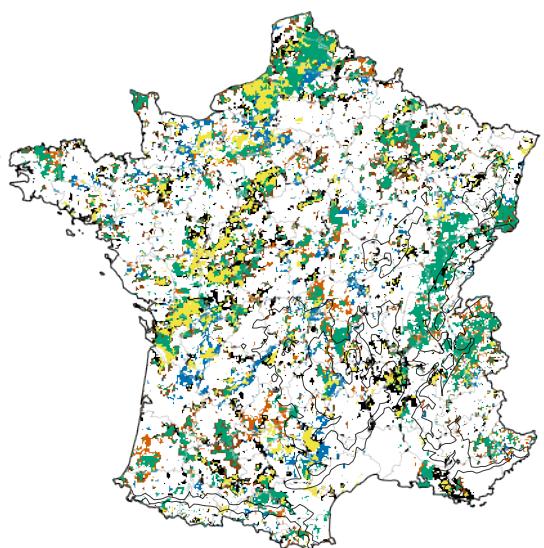
**MAR**



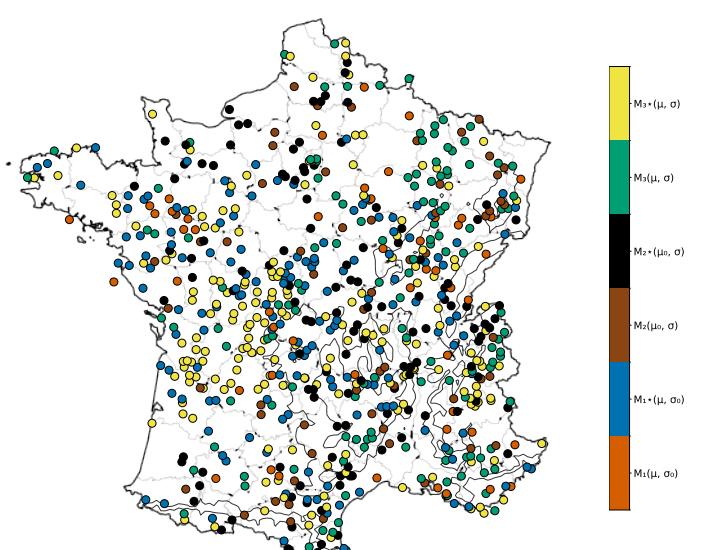
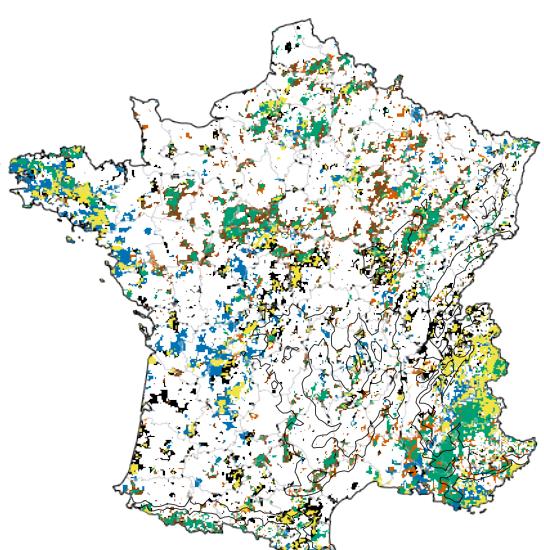
**AVR**



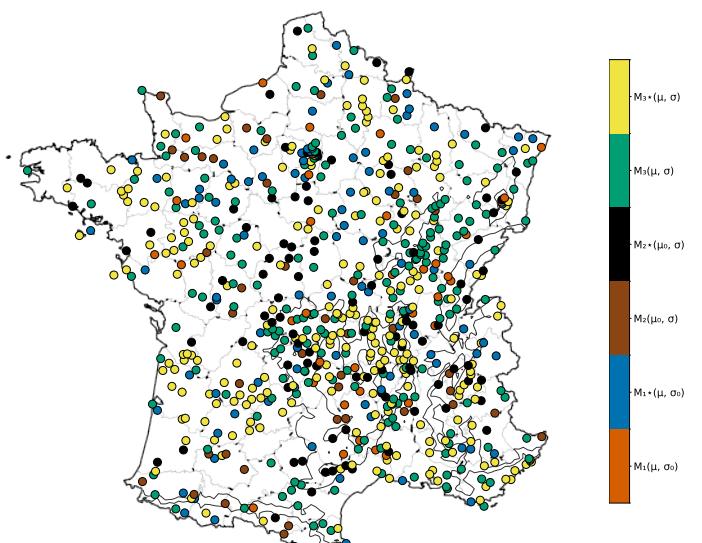
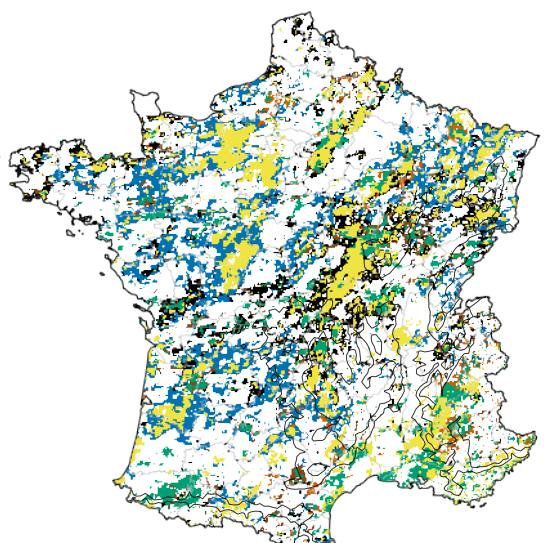
MAI



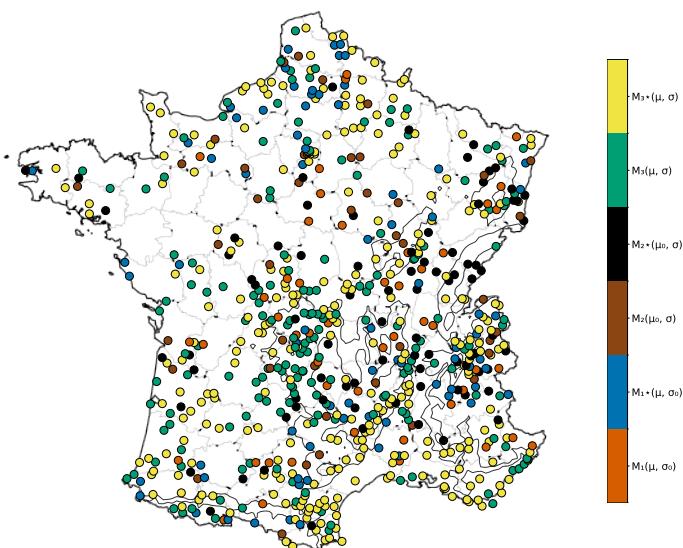
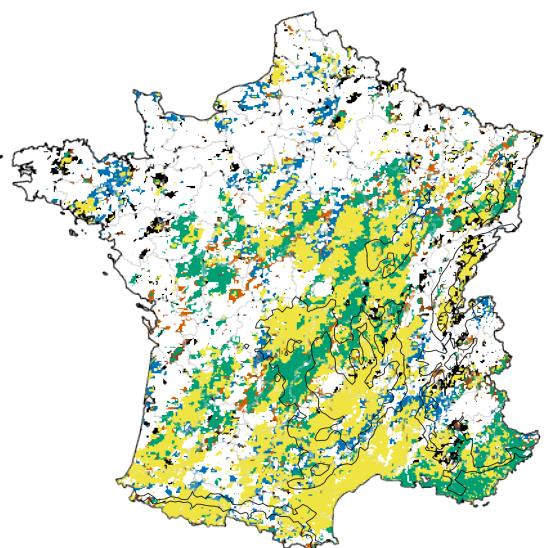
JUI



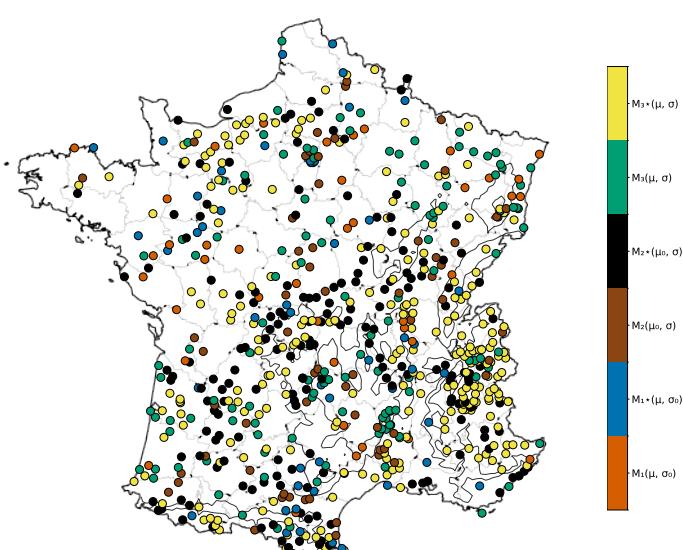
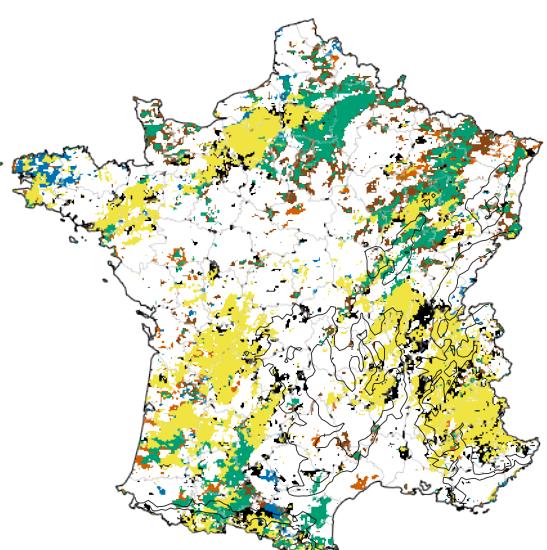
JUILL



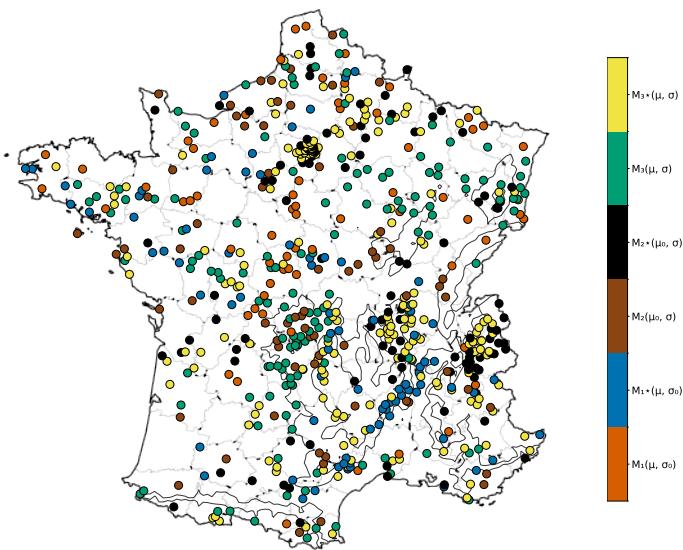
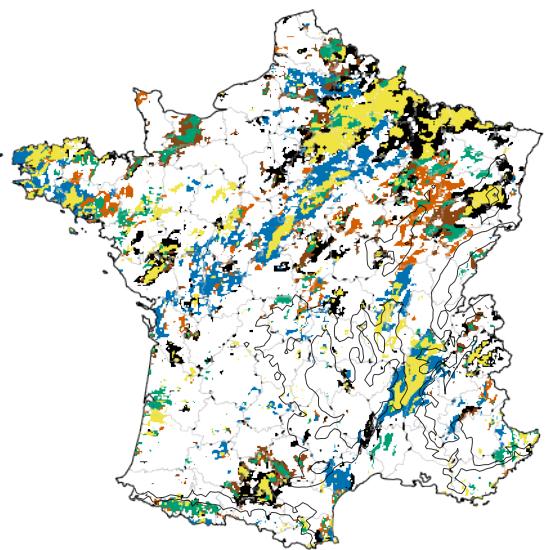
AOU



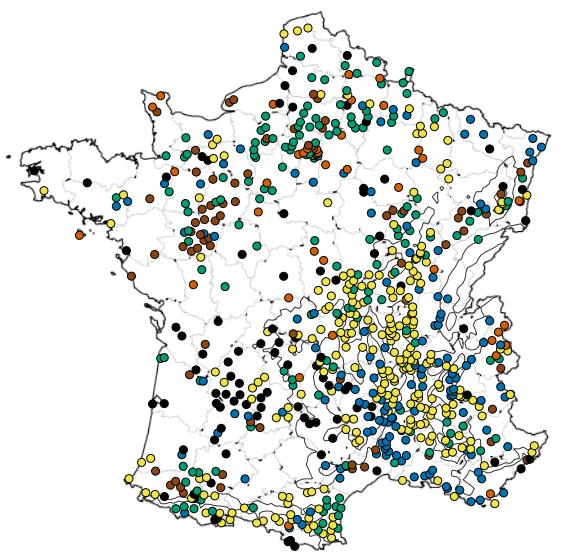
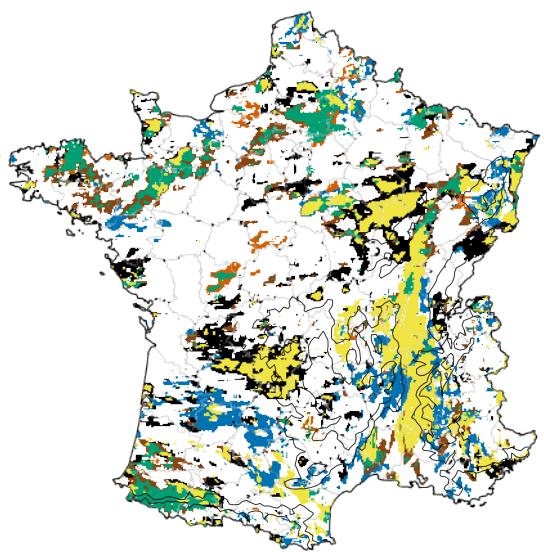
SEP



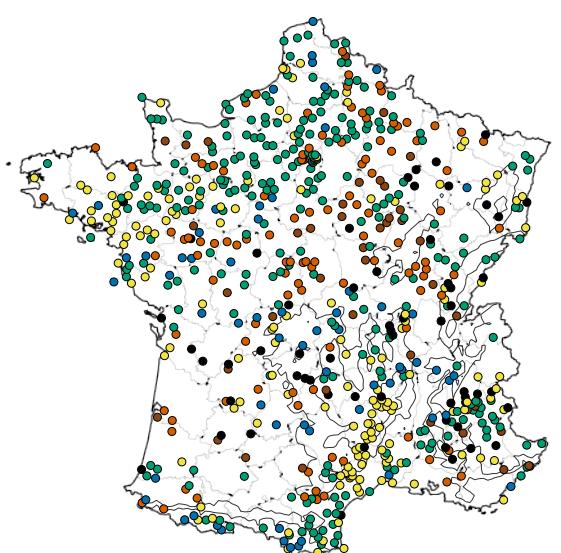
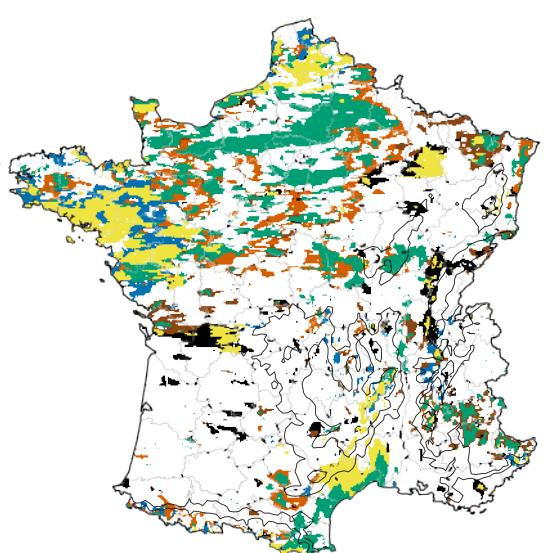
OCT



NOV



DEC

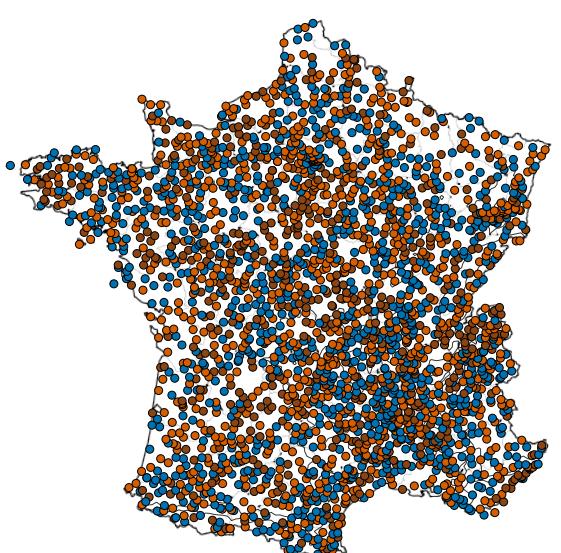
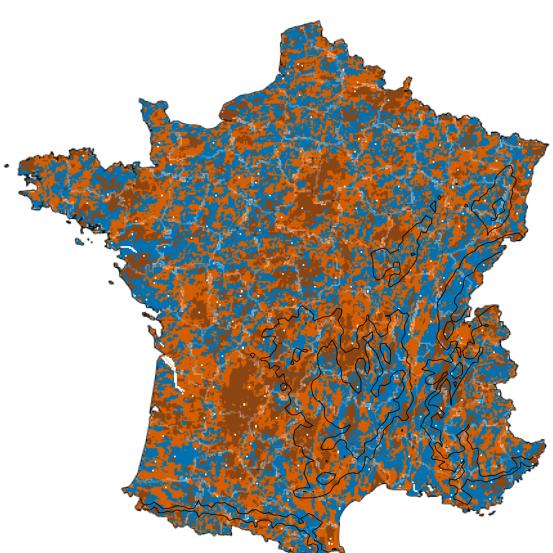


## 5.2 Données journalières (1990-2022)

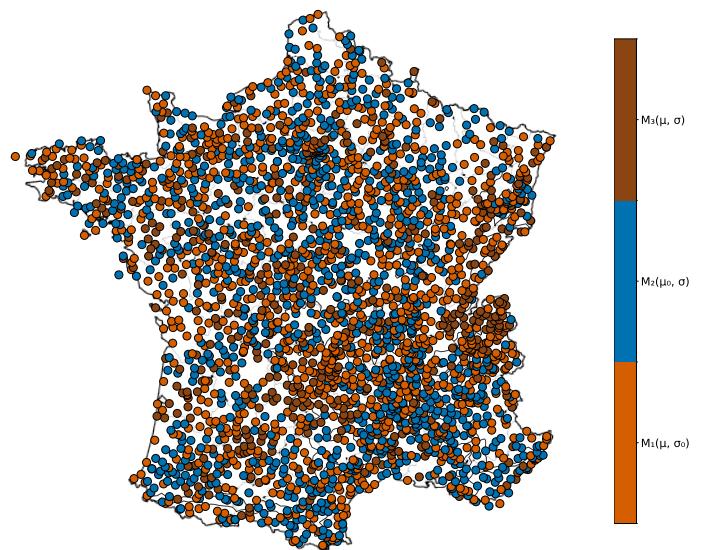
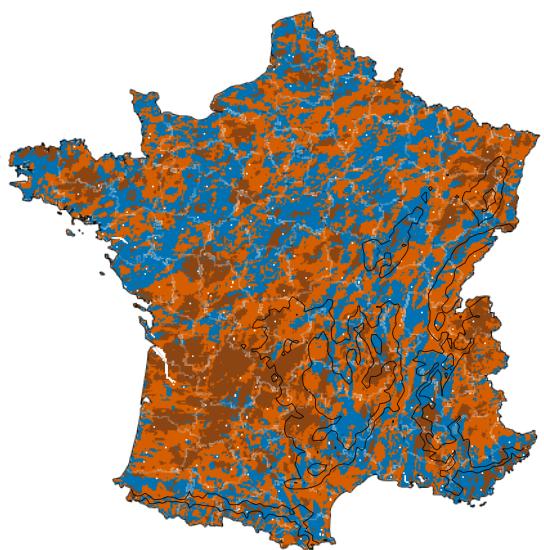
### 5.2.1 Par saison

#### 5.2.1.1 Toutes tendances

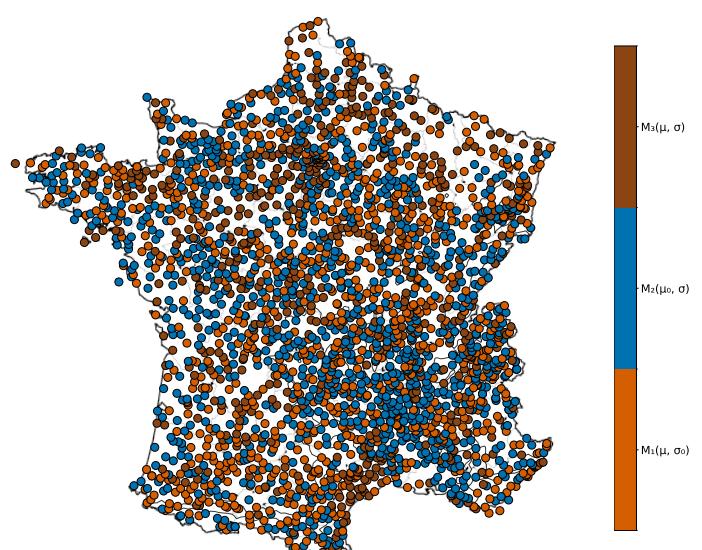
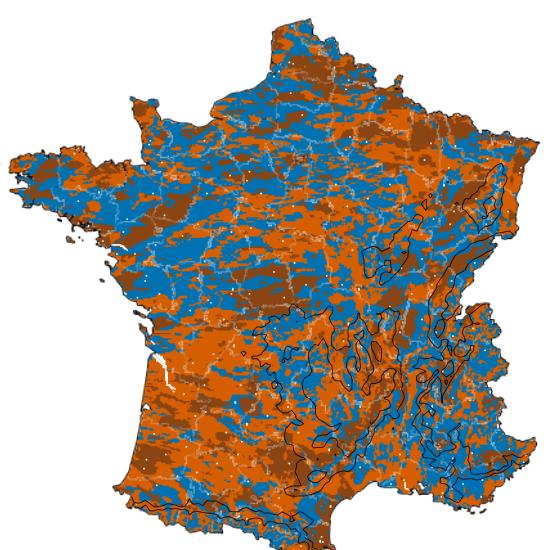
HYDRO



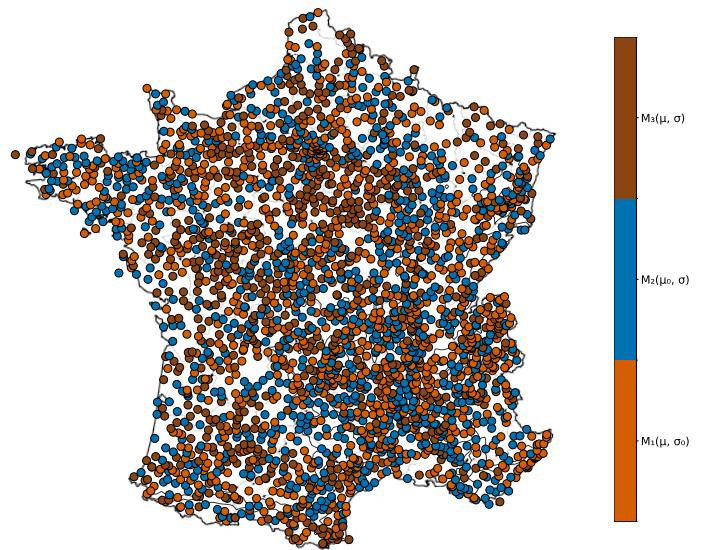
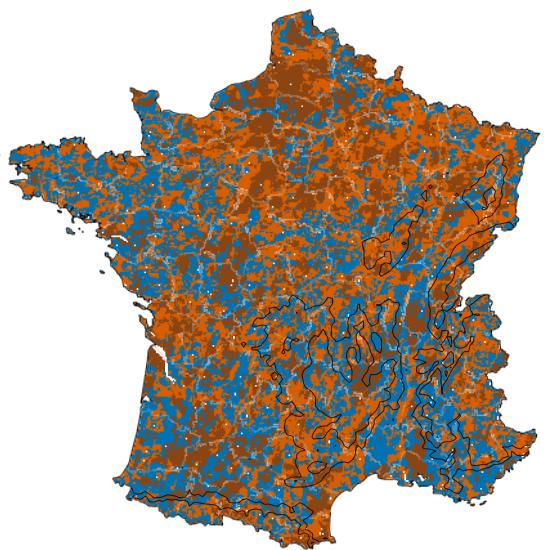
**SON**



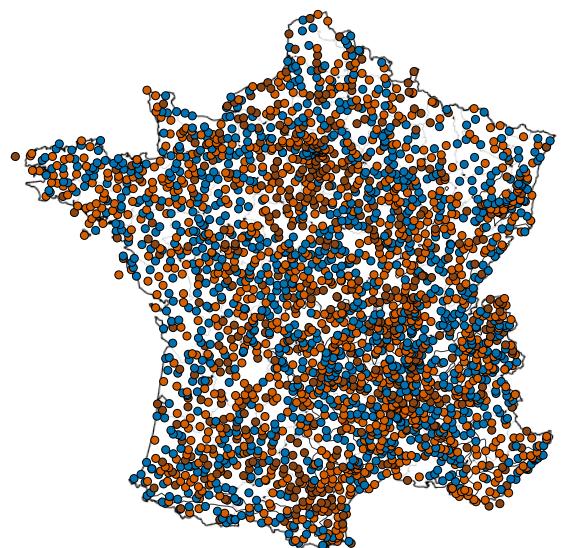
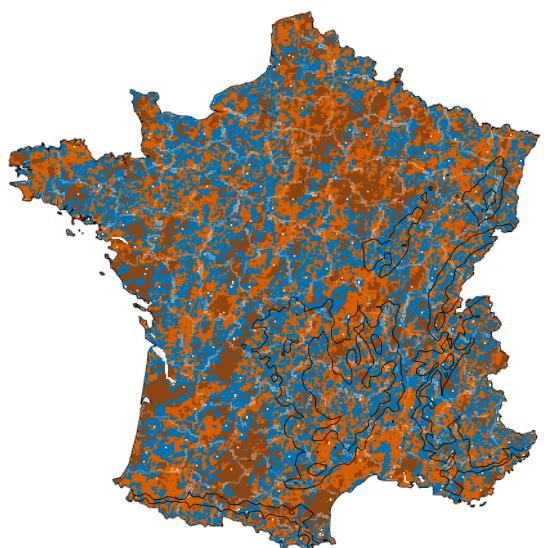
**DJF**



**MAM**

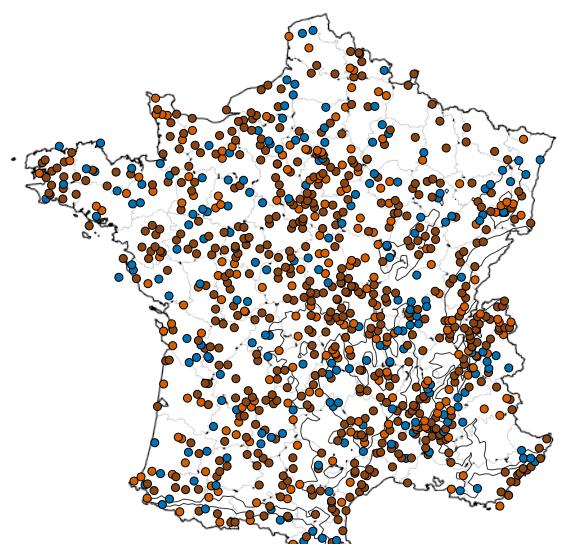
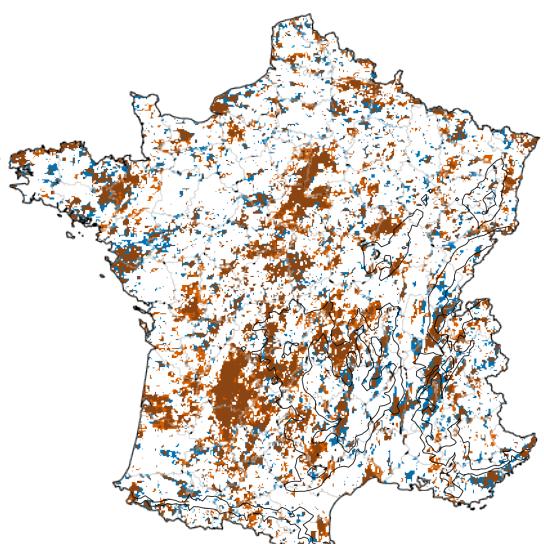


JJA

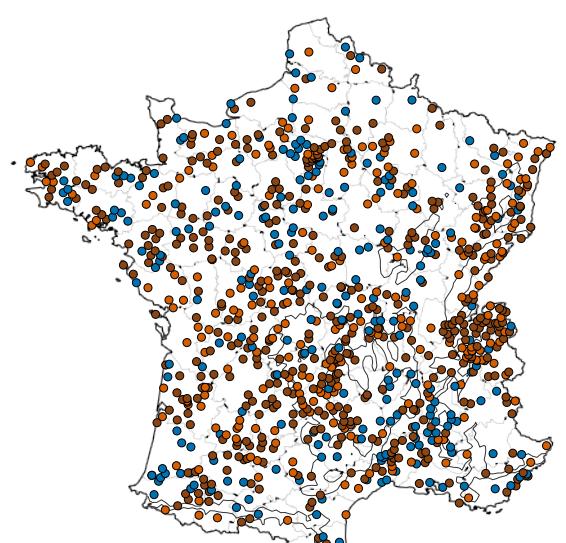
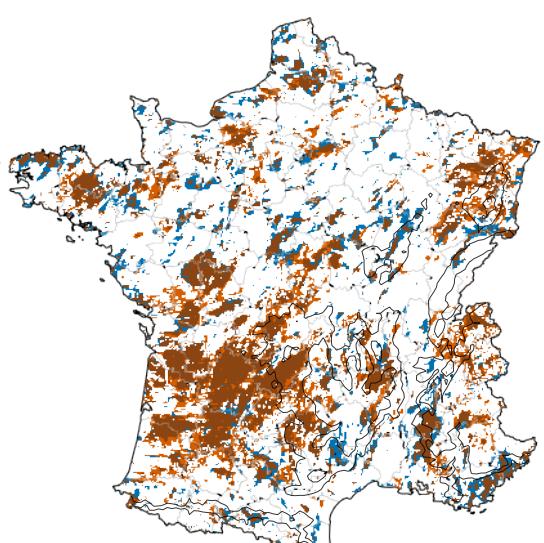


#### 5.2.1.2 Tendances significatives

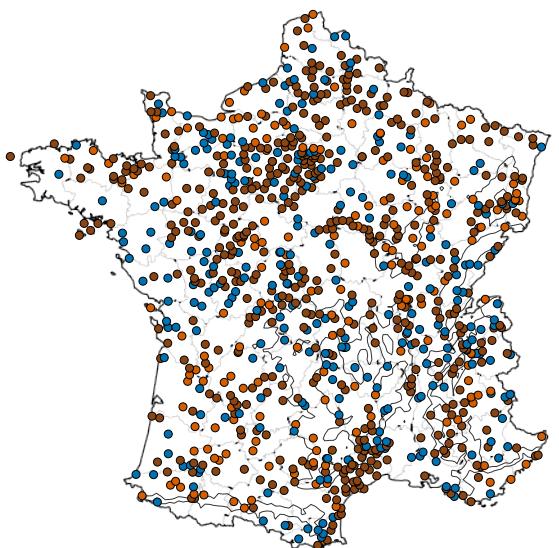
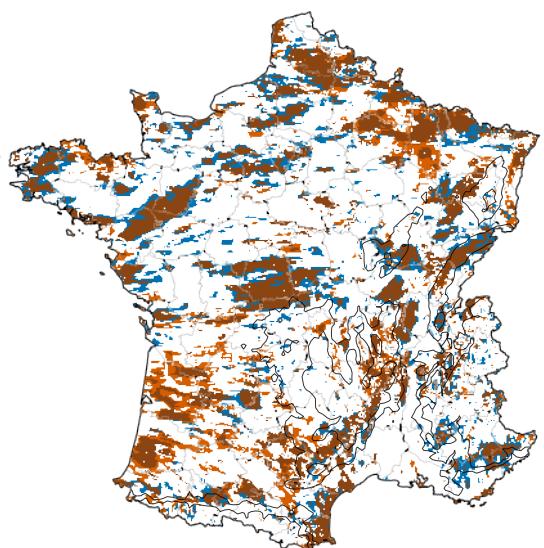
HYDRO



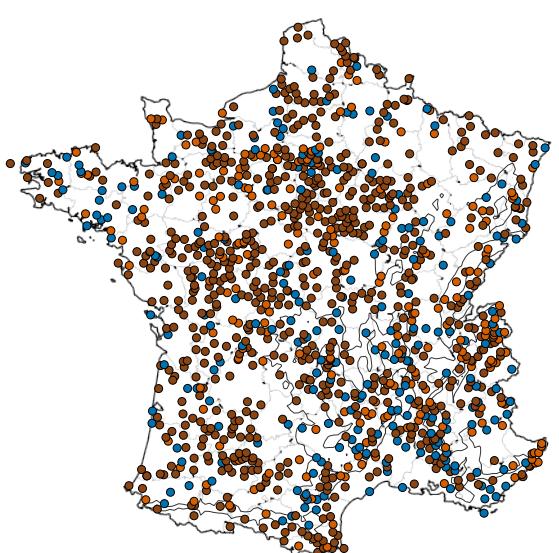
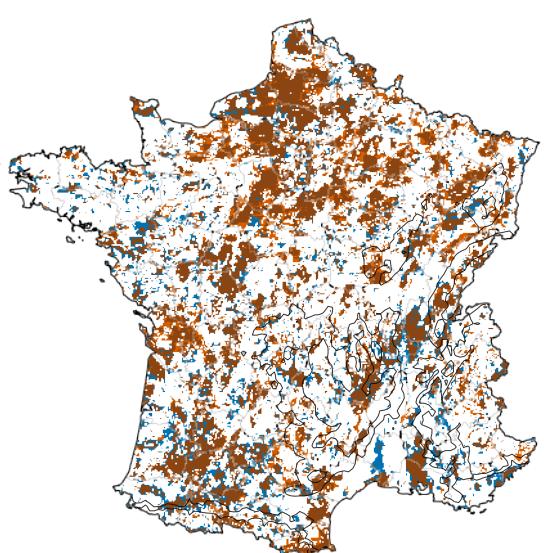
SON



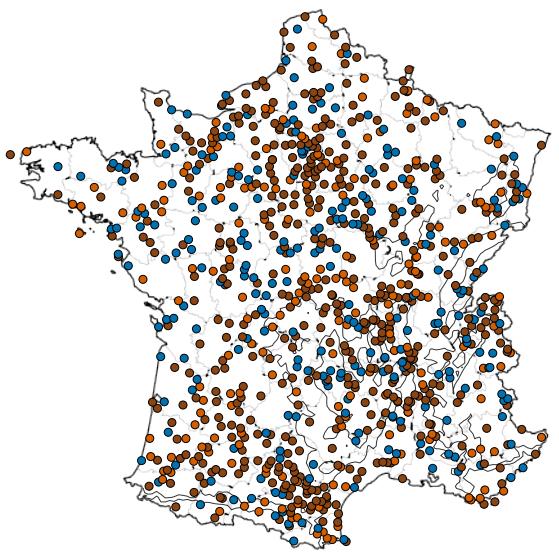
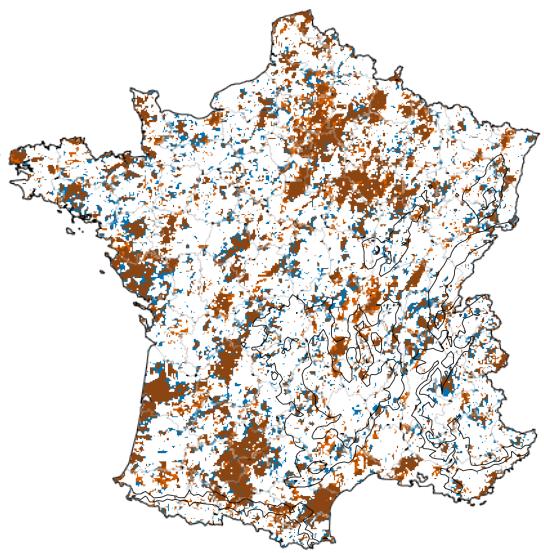
DJF



MAM



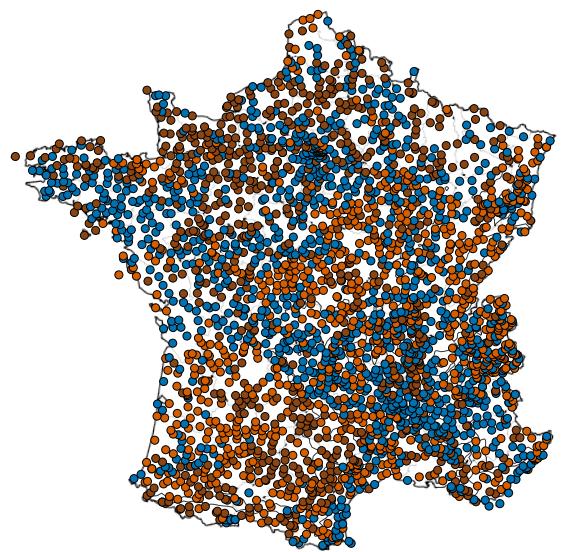
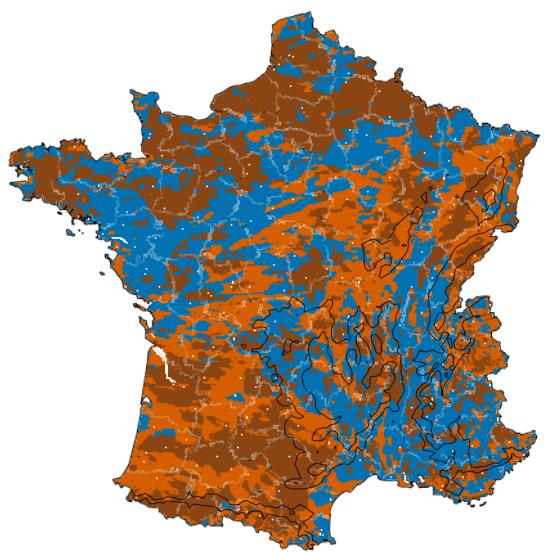
JJA



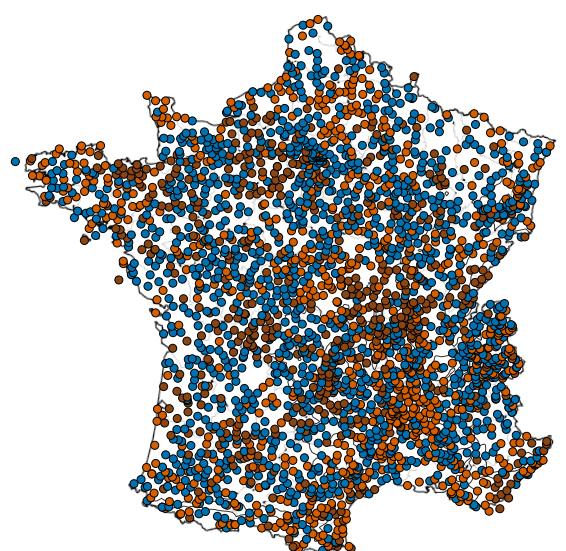
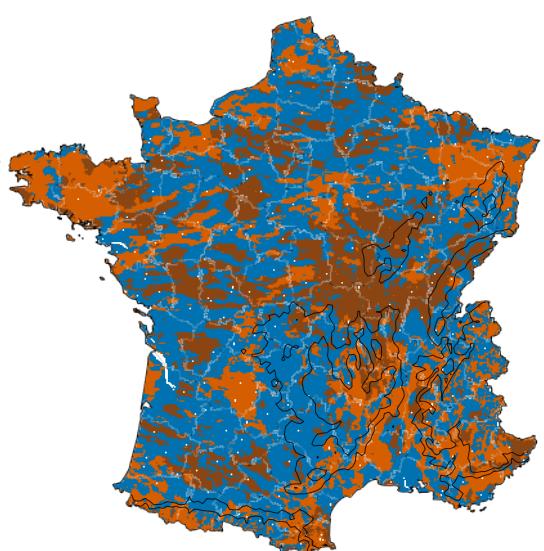
## 5.2.2 Par mois

### 5.2.2.1 Toutes tendances

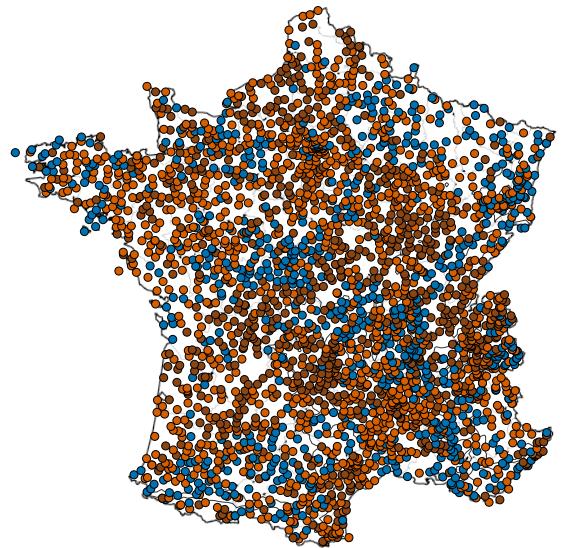
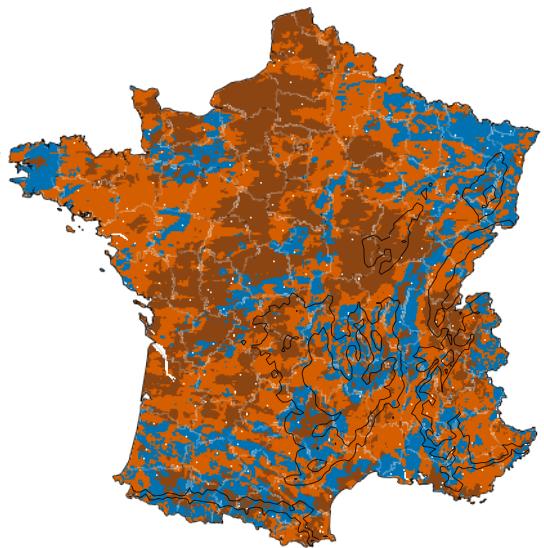
JAN



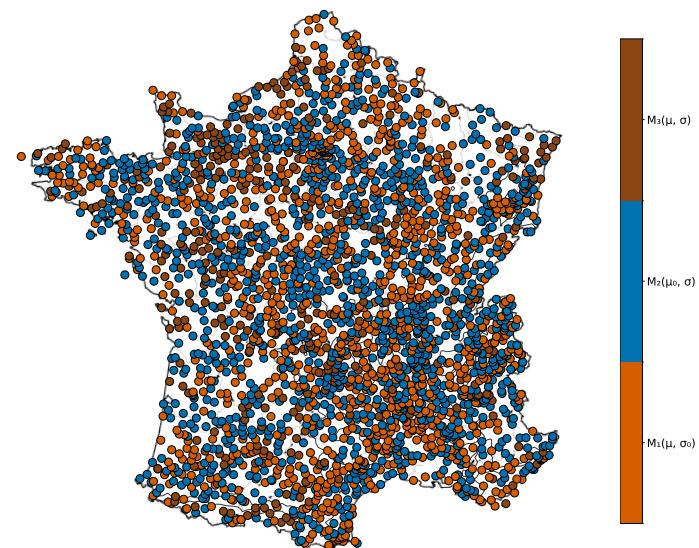
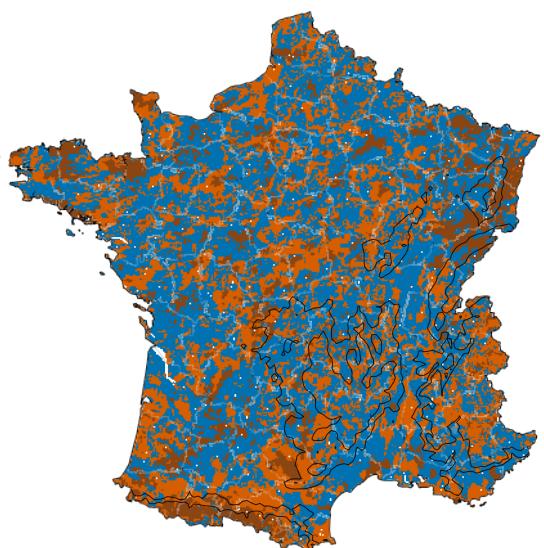
FEV



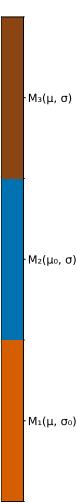
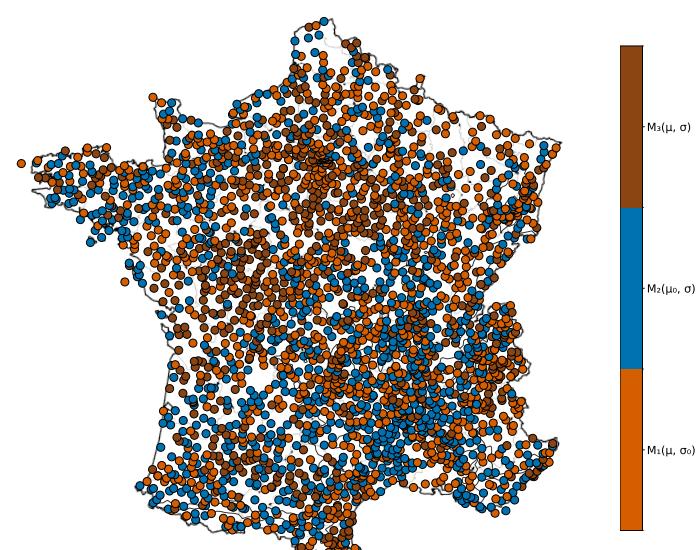
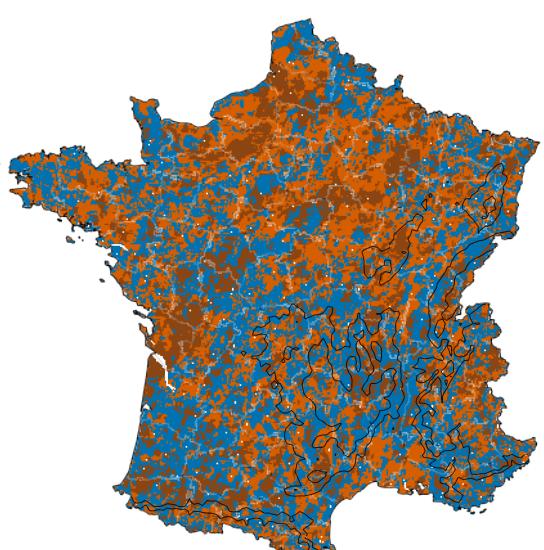
MAR



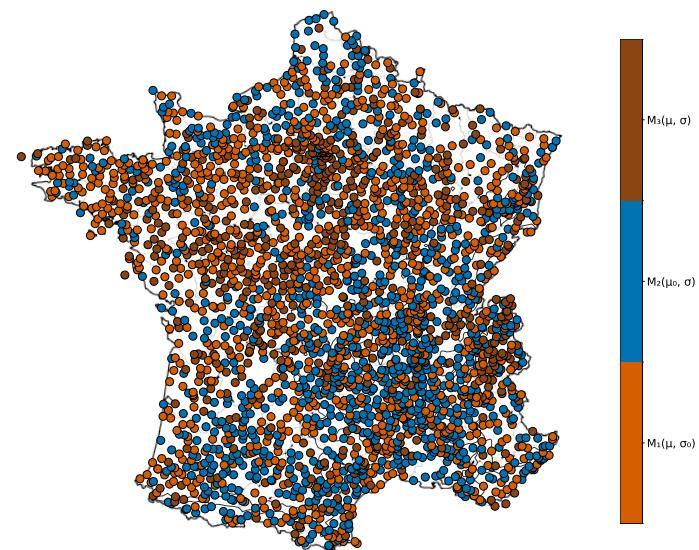
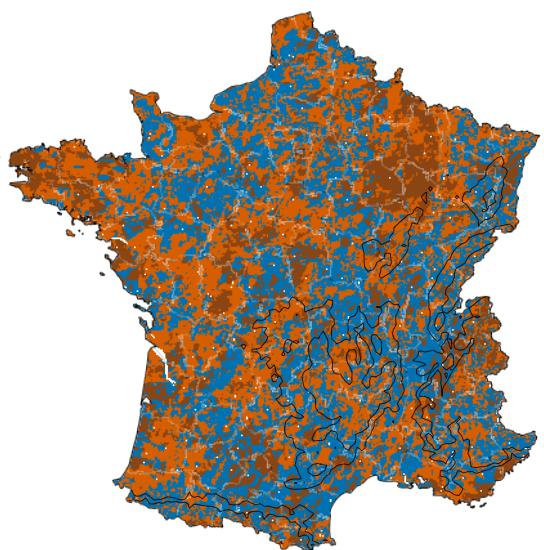
**AVR**



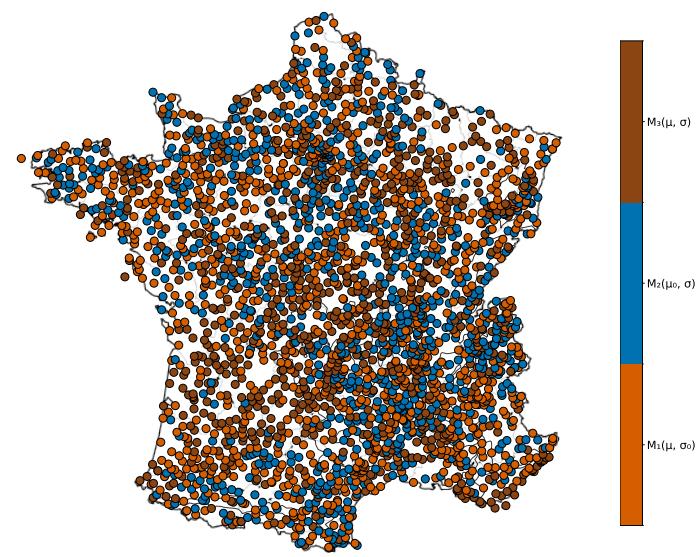
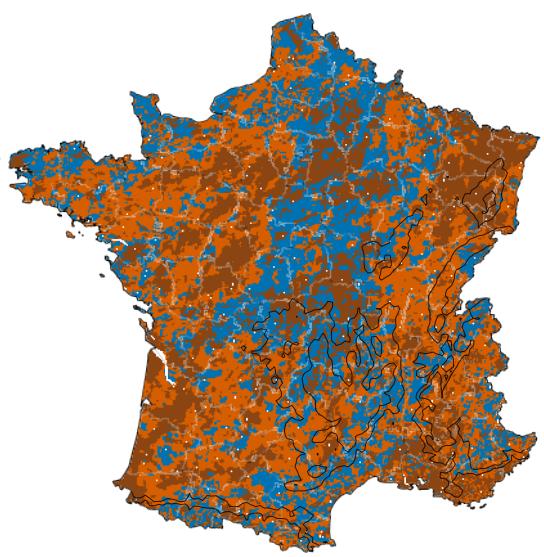
**MAI**



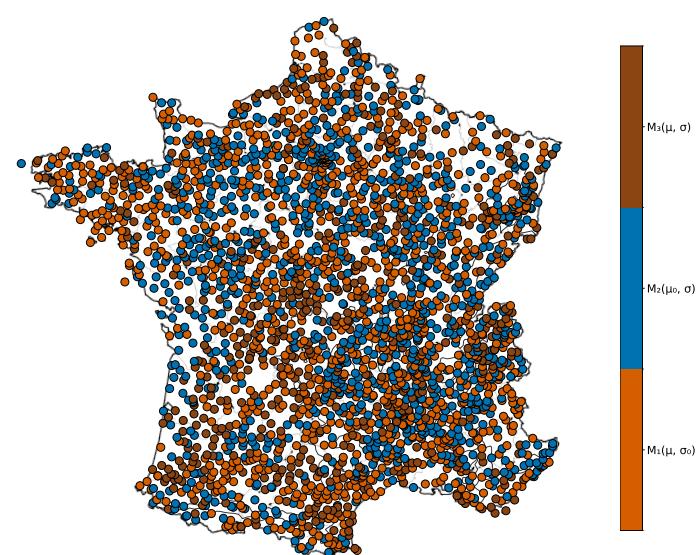
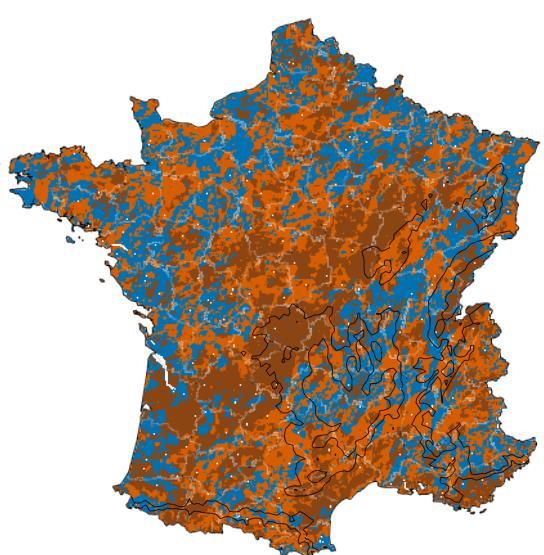
**JUI**



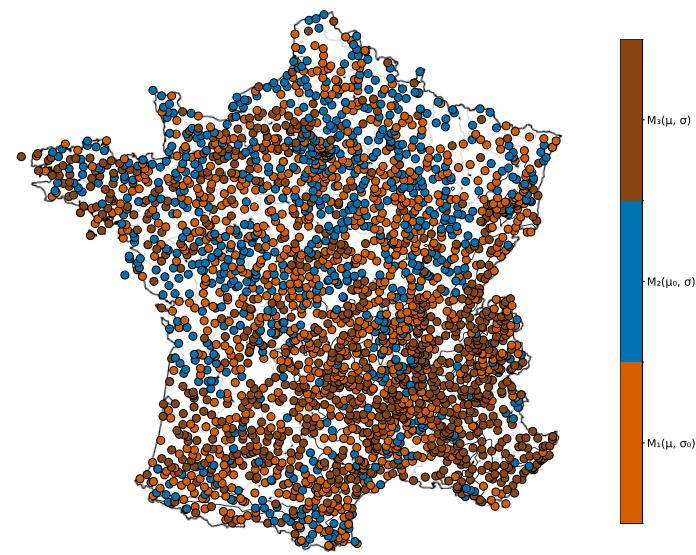
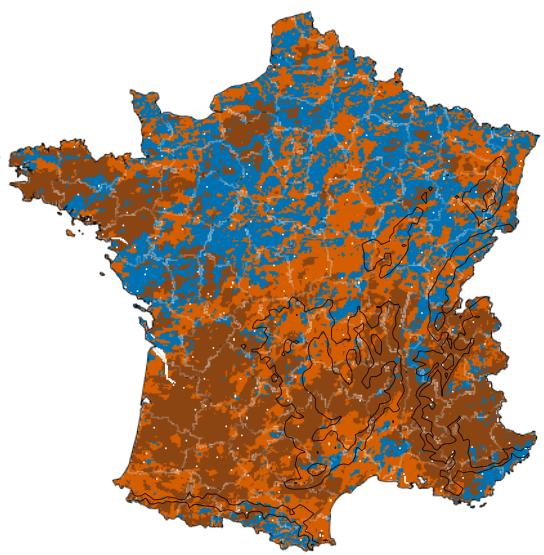
JUILL



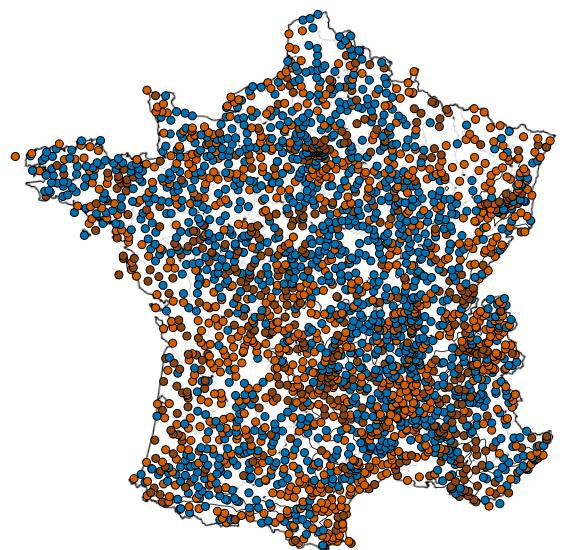
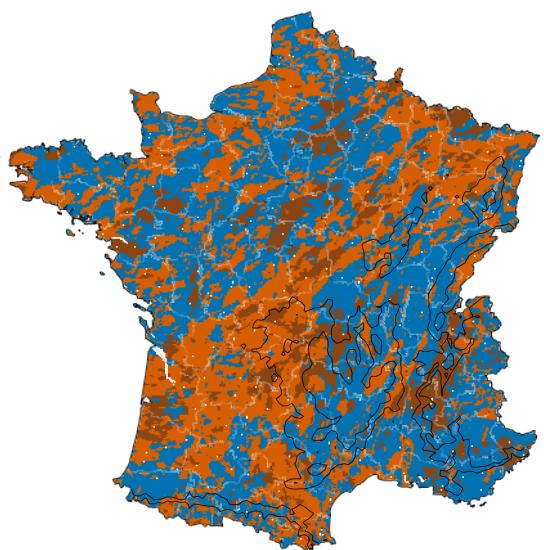
AOU



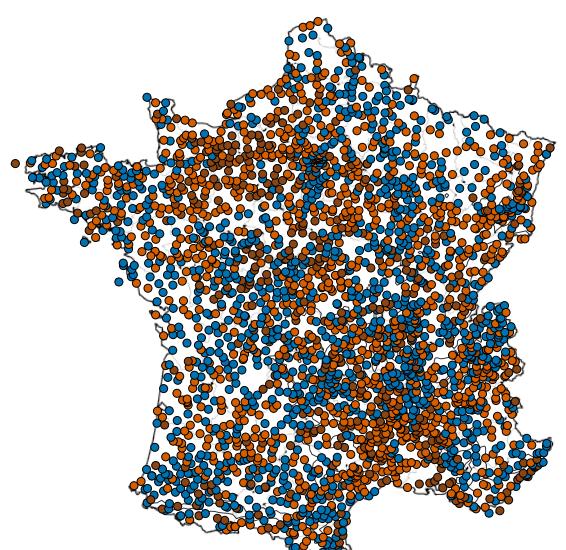
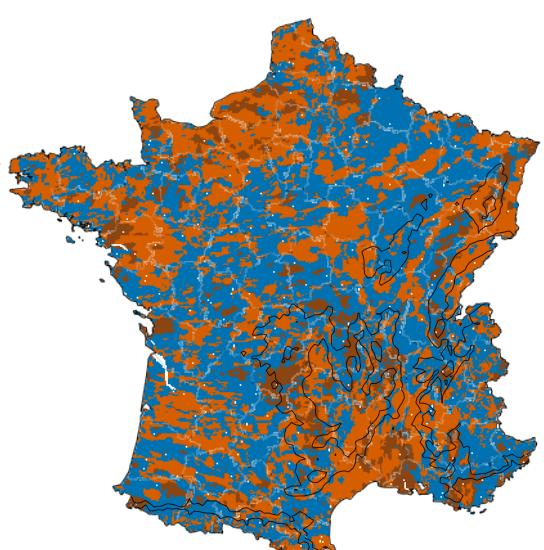
SEP



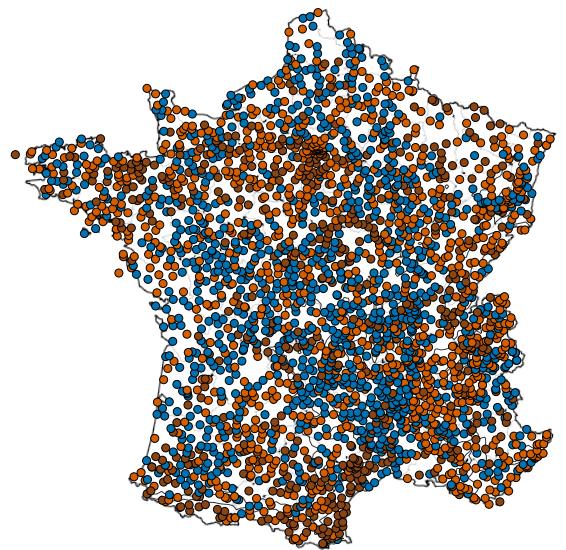
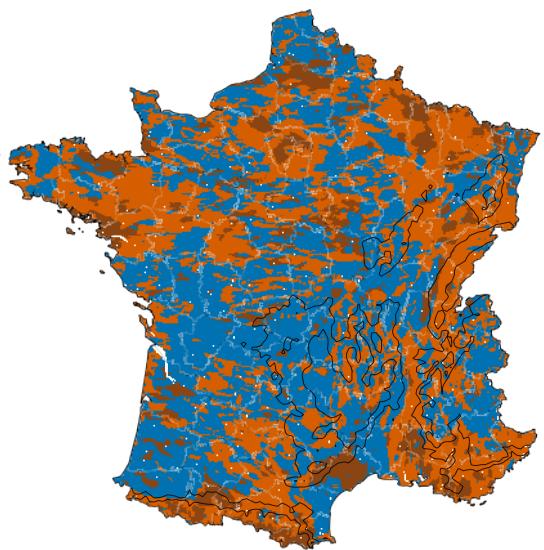
OCT



NOV

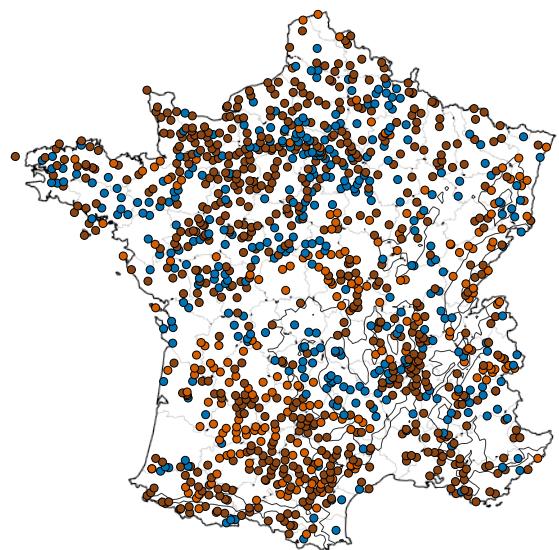
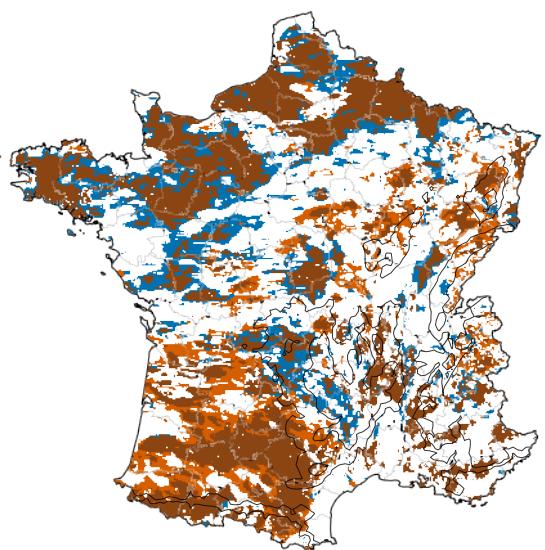


DEC

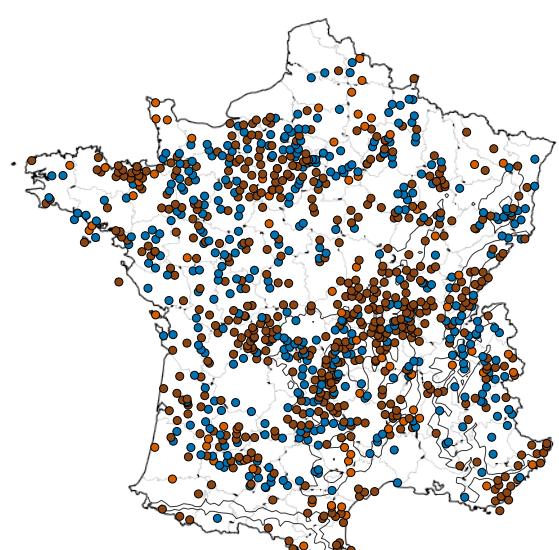
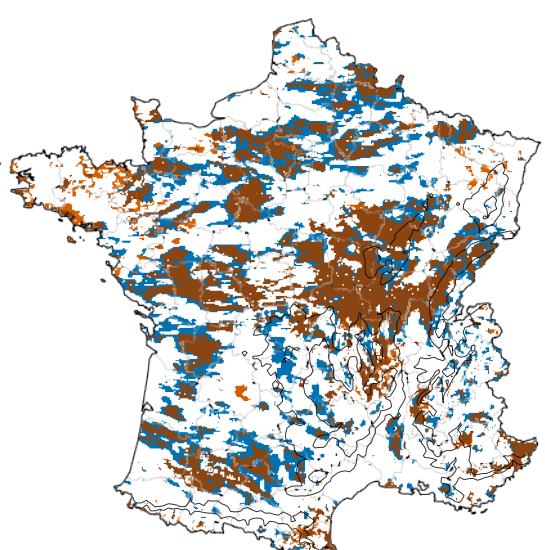


#### 5.2.2.2 Tendances significatives

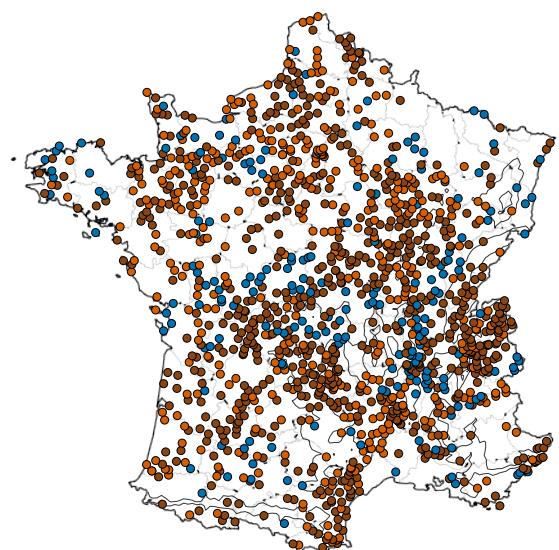
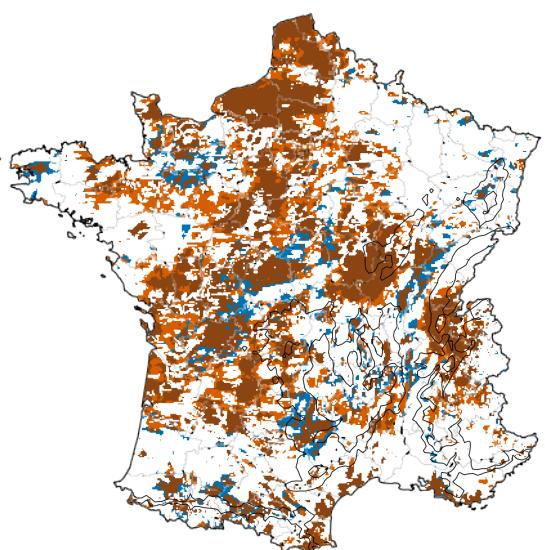
JAN



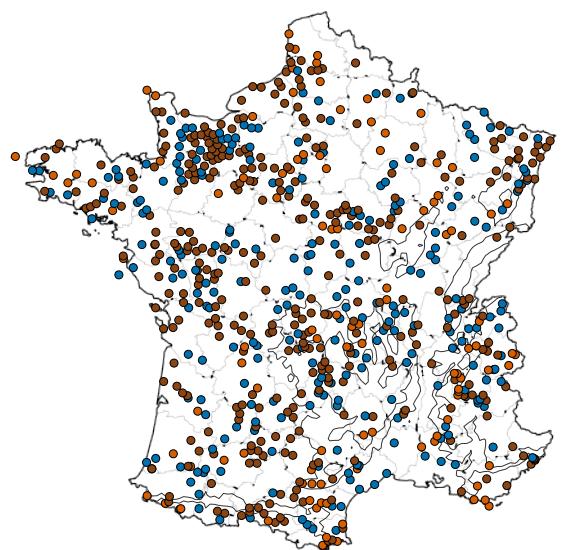
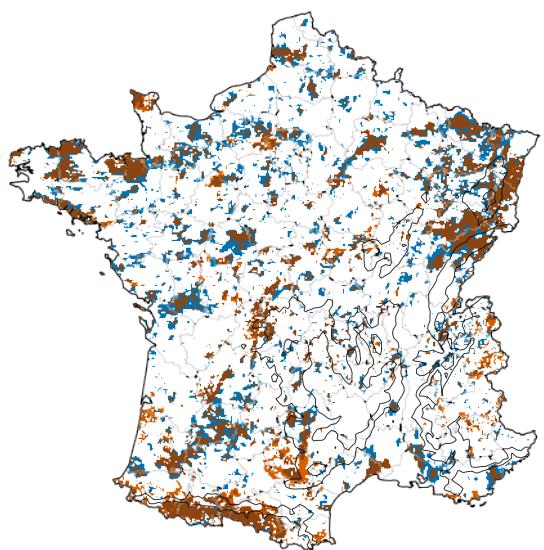
FEV



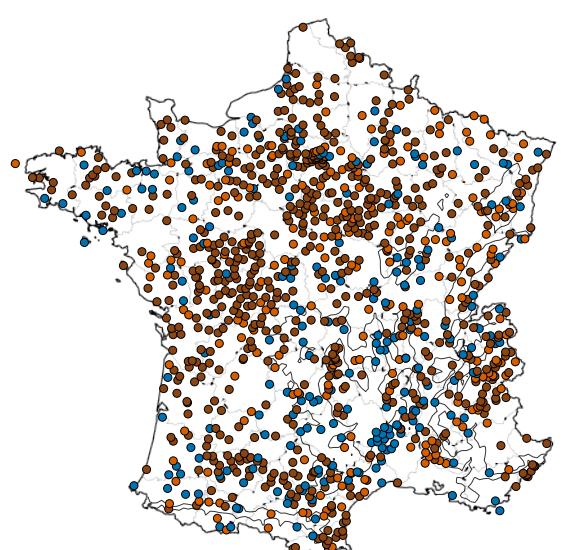
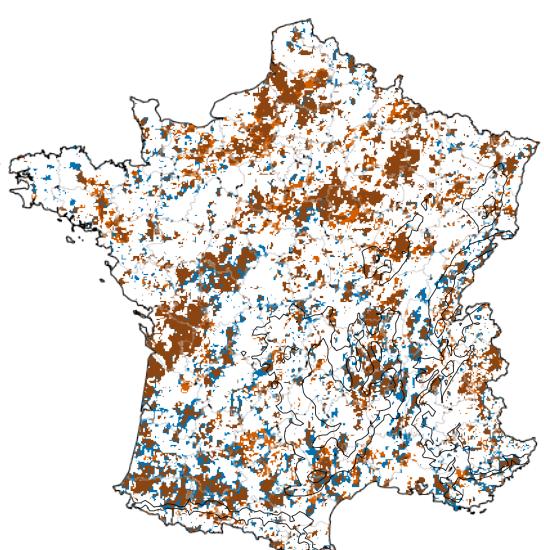
MAR



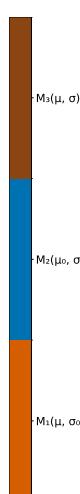
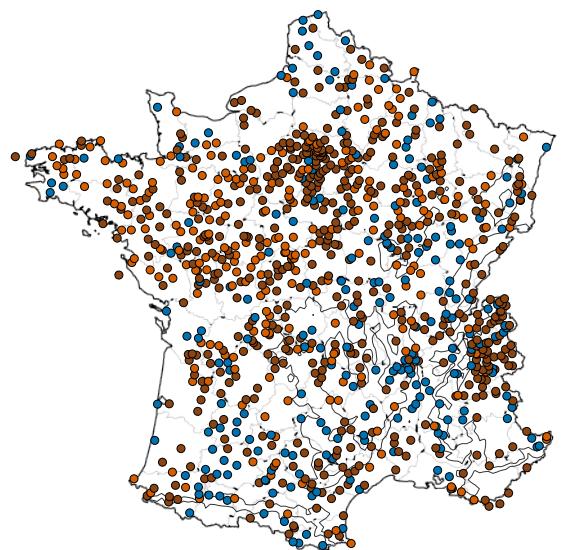
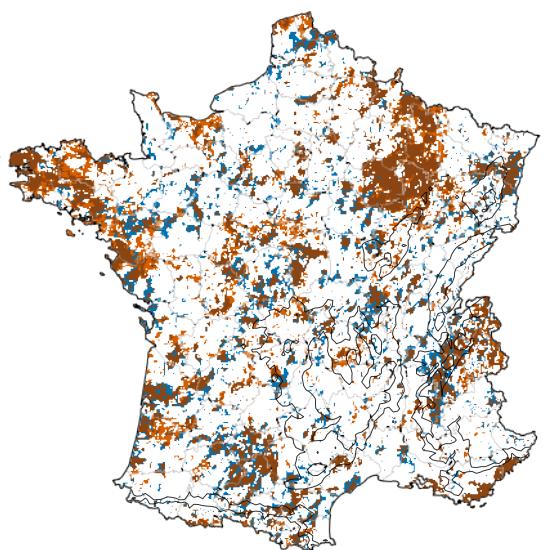
**AVR**



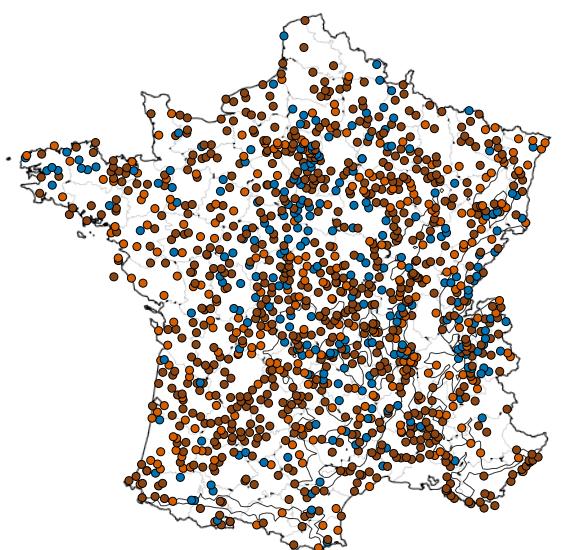
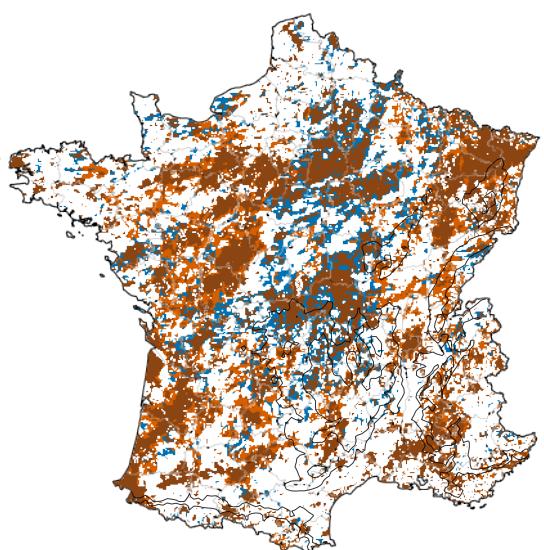
**MAI**



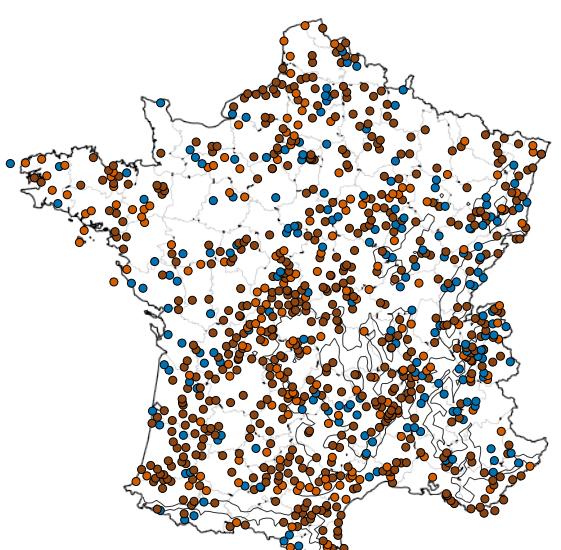
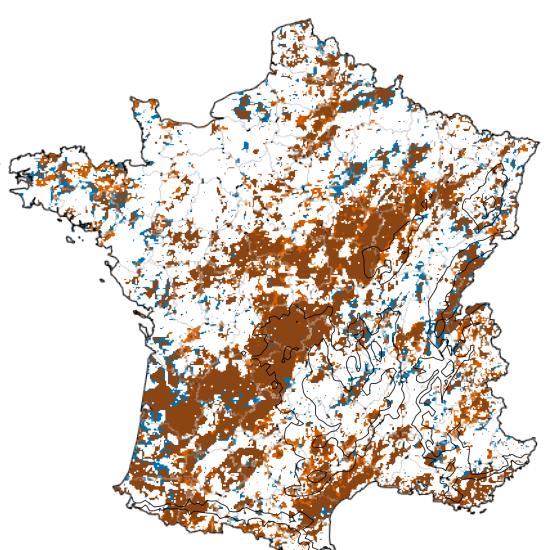
**JUI**



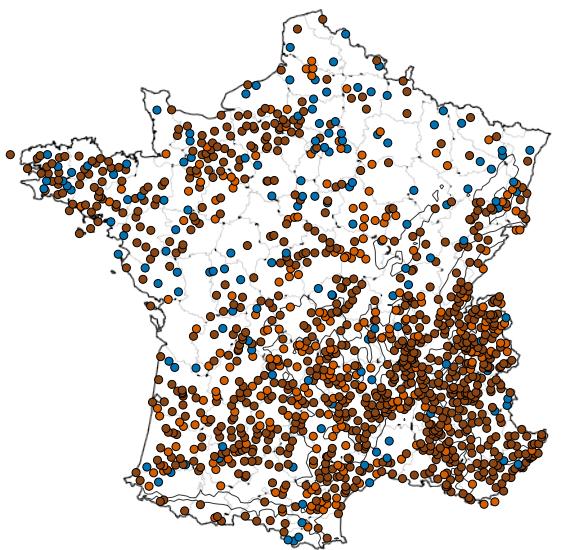
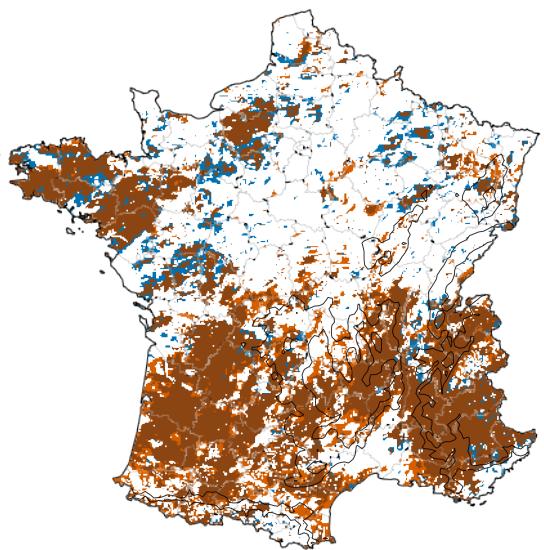
JUILL



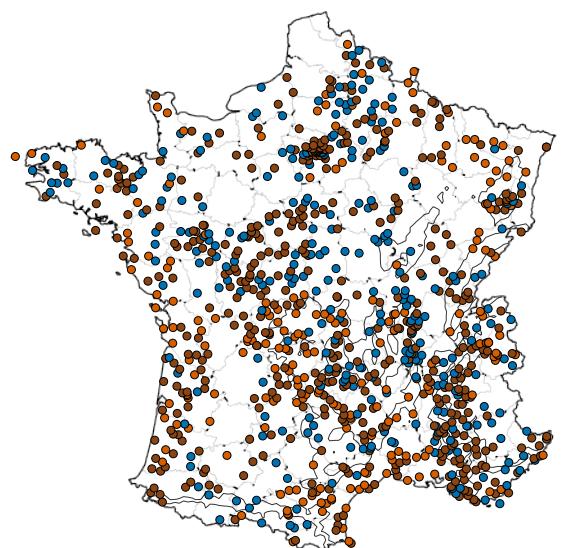
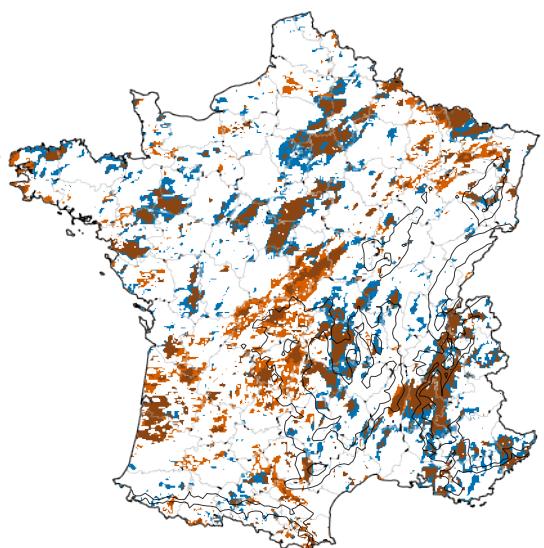
AOU



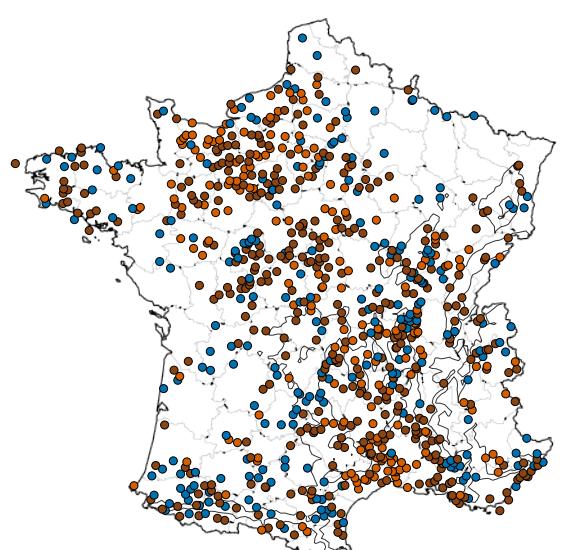
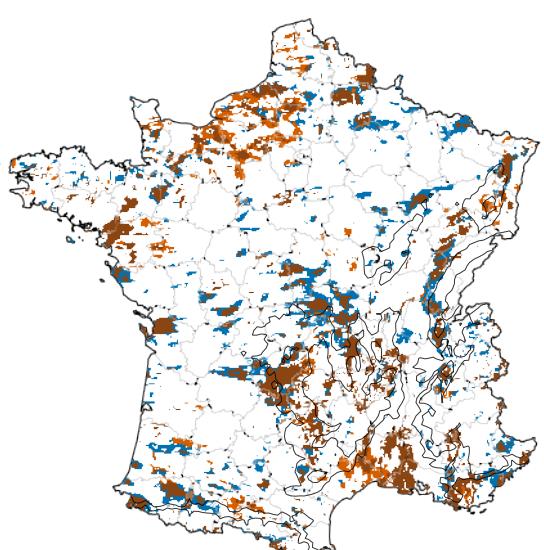
SEP



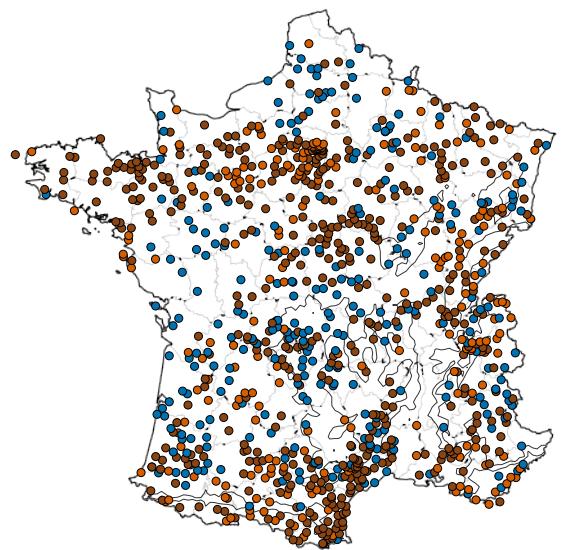
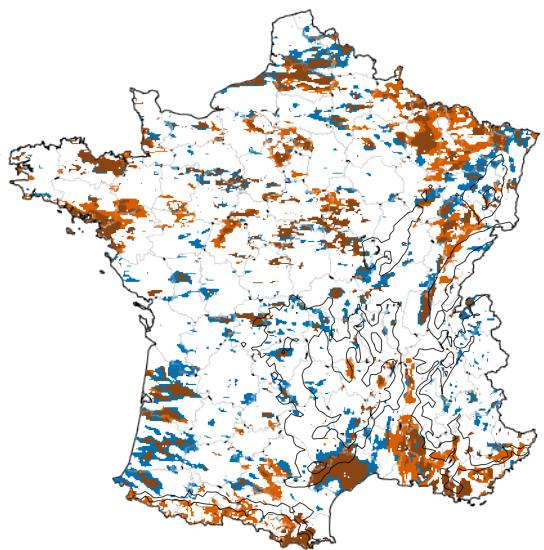
OCT



NOV



DEC

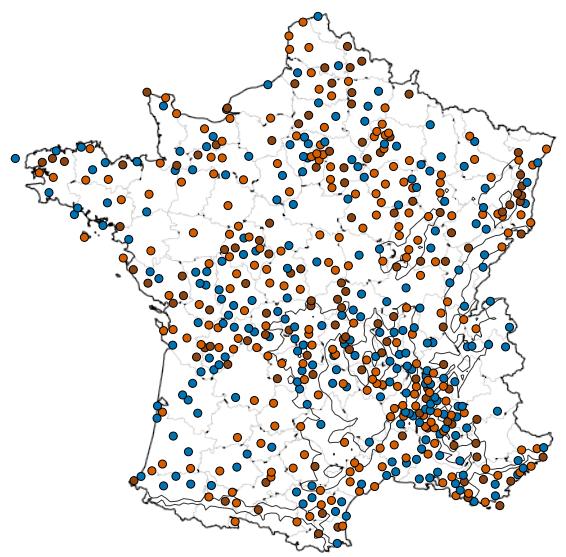
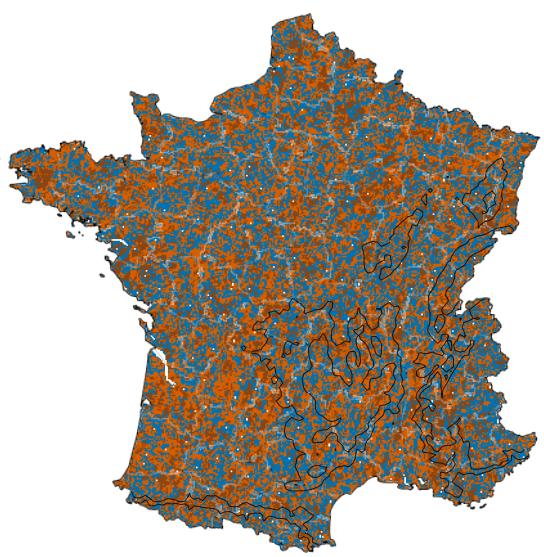


## 5.3 Données horaire (1990-2022)

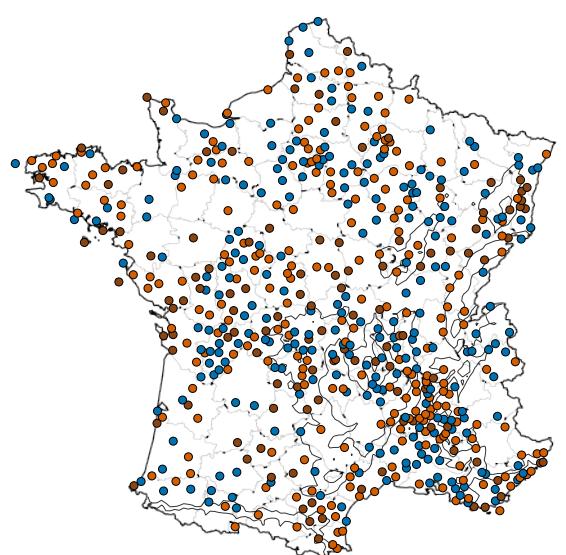
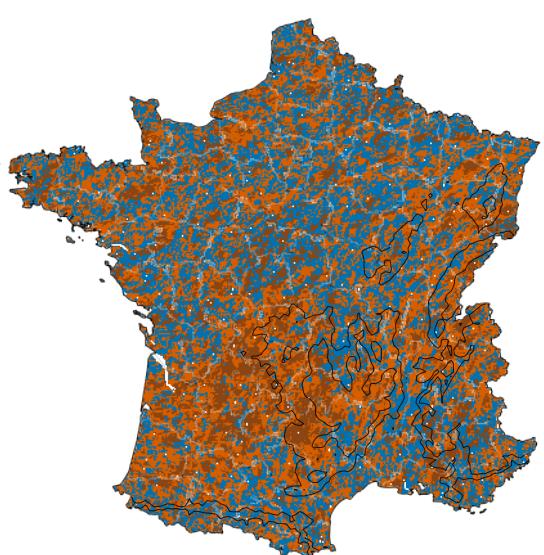
### 5.3.1 Par saison

#### 5.3.1.1 Toutes tendances

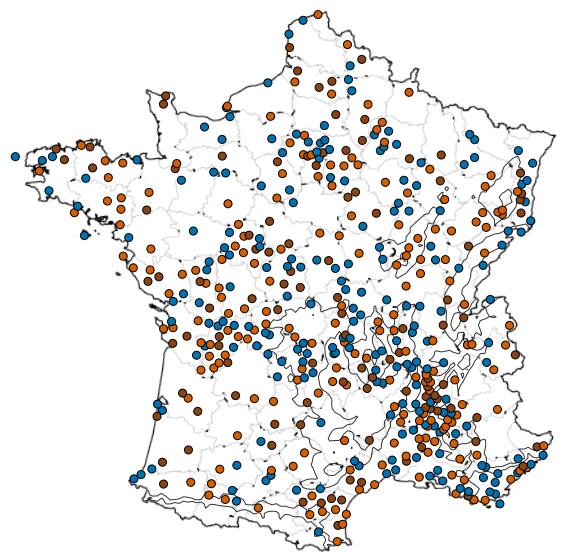
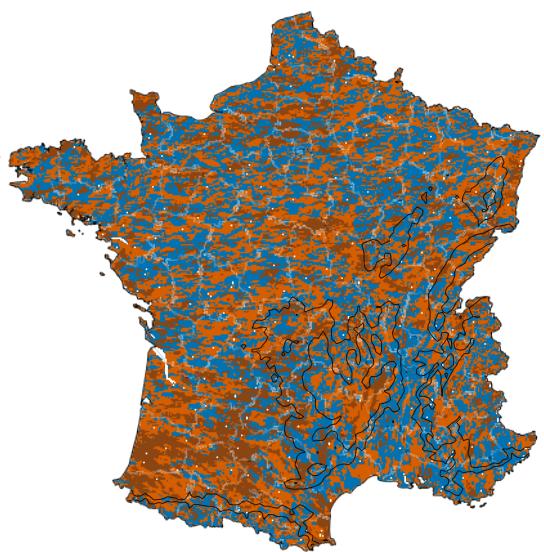
**HYDRO**



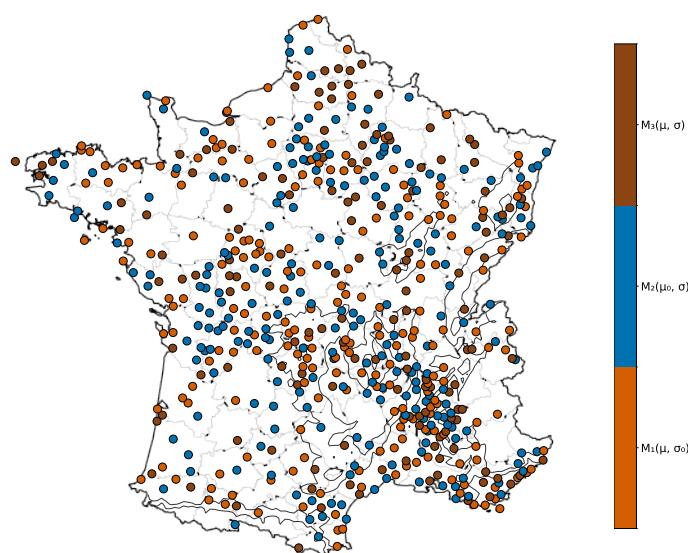
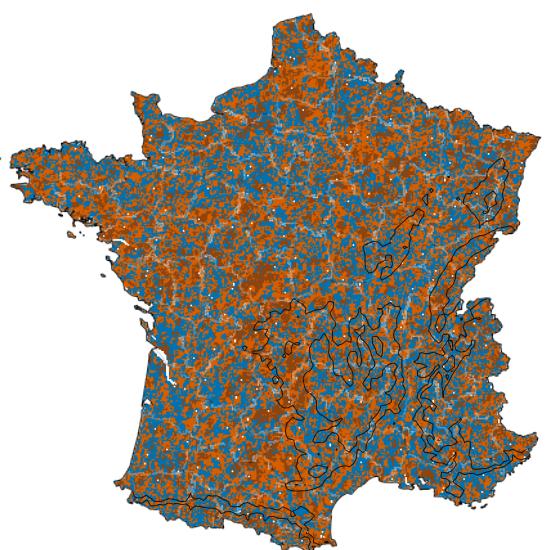
**SON**



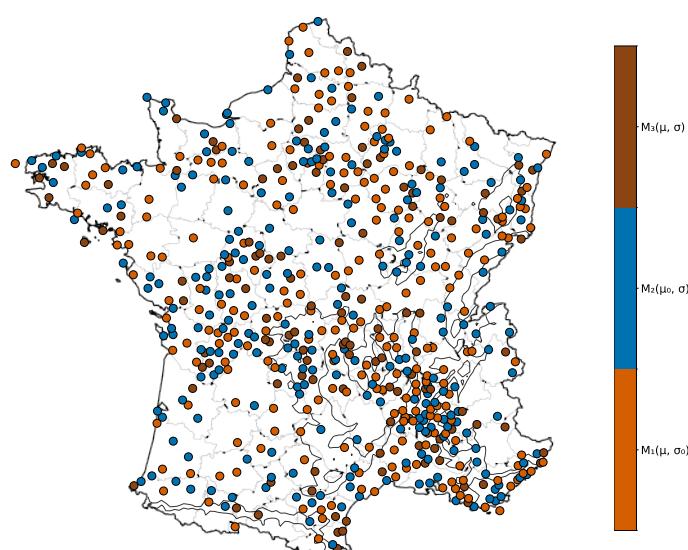
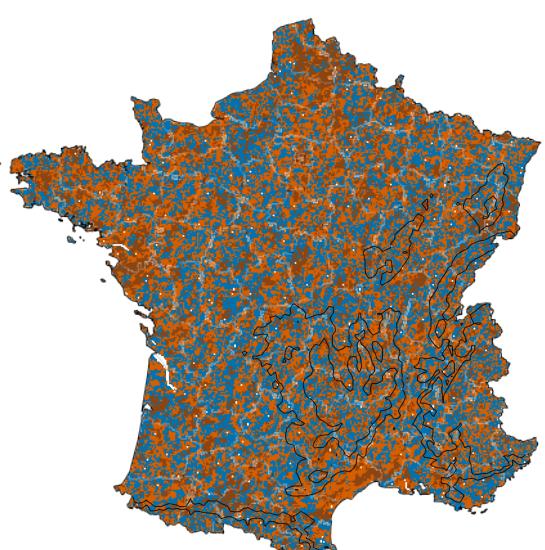
**DJF**



MAM

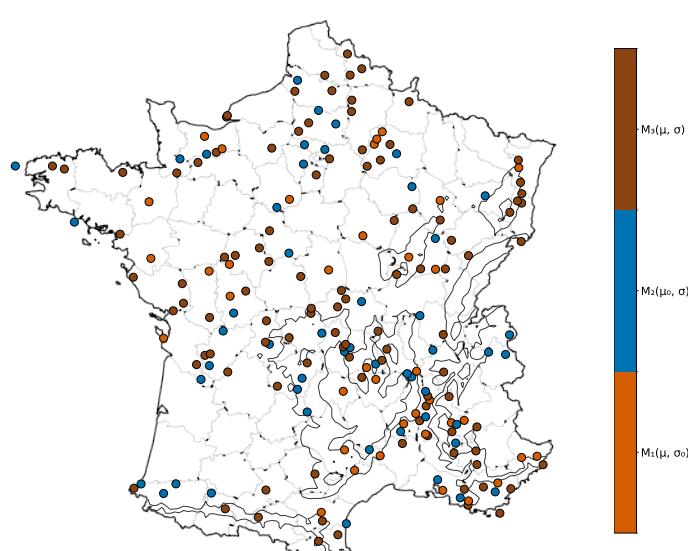
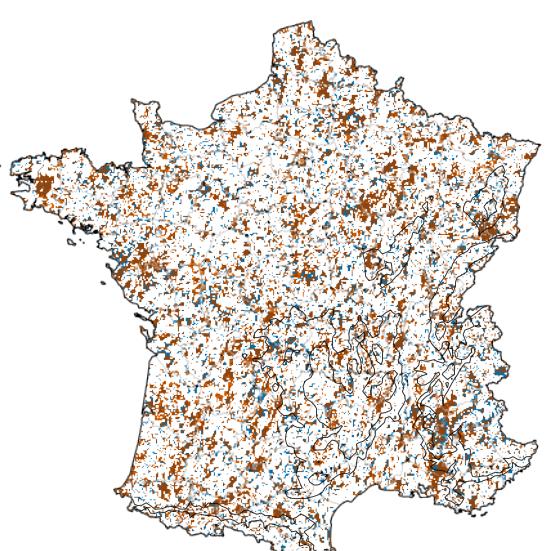


JJA

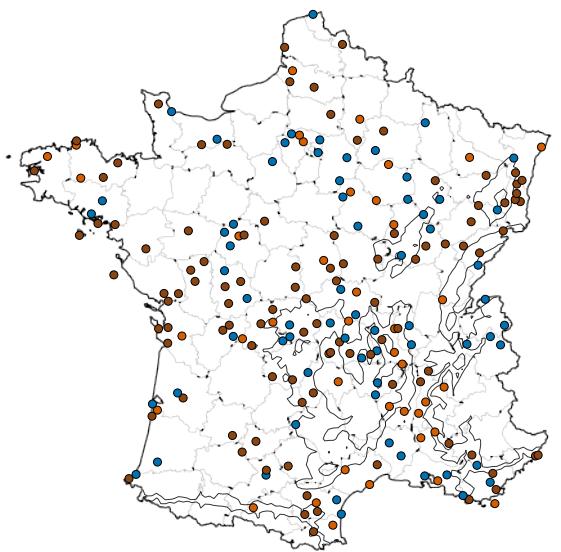
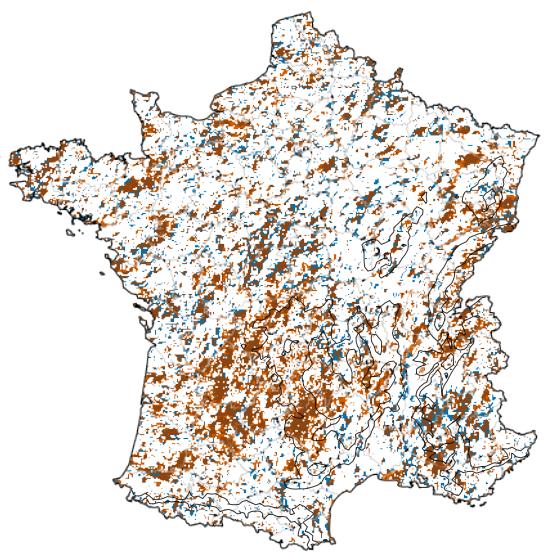


### 5.3.1.2 Tendances significatives

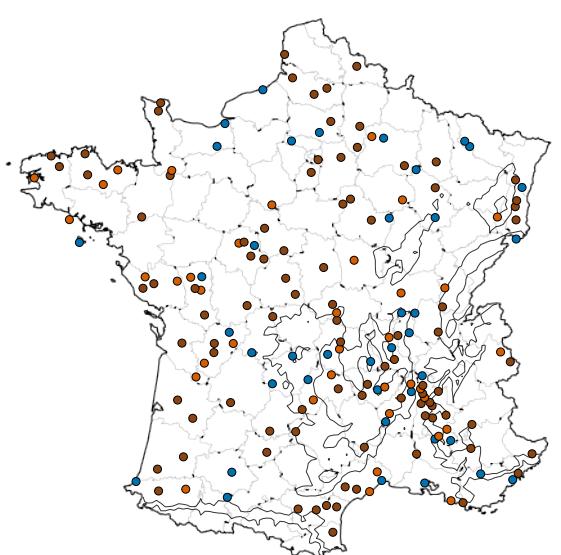
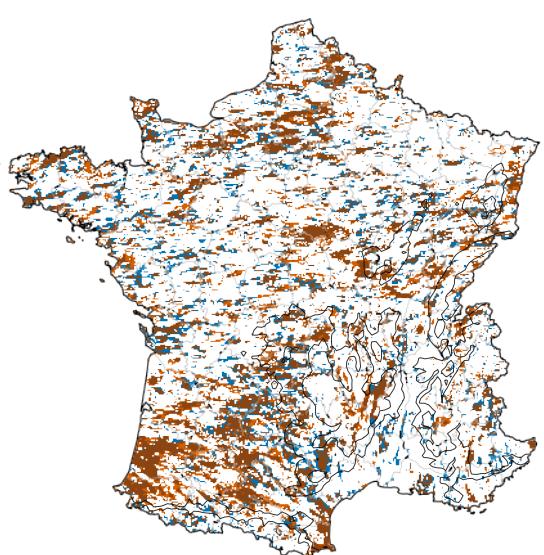
HYDRO



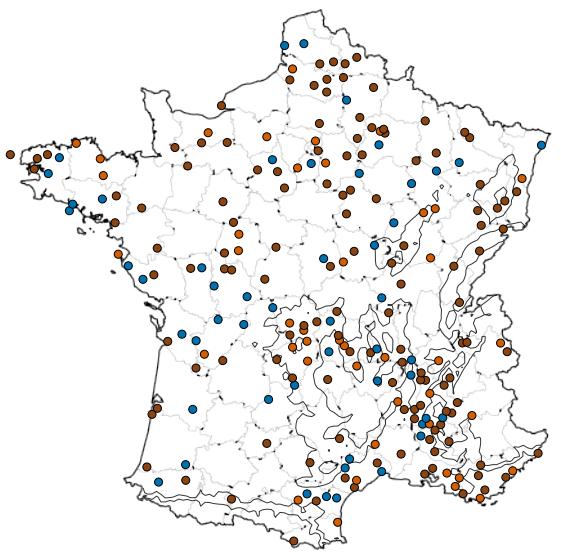
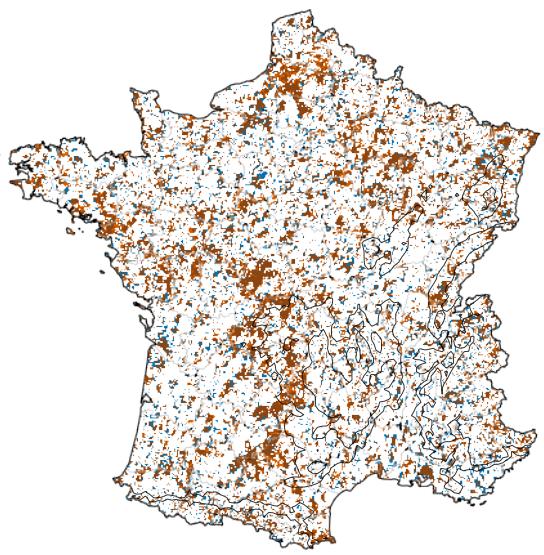
**SON**



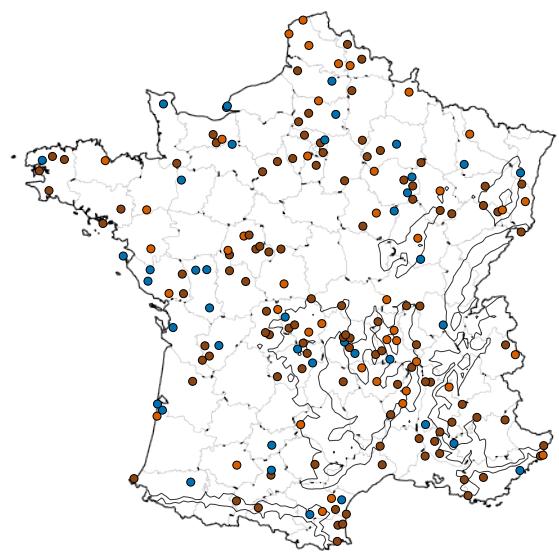
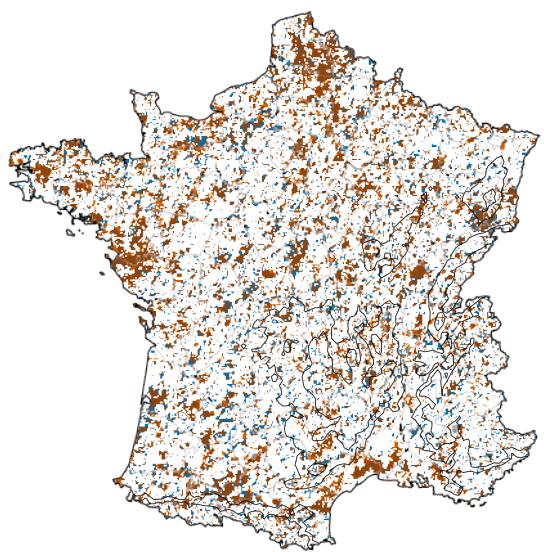
**DJF**



**MAM**



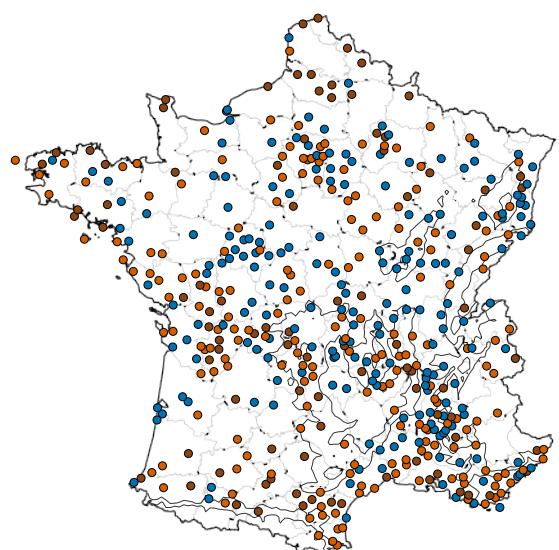
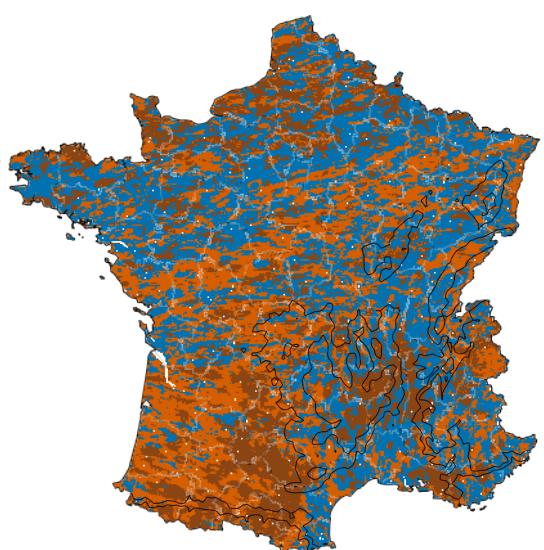
JJA



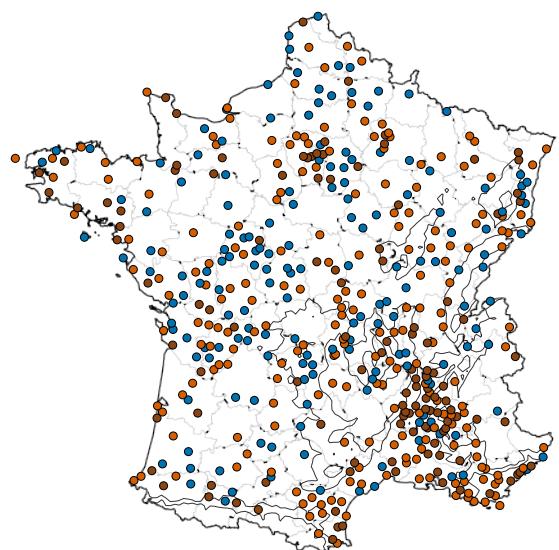
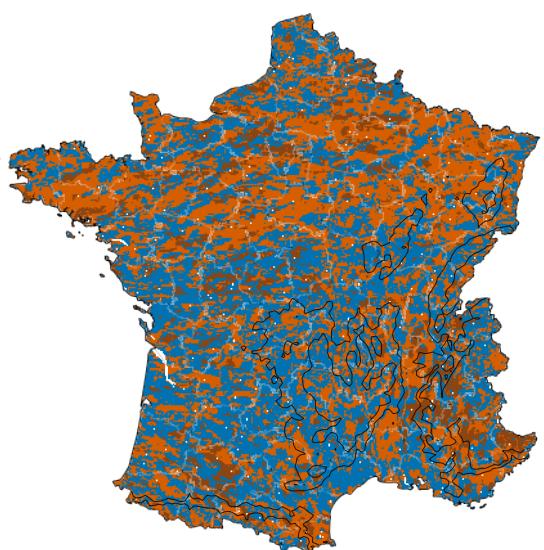
### 5.3.2 Par mois

#### 5.3.2.1 Toutes tendances

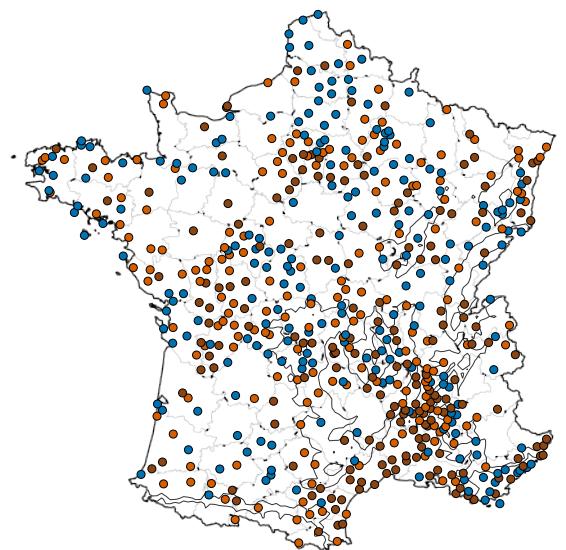
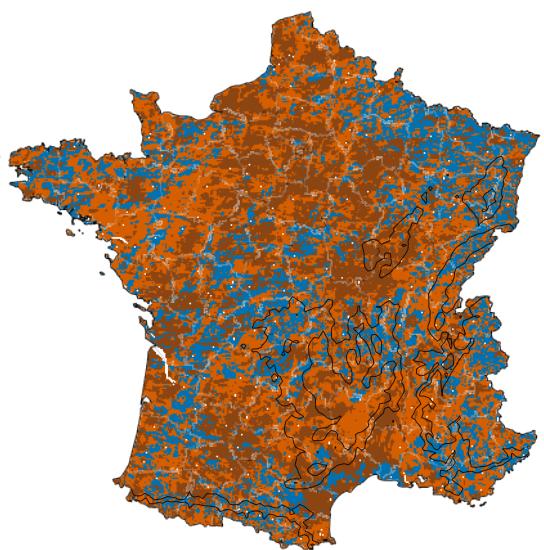
JAN



FEV

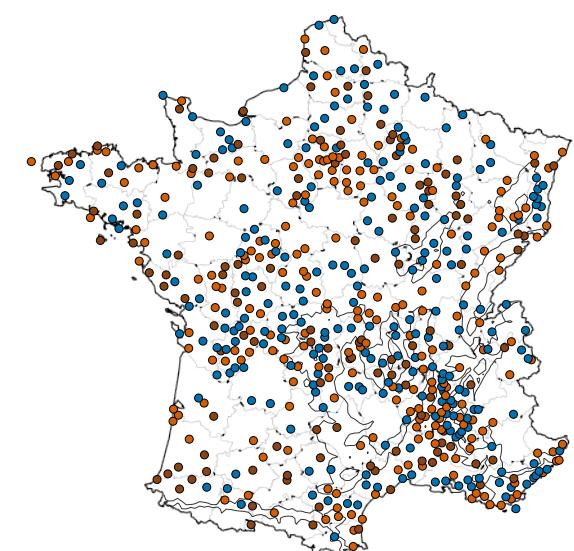
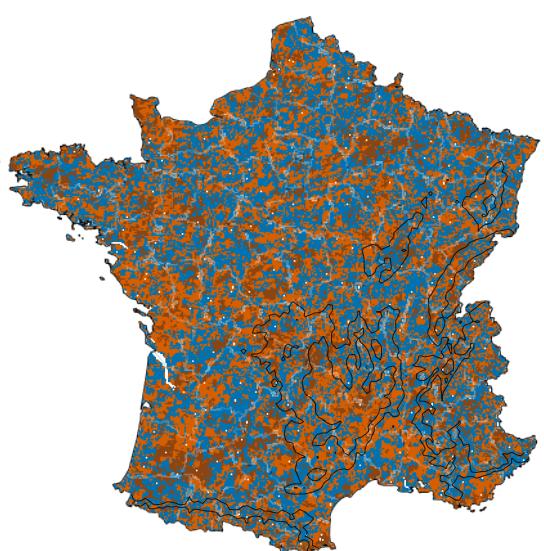


MAR



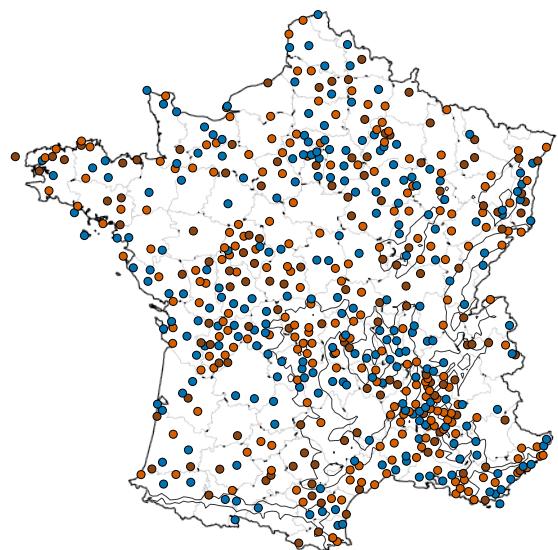
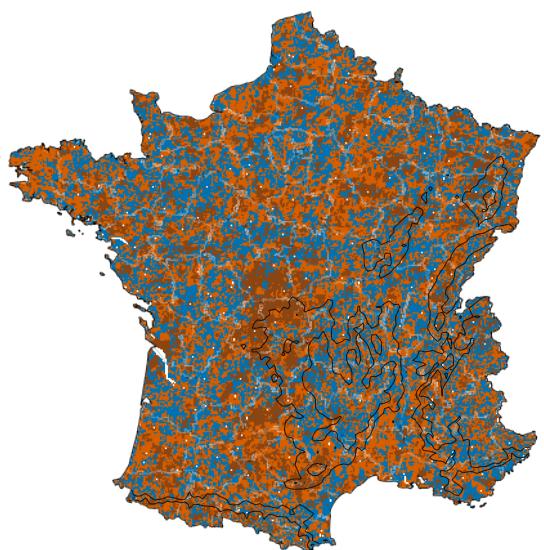
M3( $\mu, \sigma$ )  
M2( $\mu, \sigma$ )  
M1( $\mu, \sigma_0$ )

AVR



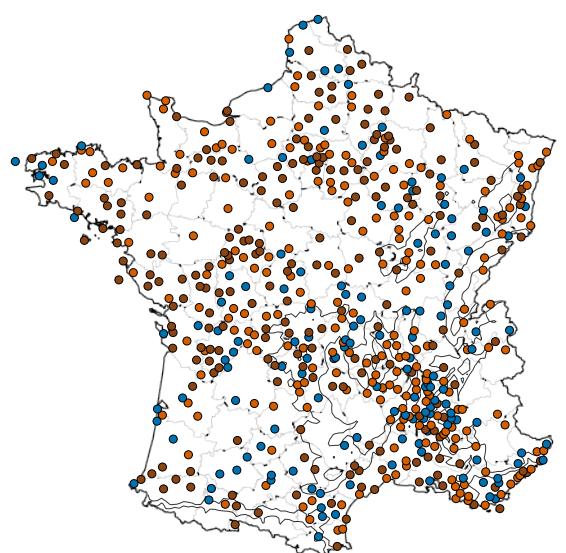
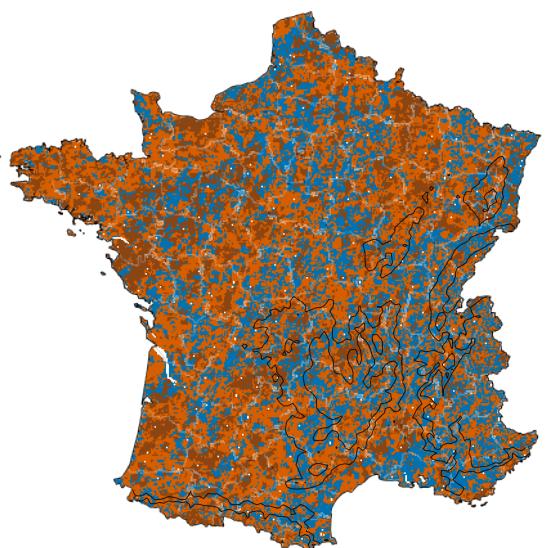
M3( $\mu, \sigma$ )  
M2( $\mu, \sigma$ )  
M1( $\mu, \sigma_0$ )

MAI

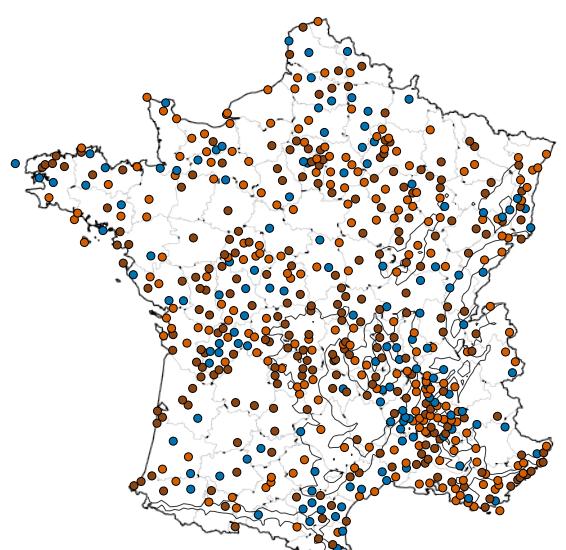
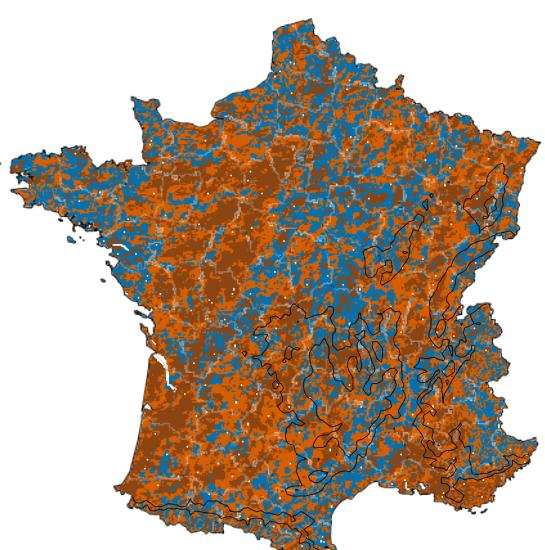


M3( $\mu, \sigma$ )  
M2( $\mu, \sigma$ )  
M1( $\mu, \sigma_0$ )

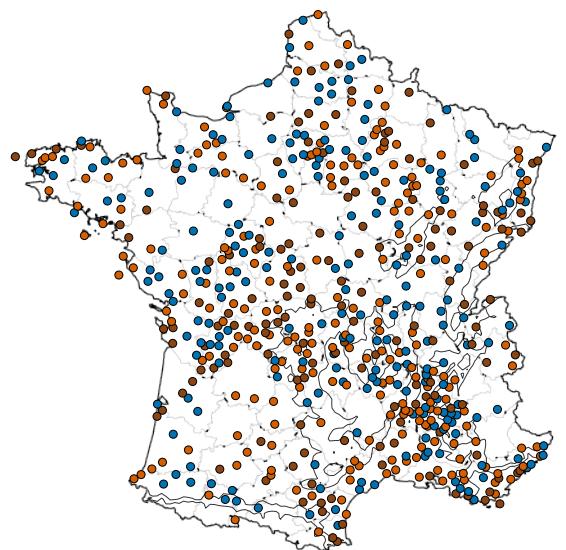
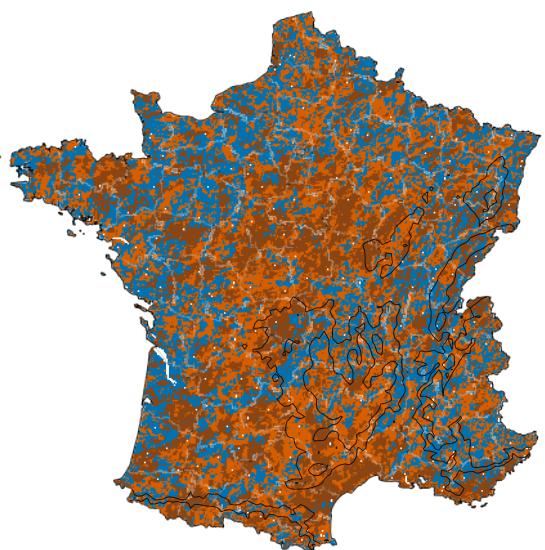
JUI



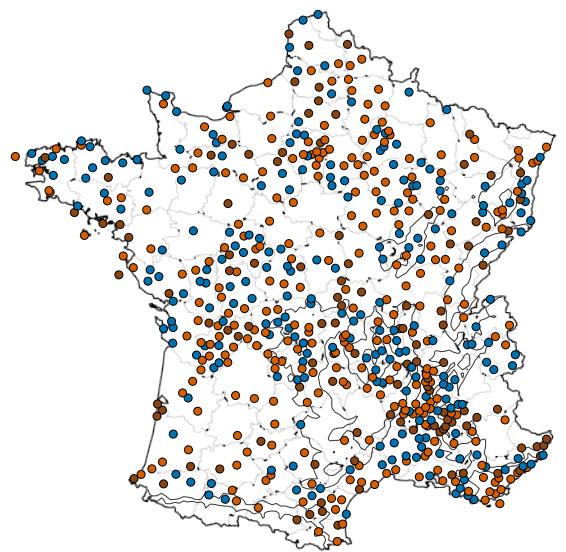
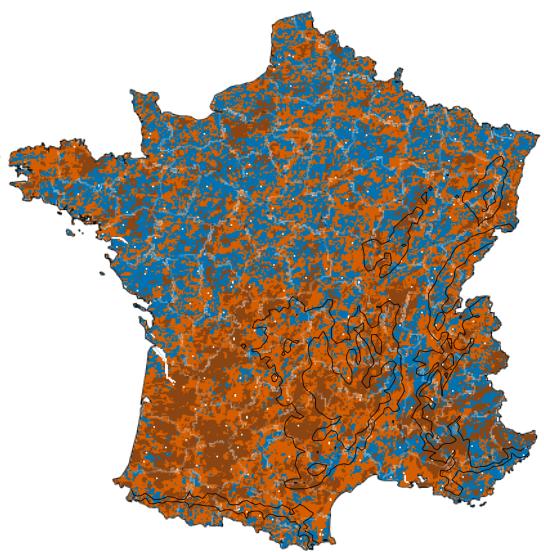
JUILL



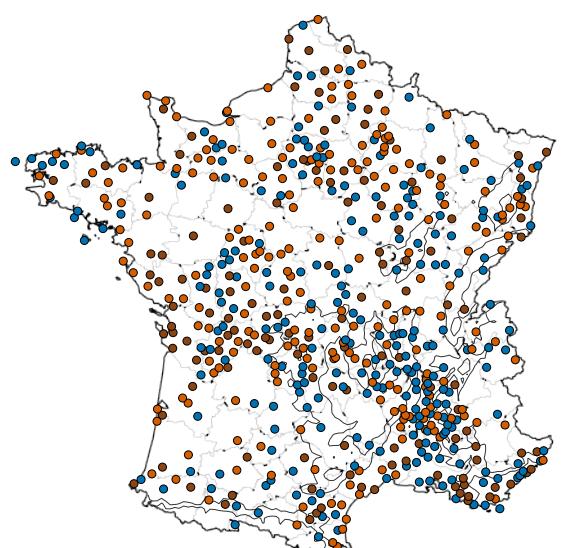
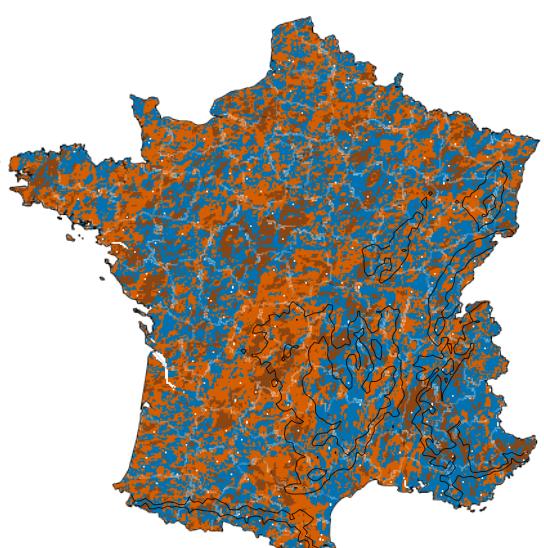
AOU



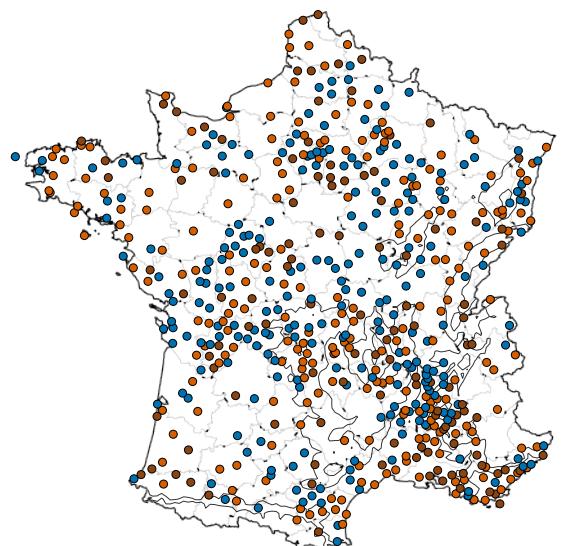
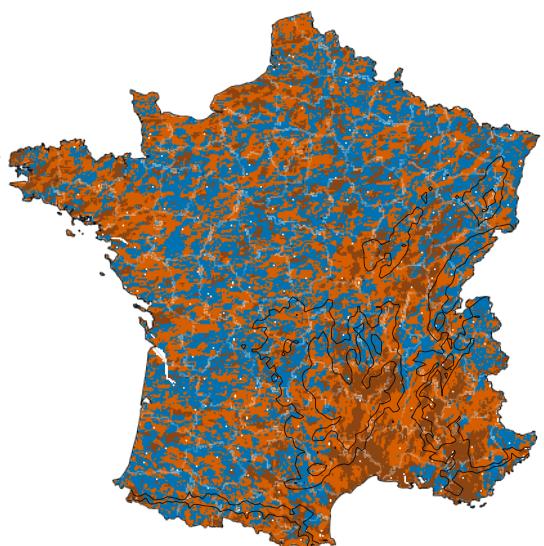
SEP



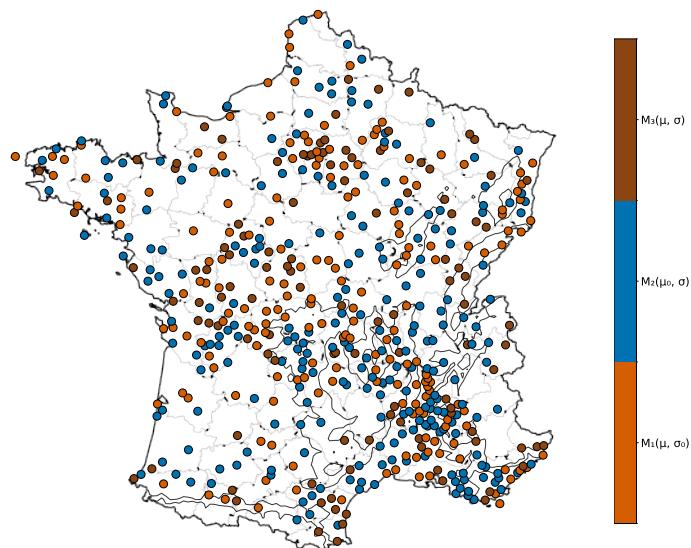
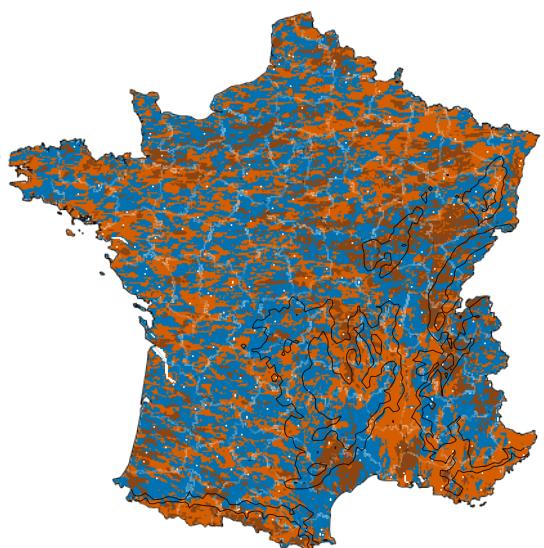
OCT



NOV

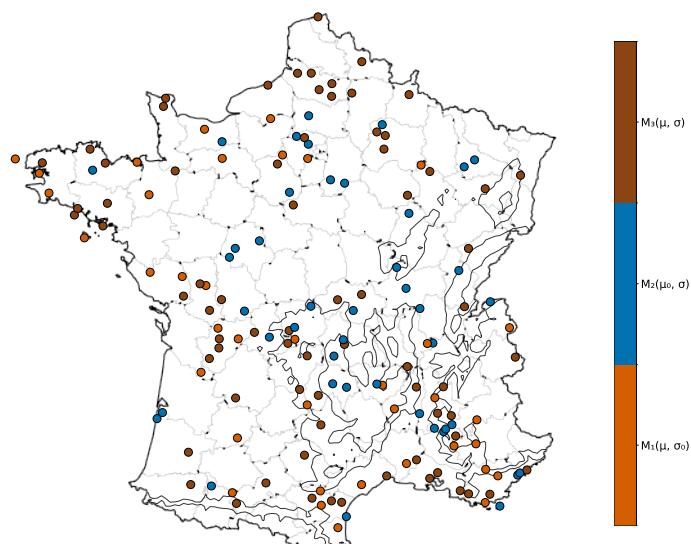
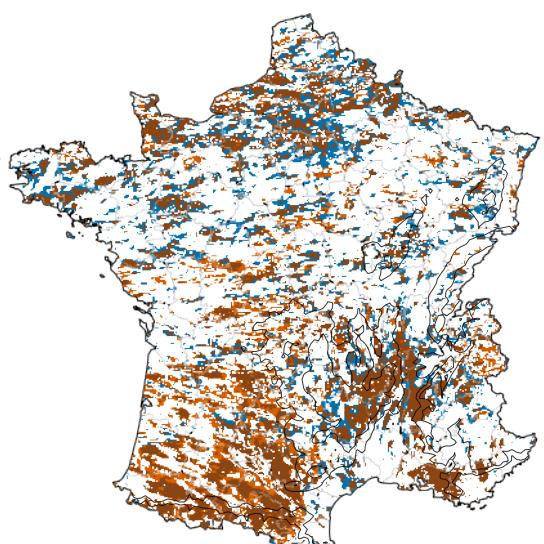


DEC

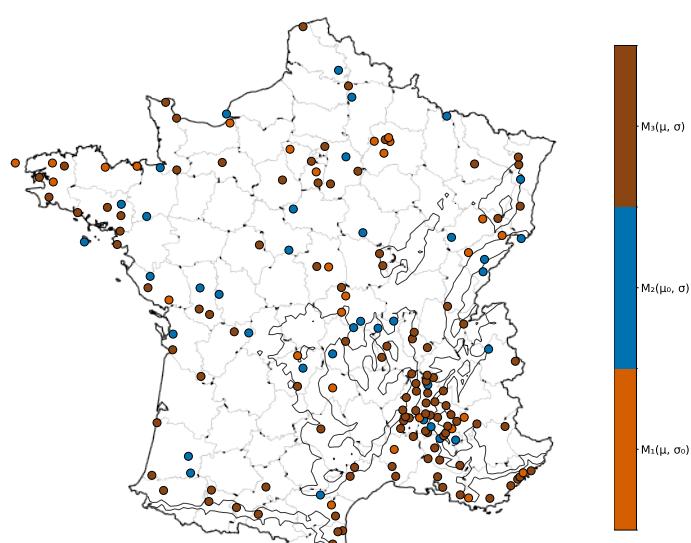
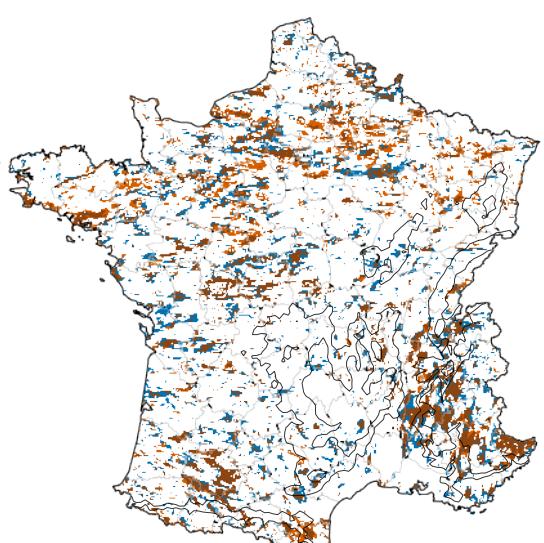


### 5.3.2.2 Tendances significatives

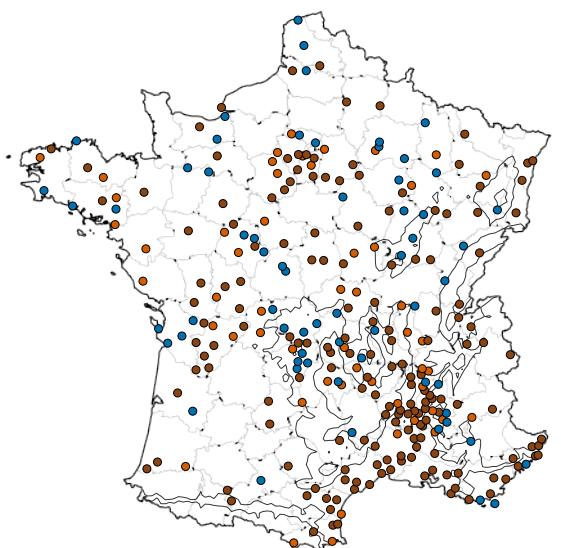
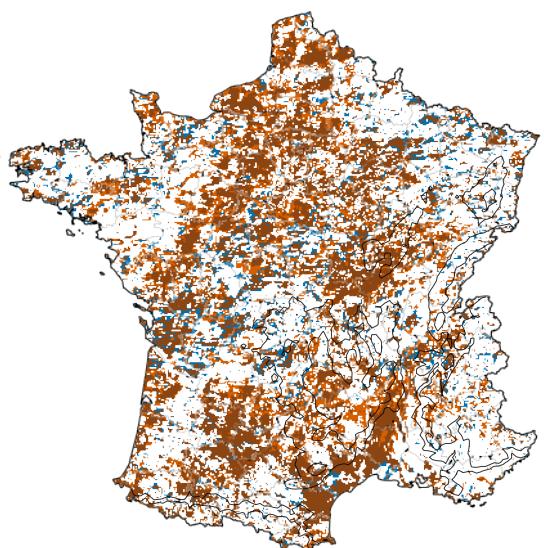
JAN



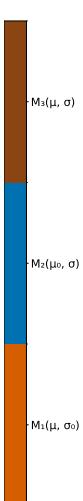
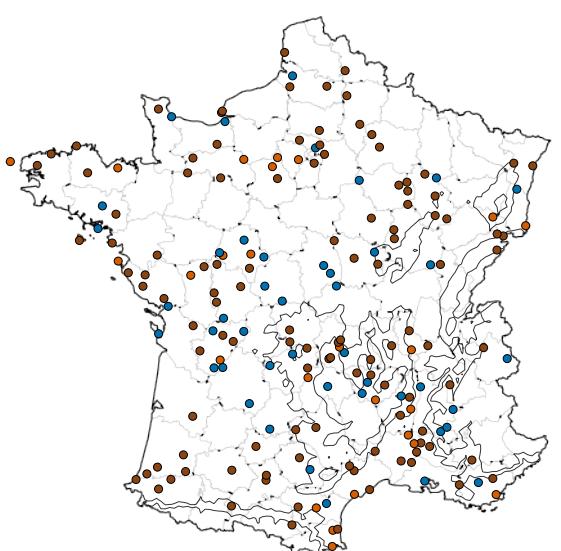
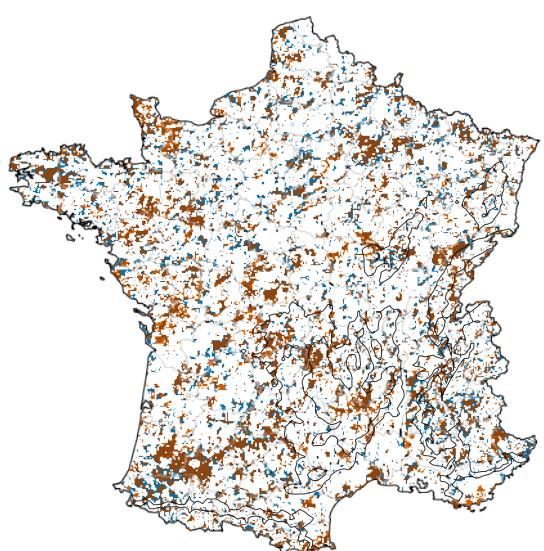
FEV



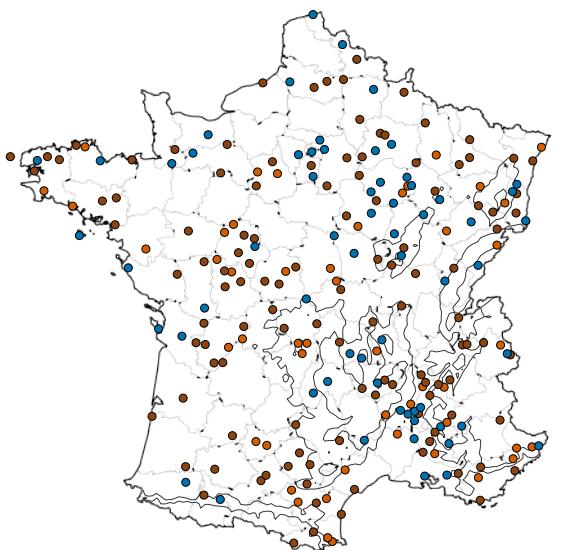
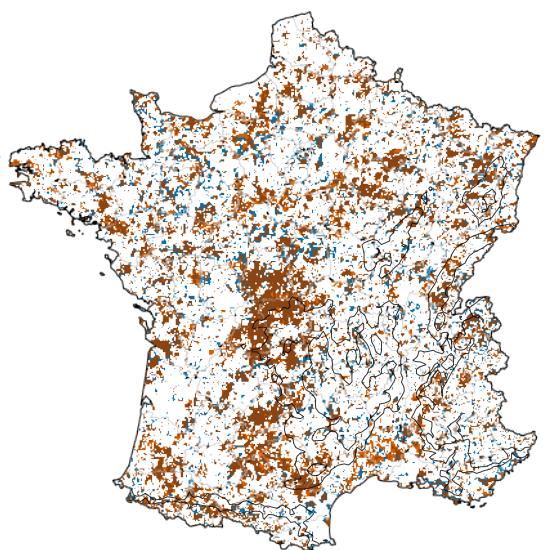
**MAR**



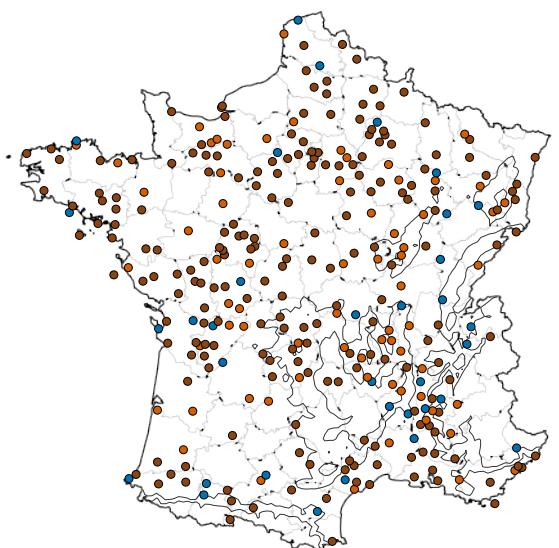
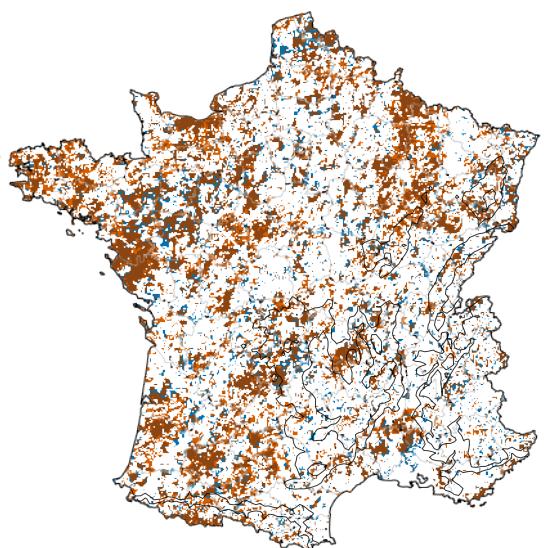
**AVR**



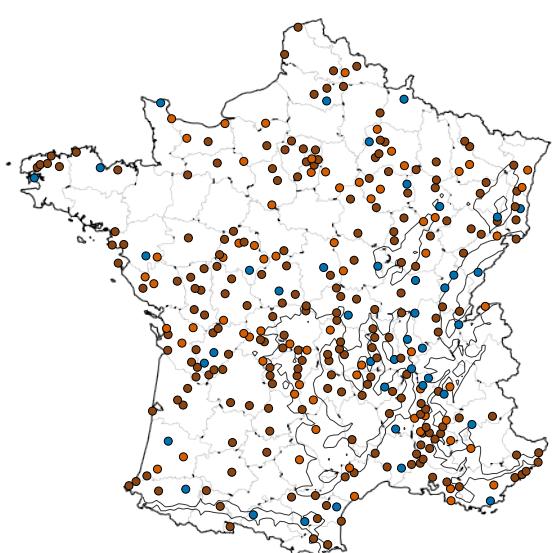
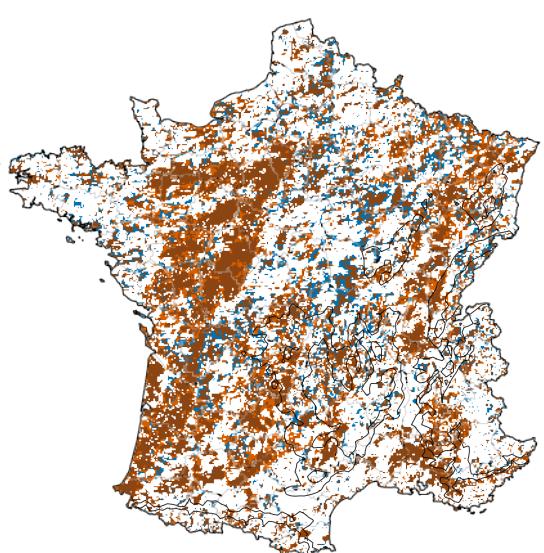
**MAI**



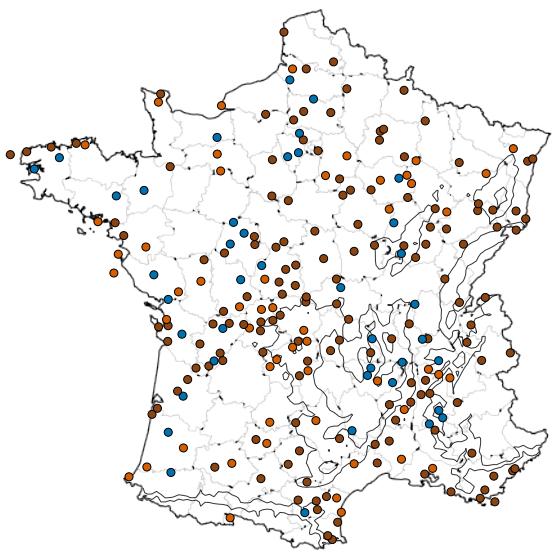
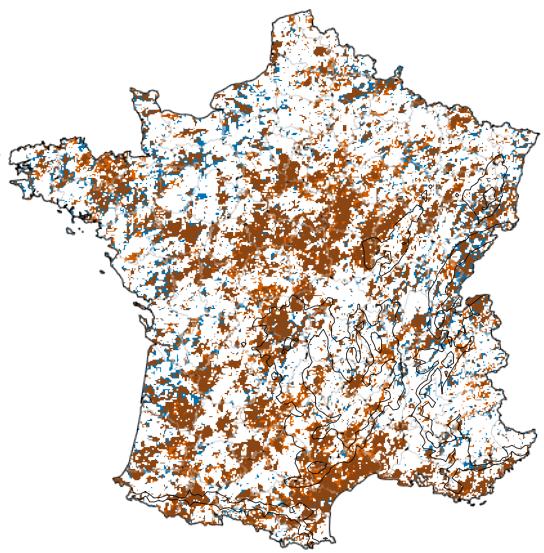
JUI



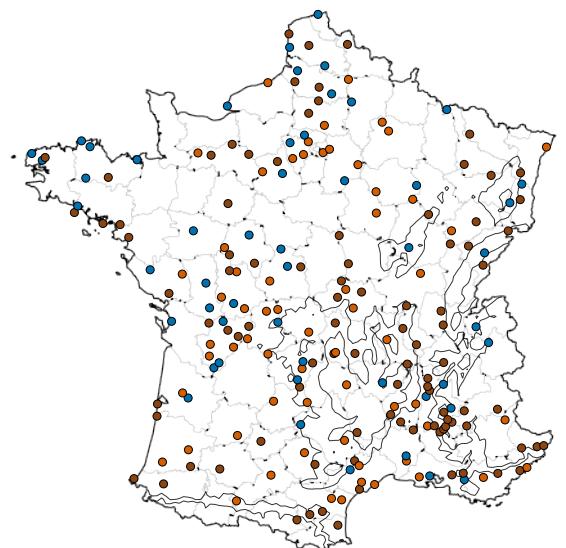
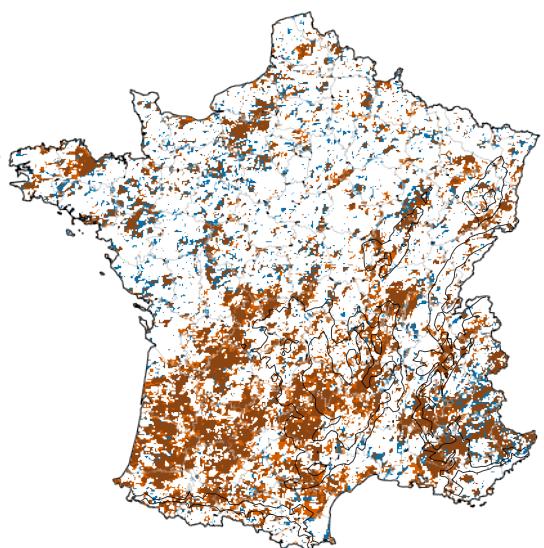
JUILL



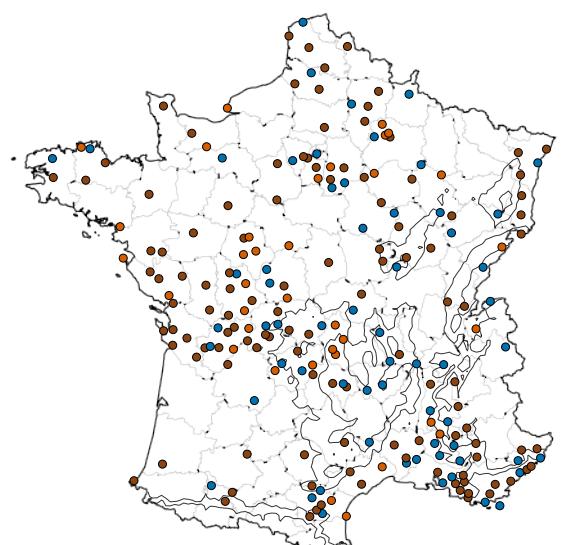
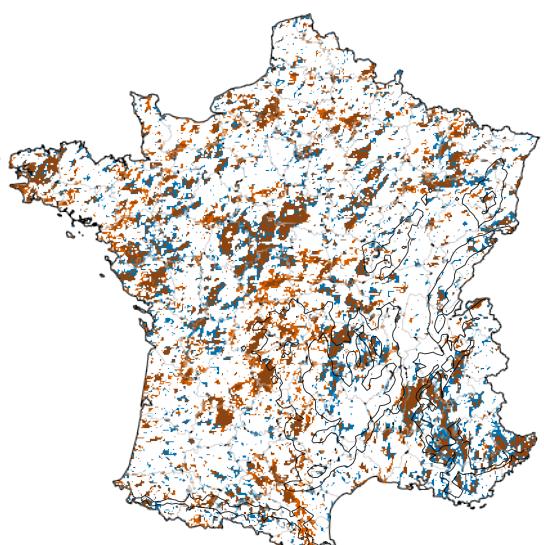
AOU



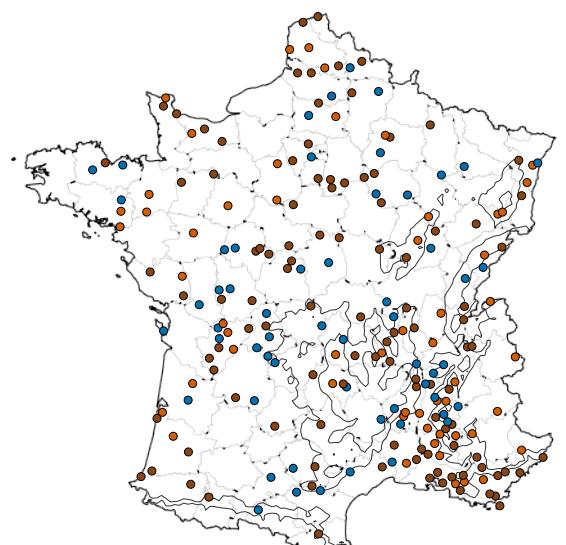
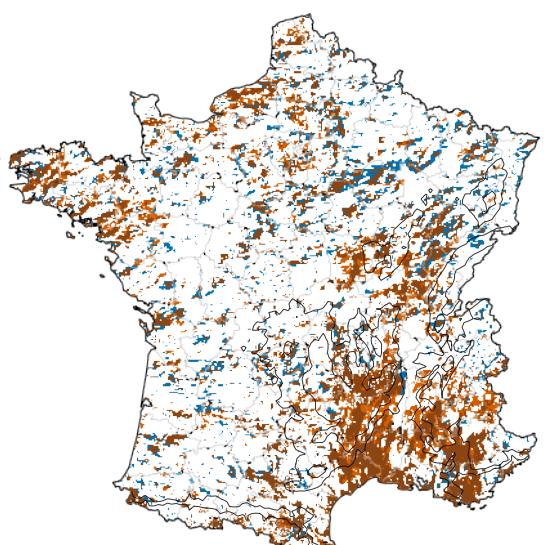
SEP



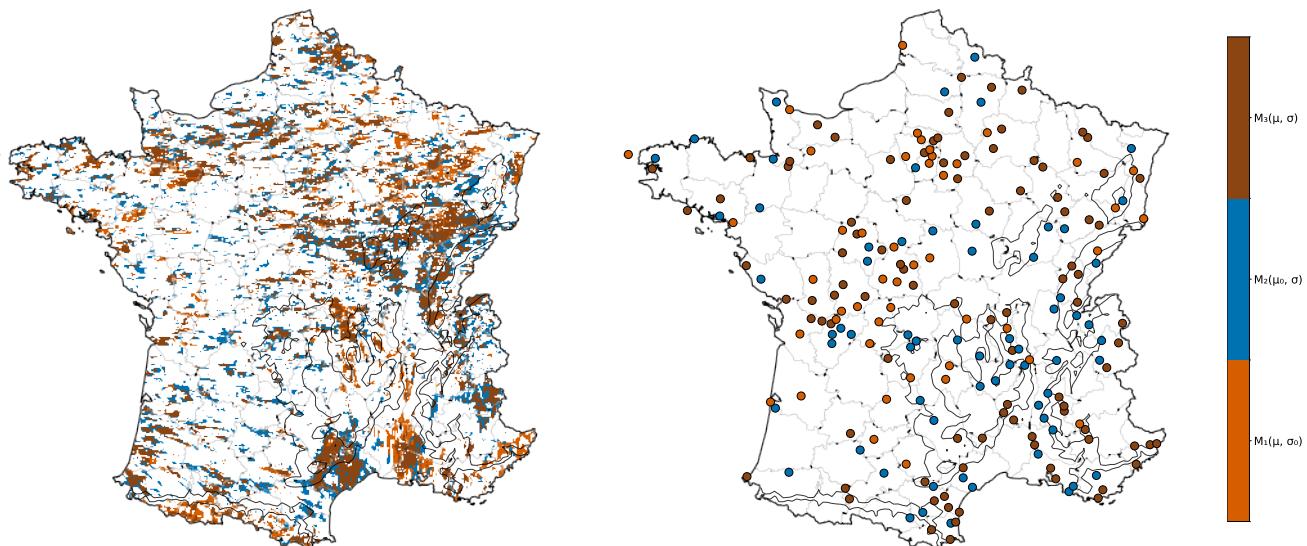
OCT



NOV

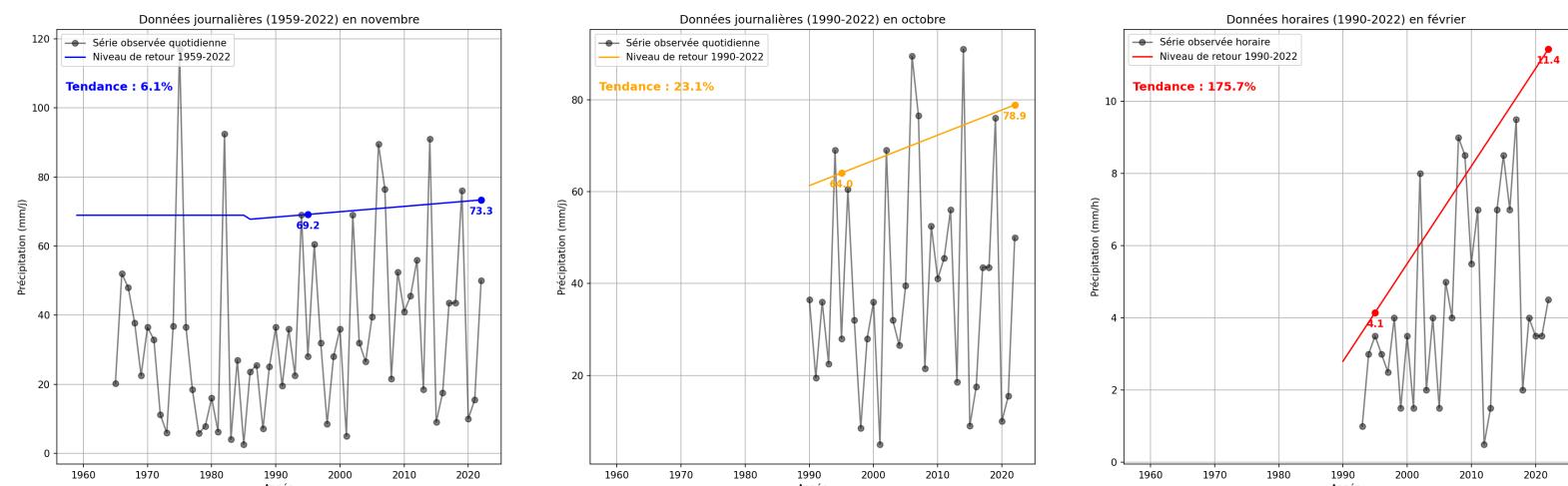


DEC



## 6 Exemple de séries temporelles des précipitations maximales aux différentes échelles d'une station

Station Météo-France de Saint-Marcel-lès-Valence ( $44^{\circ}58'48.6''N$   $4^{\circ}55'52.8''E$ ) dans la Vallée du Rhône.



Modèle sélectionné dans l'ordre d'affichage des graphiques :  $M_1^*$ ,  $M_1$ ,  $M_3$ .