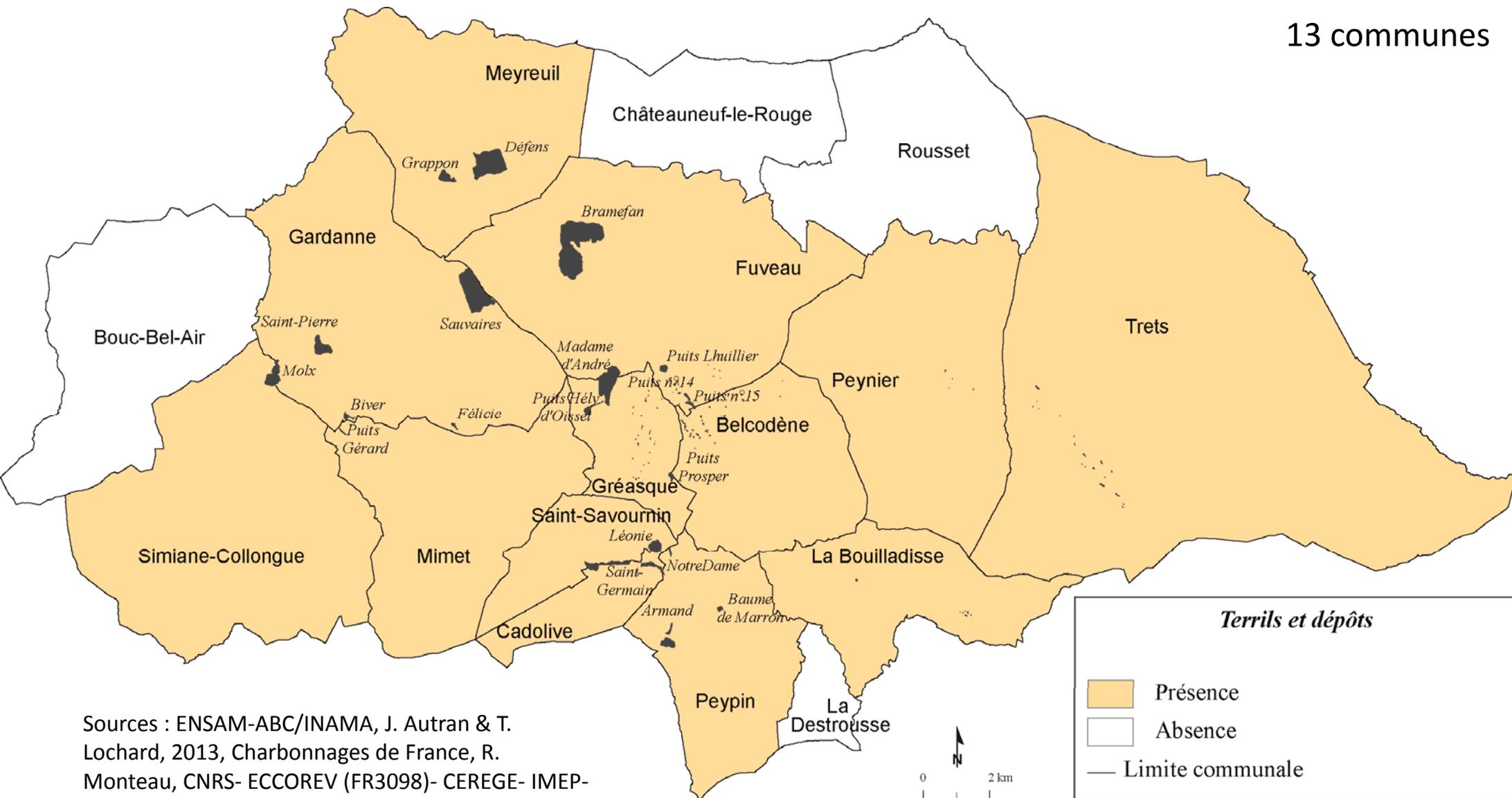


Les terrils du bassin minier de Provence : Etat des lieux, dynamique de l'occupation du sol (2002-2014)

J.-C. RAYNAL (ECCOREV – OHM BMP)
raynal@eccorev.fr

Situation des terrils dans le bassin minier de Provence

13 communes



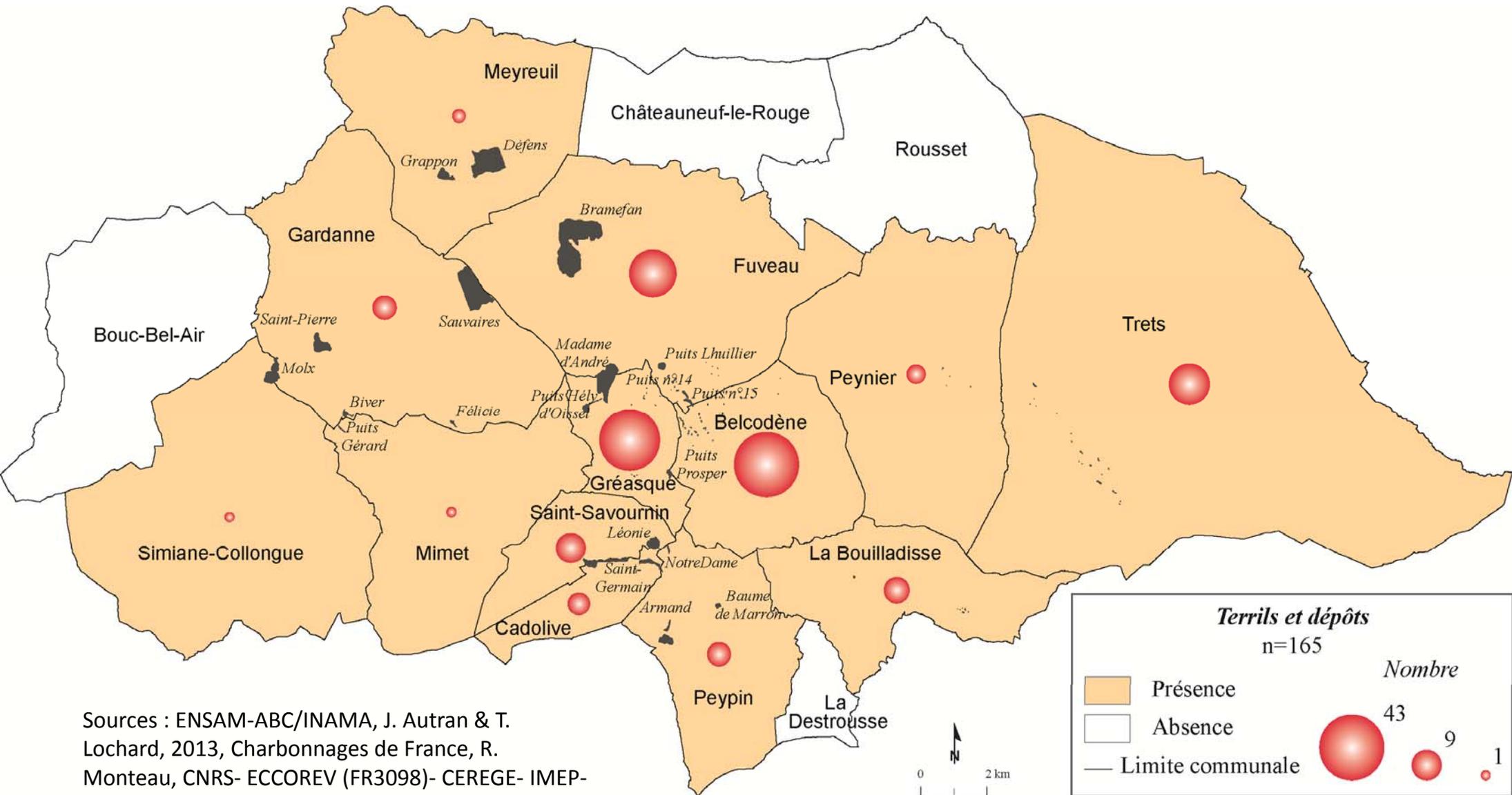
Sources : ENSAM-ABC/INAMA, J. Autran & T. Lochard, 2013, Charbonnages de France, R. Monteau, CNRS- ECCOREV (FR3098)- CEREGE- IMEP- OHM-BMP, C. Clouard, 2010

Sources : BRGM, 2011 - IGN BD CARTO®, 2015

© CNRS - ECCOREV (FR 3098) / OHM-BMP, J.-C. Raynaud, 2015



Situation des terrils dans le bassin minier de Provence



Sources : ENSAM-ABC/INAMA, J. Autran & T. Lochard, 2013, Charbonnages de France, R. Monteau, CNRS- ECCOREV (FR3098)- CEREGE- IMEP- OHM-BMP, C. Clouard, 2010

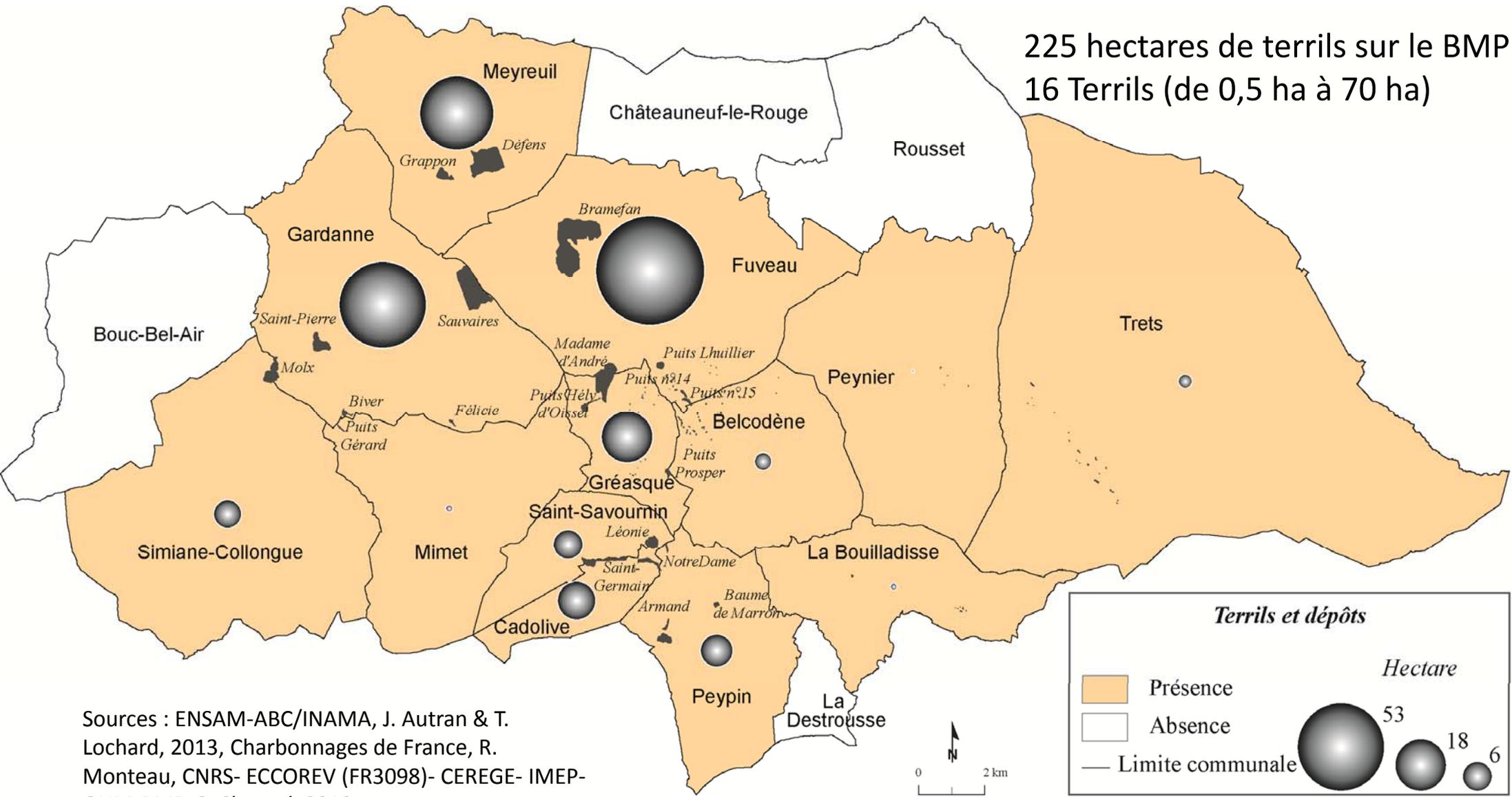
Sources : BRGM, 2011 - IGN BD CARTO®, 2015

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Situation des terrils dans le bassin minier de Provence

225 hectares de terrils sur le BMP
16 Terrils (de 0,5 ha à 70 ha)



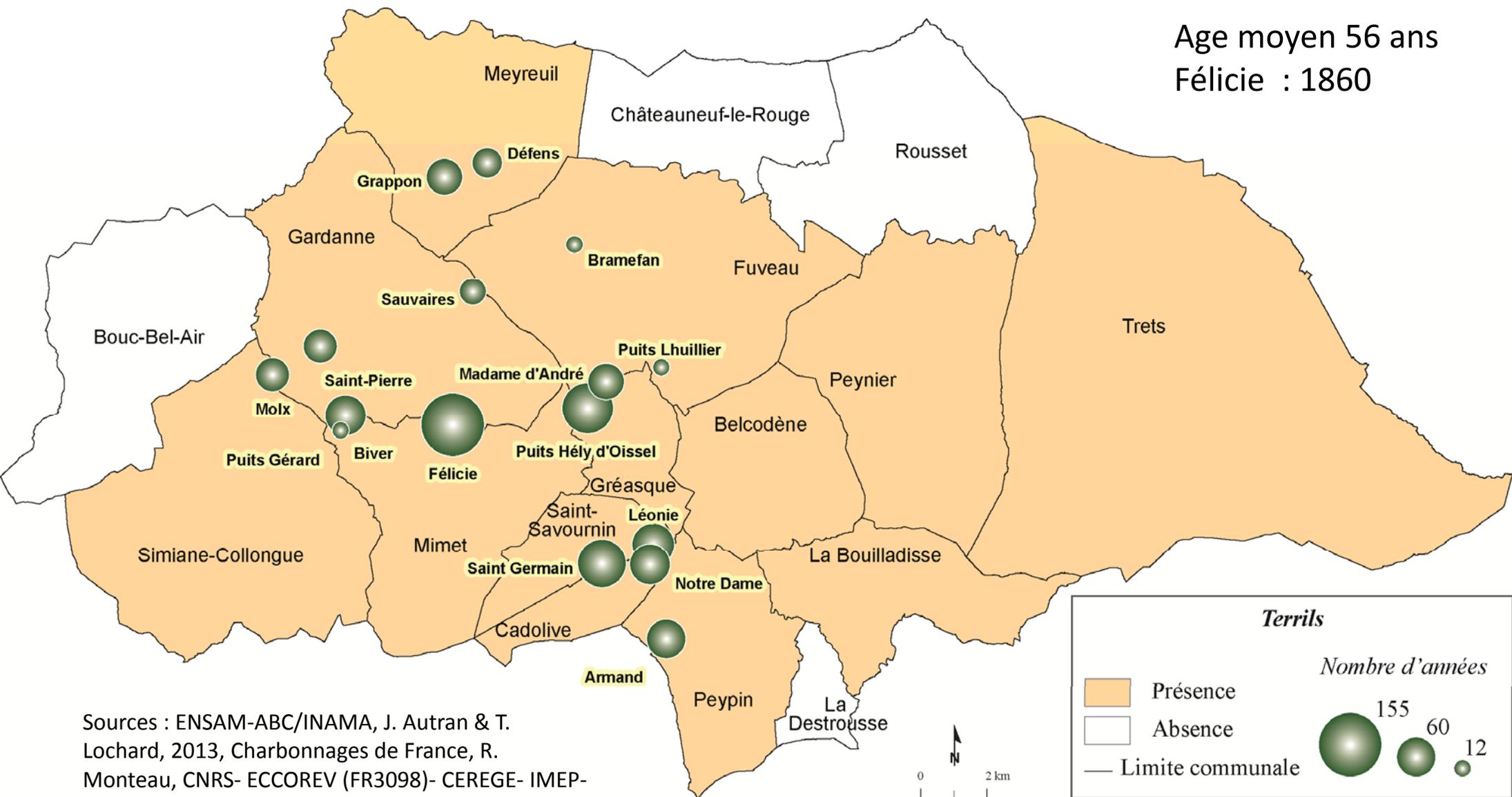
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Sources : BRGM, 2011 - IGN BD CARTO®, 2015

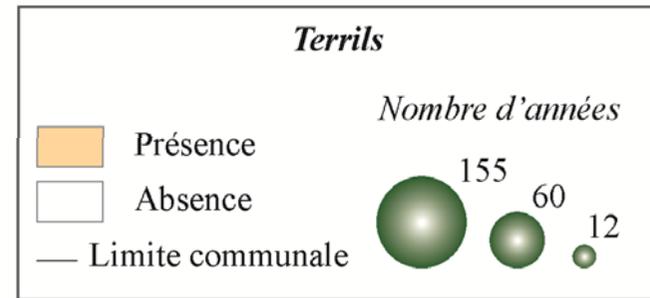
© CNRS - ECCOREV (FR 3098) / OHM-BMP, J.-C. Raynal, 2015

Ancienneté des terrils dans le bassin minier de Provence

Age moyen 56 ans
Félicie : 1860



Sources : ENSAM-ABC/INAMA, J. Autran & T. Lochard, 2013, Charbonnages de France, R. Monteau, CNRS- ECCOREV (FR3098)- CEREGE- IMEP- OHM-BMP, C. Clouard, 2010



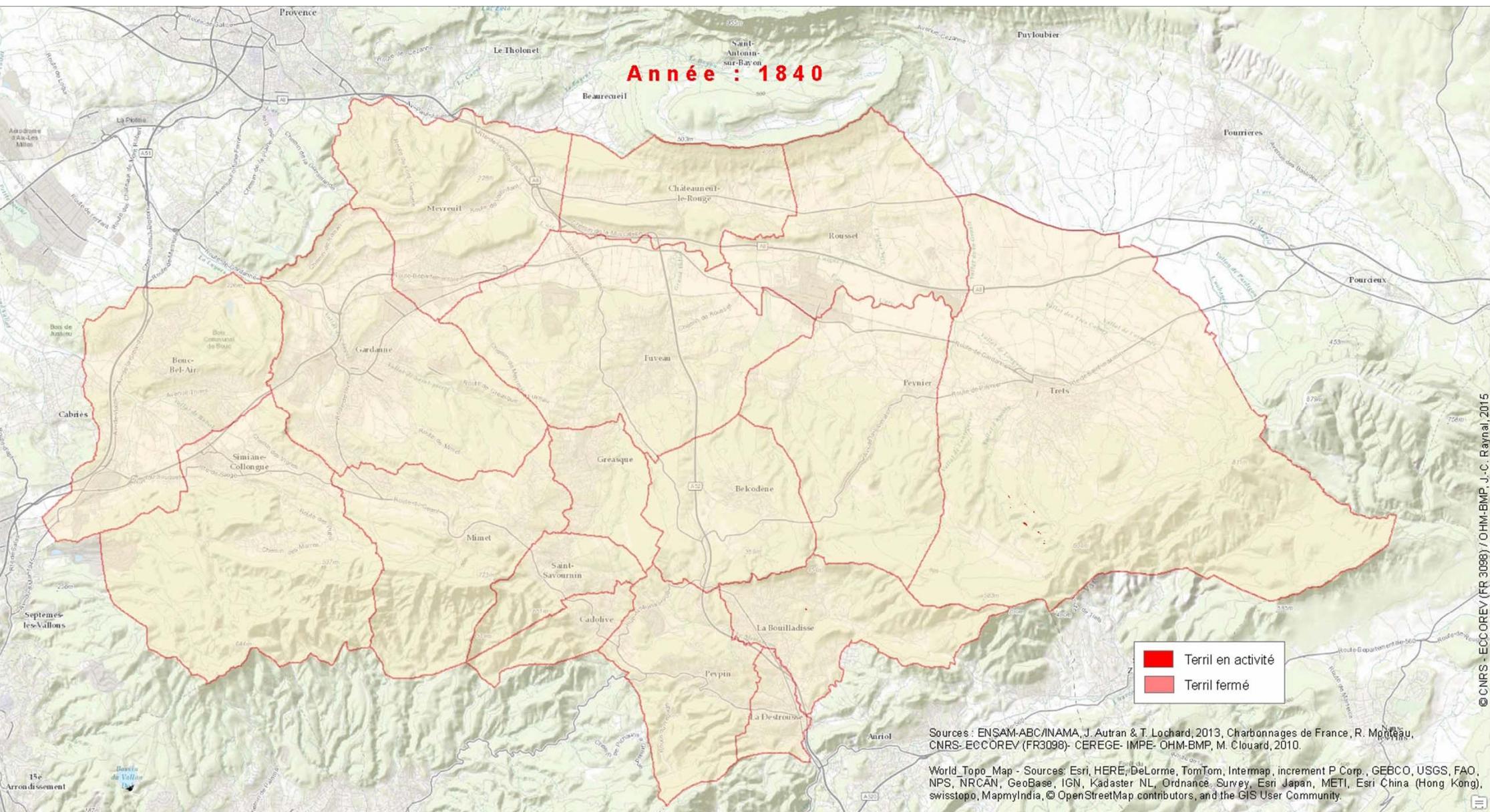
Sources : BRGM, 2011 - IGN BD CARTO®, 2015

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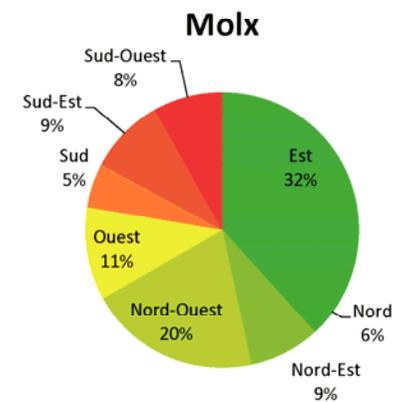
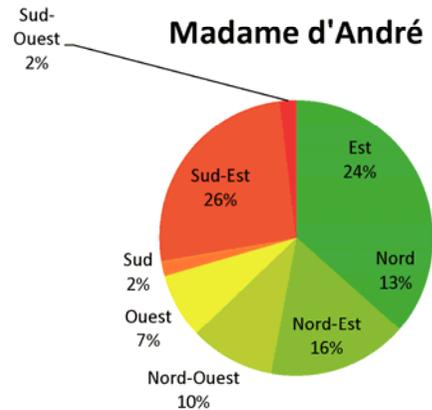
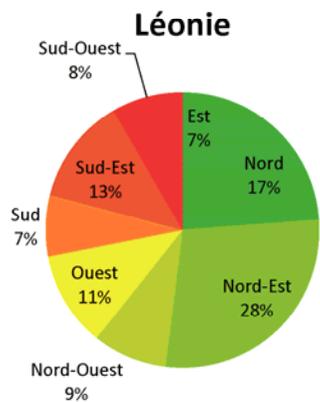
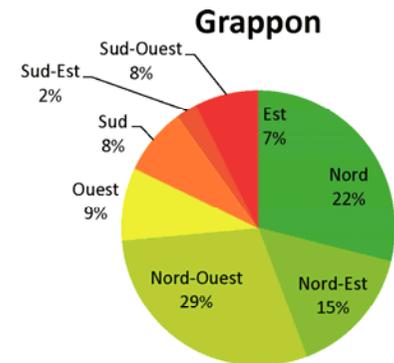
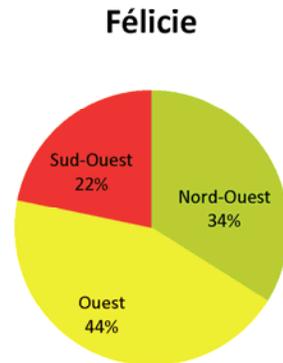
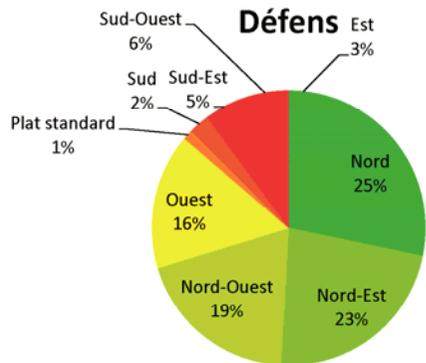
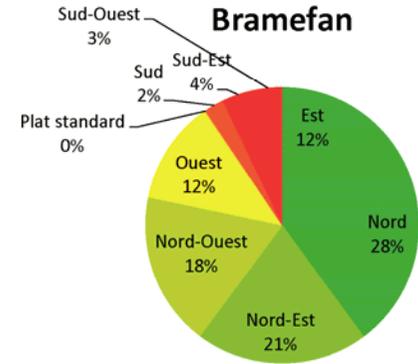
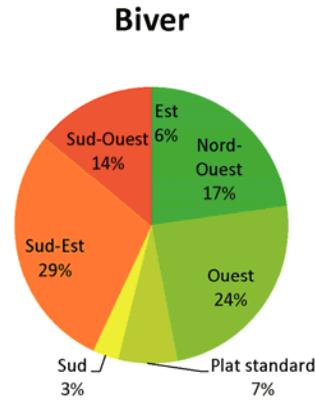
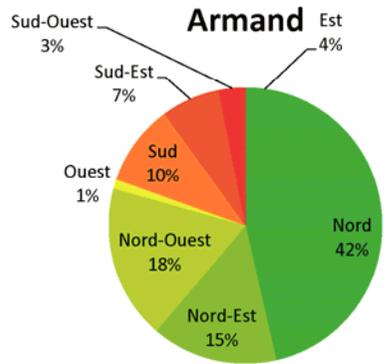


Journée « Terrils », 7 décembre 2015, Aix-en-Provence

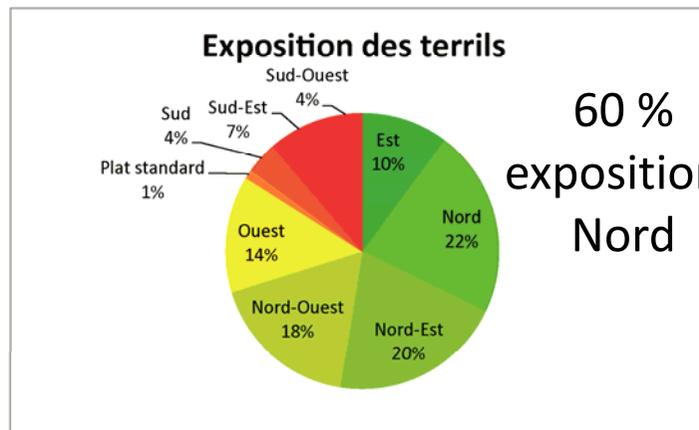
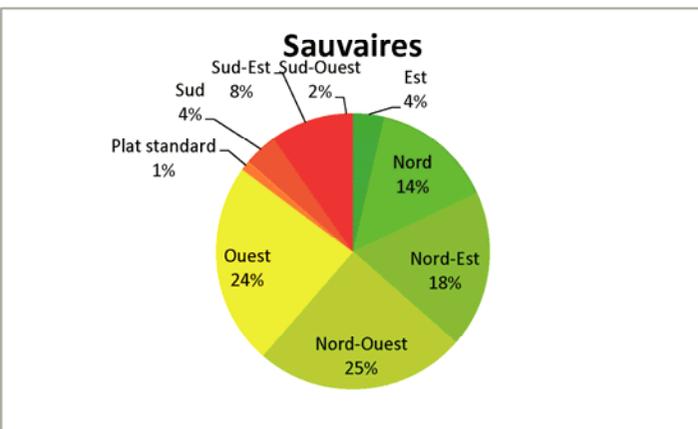
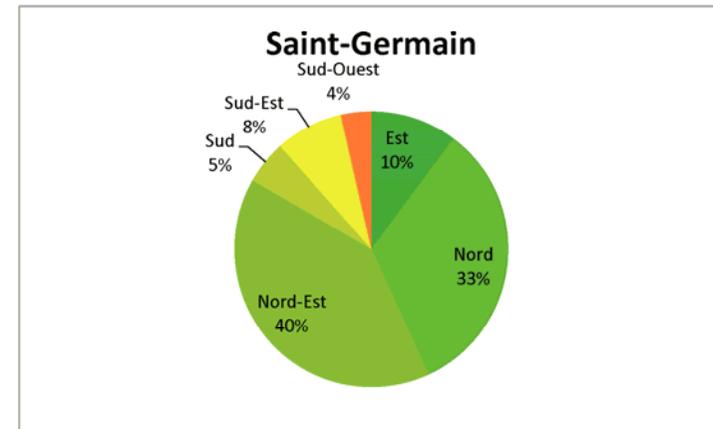
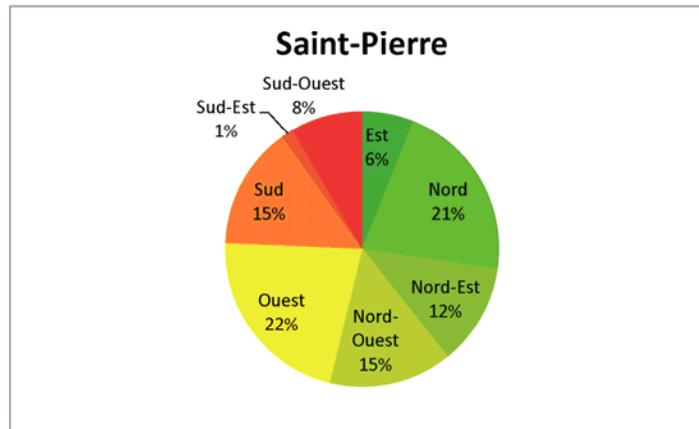
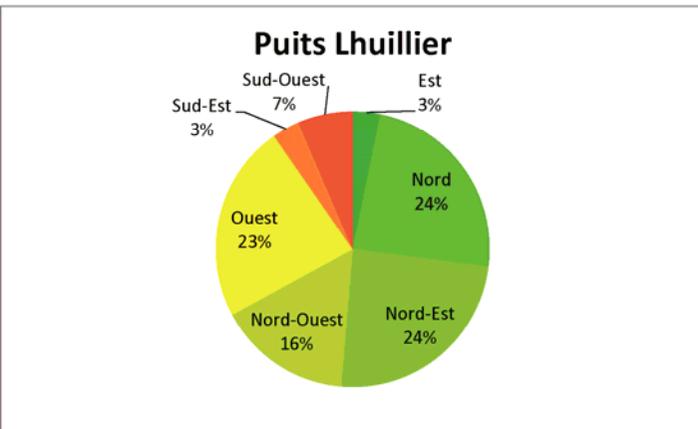
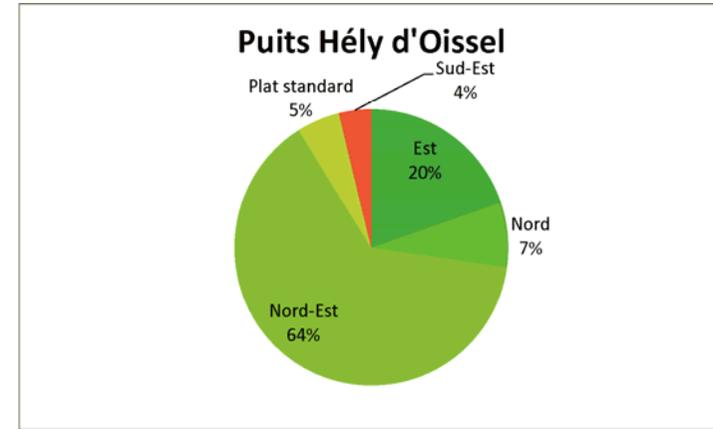
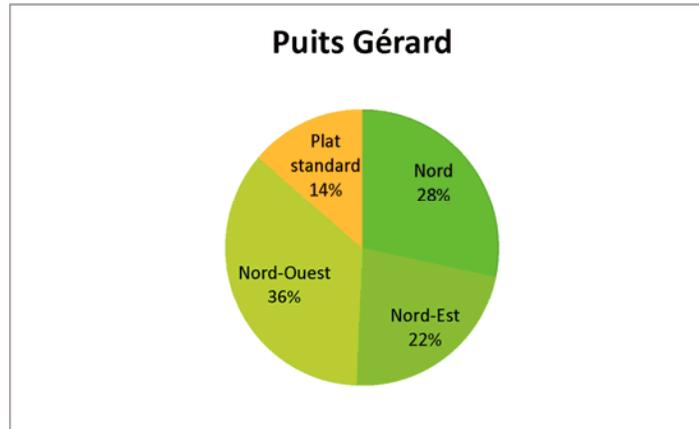
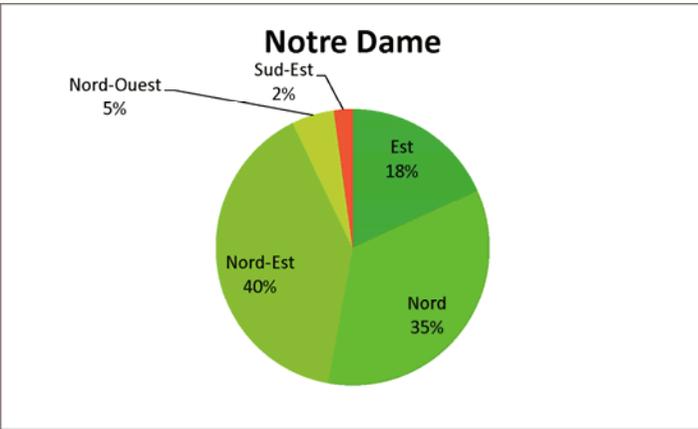
Implantation des terrils dans le bassin minier de Provence



Exposition des terrils



Exposition des terrils



60 %
expositions
Nord

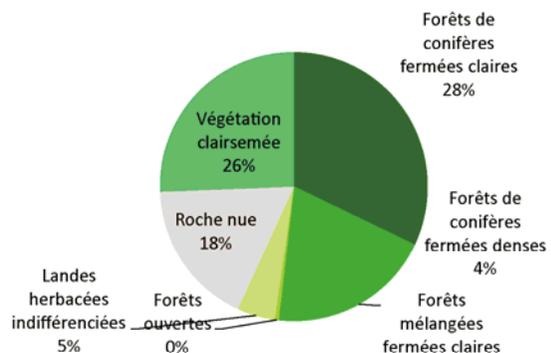


Matrice des principaux terrils du BMP (W.-A. Byache, 2015)

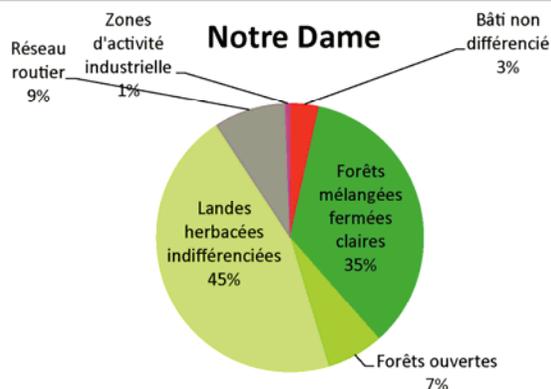
| NOM | COMMUNE | MATRICE | DEBUT | FIN | SURFACE | MORPHOLOGIE | ORIGINE | NATURE | SARCOPHAGE |
|----------|-----------------|-----------------------|--------------|--|---------|--|---|--|------------|
| Armand | Peypin | Urbaine et forestière | fin 19e | 1950-1955 | 7 ha | Ancien terril adossé à une colline | Exploitation minière | | 0 |
| Biver | Gardanne | Urbaine | 1893 | 1950 | 1,96 ha | Ancien terril en butte arborée, entièrement transformé en chaux | Exploitation minière | | 0 |
| Bramefan | Fuveau | Forestière | 1987 | 2003 (encore alimenté par d'autres dépôts aujourd'hui) | 72 ha | Tabulaire avec système multi-couches semi-karstique (petits aquifères captifs) | Exploitation minière + déchets centrale thermique | Stériles de mine et de cendres de la centrale thermique | 0 |
| Defens | Meyreuil | Forestière et rurale | 1952 (ouest) | 1978 (est) | 52 ha | Tabulaire: plates-formes et pentes végétalisées | Exploitation minière + déchets centrale thermique | Stériles | 1 |
| Gérard | Gardanne | Forestière et urbaine | 1949 | | 3 ha | Ancien terril en butte | | | |
| Germain | Saint Savournin | Urbaine | | | 10,8 ha | Ancien terril tabulaire | Exploitation minière | | |
| Grappon | Meyreuil | Urbaine et forestière | 1950 | 1965 | 6 ha | Sommet en forme de butte, légèrement arrondi | Exploitation minière + déchets centrale thermique | Pierres de mine calcaires (issues du lavage et criblage du charbon), matériaux rocheux, cendres volantes et de foyer, résidus fins de lavage | 1 |

Occupation du sol 2014

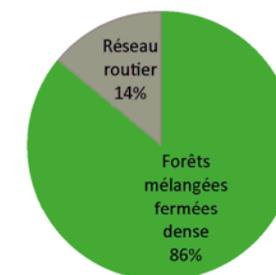
Molx



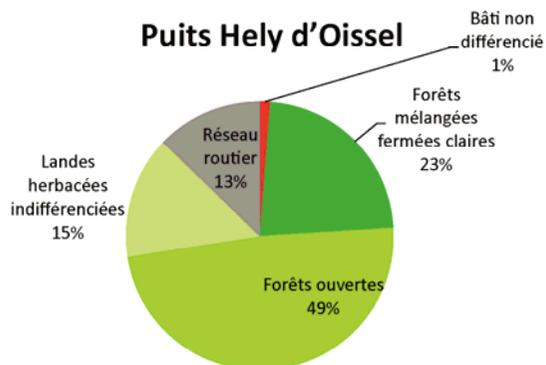
Notre Dame



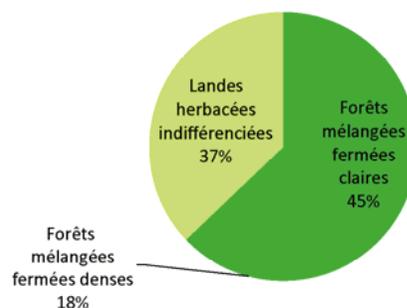
Puits Gérard



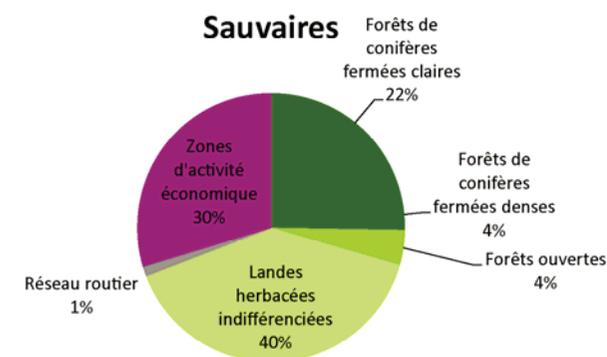
Puits Hely d'Oissel



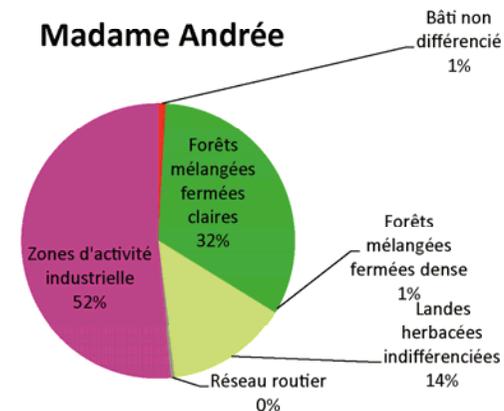
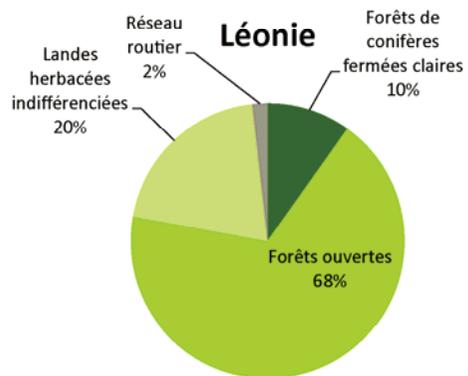
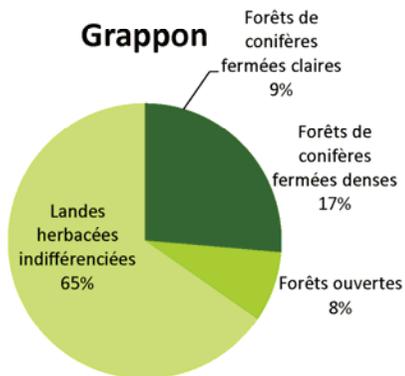
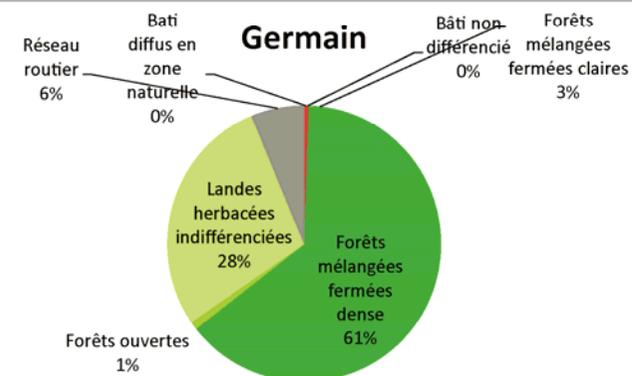
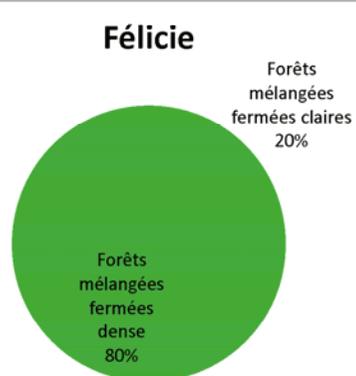
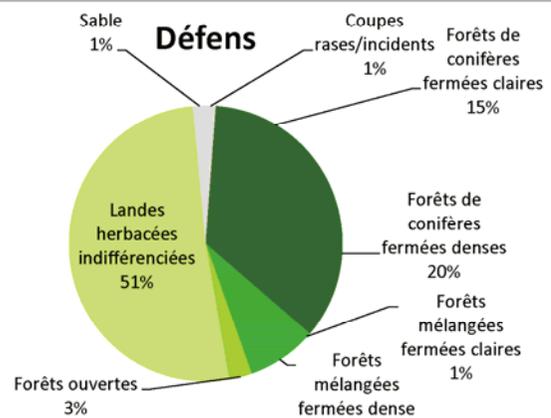
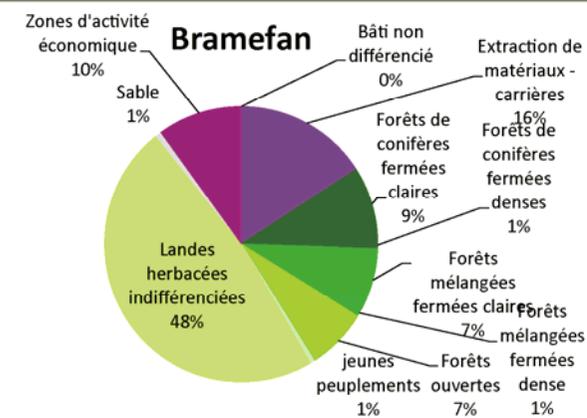
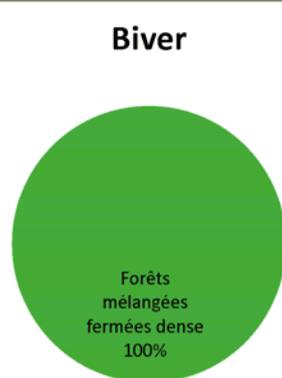
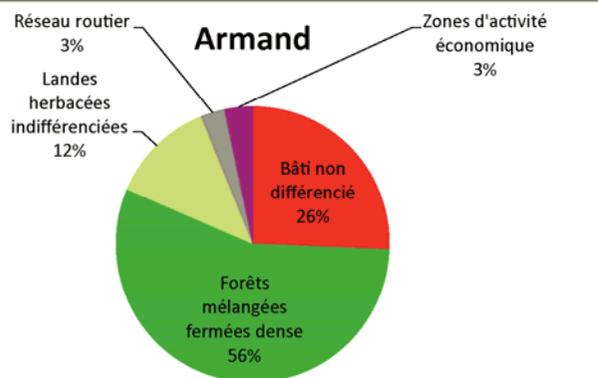
Saint-Pierre



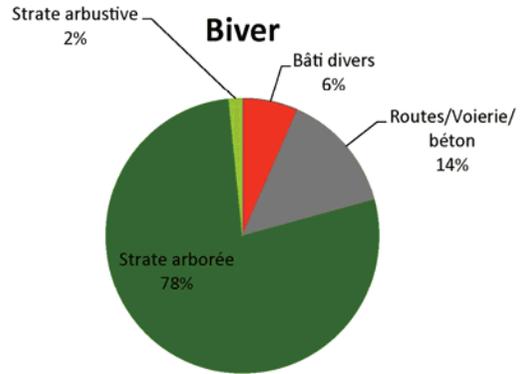
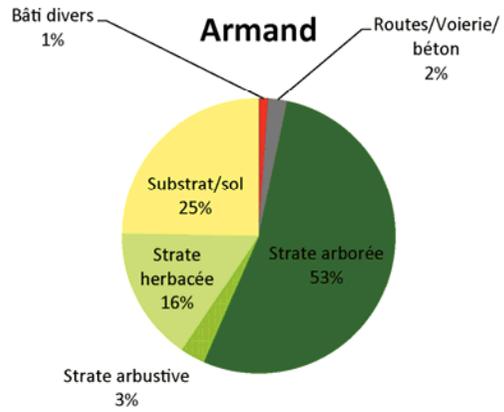
Sauvaires



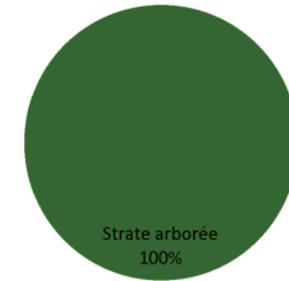
Nature de l'occupation des terrils en 2014



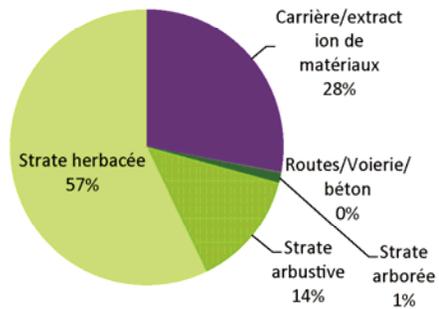
Recouvrement en 2014



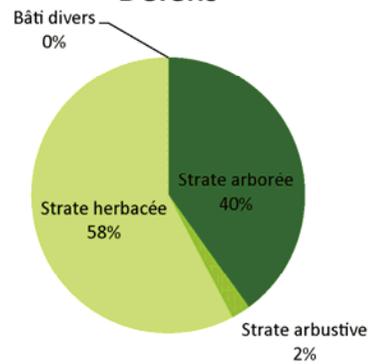
Felicie



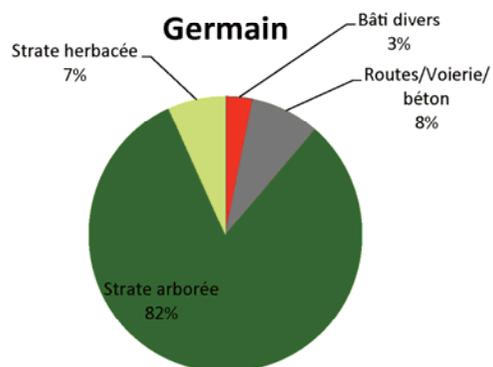
Bramefan



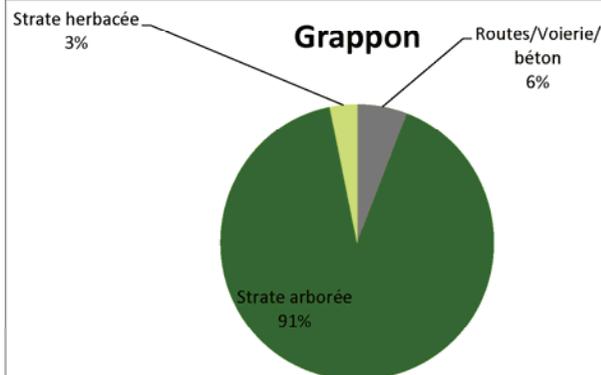
Défens



Germain

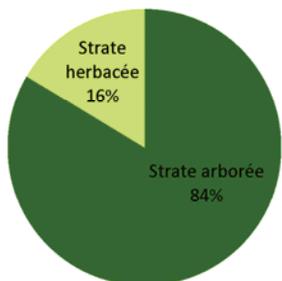


Grappon

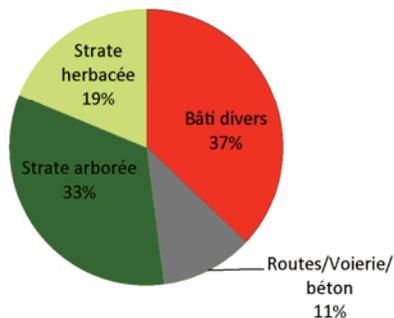


Recouvrement en 2014

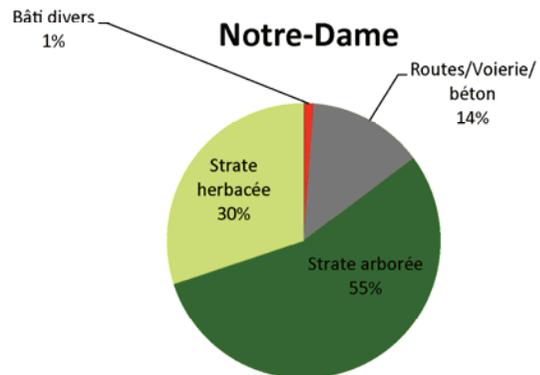
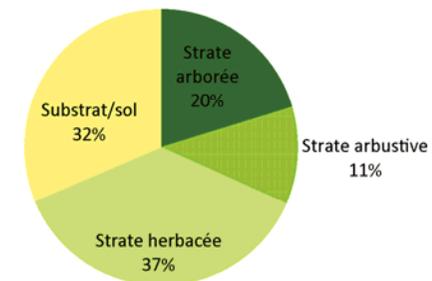
Léonie



Madame Andrée

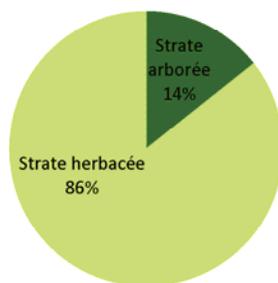


Molx

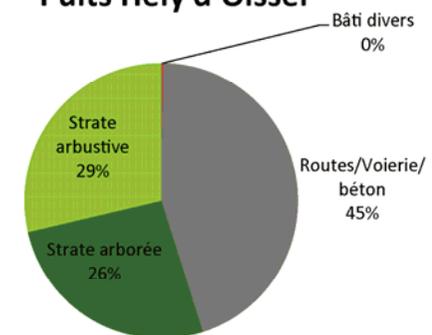


Notre-Dame

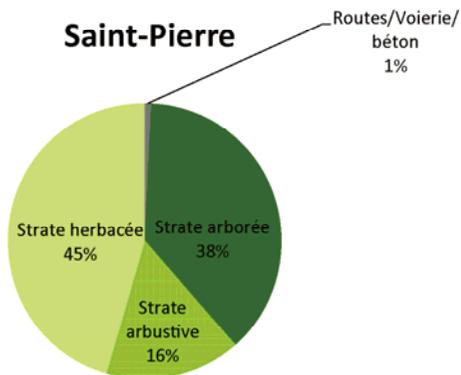
Puits Gérard



Puits Hély d'Oissel



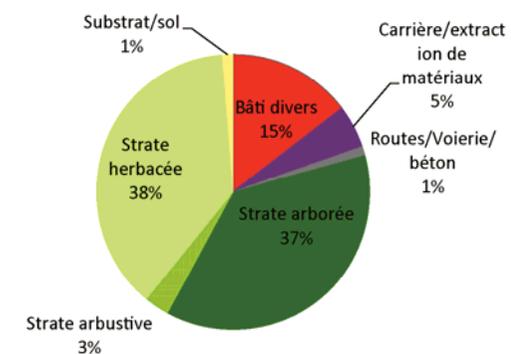
Saint-Pierre



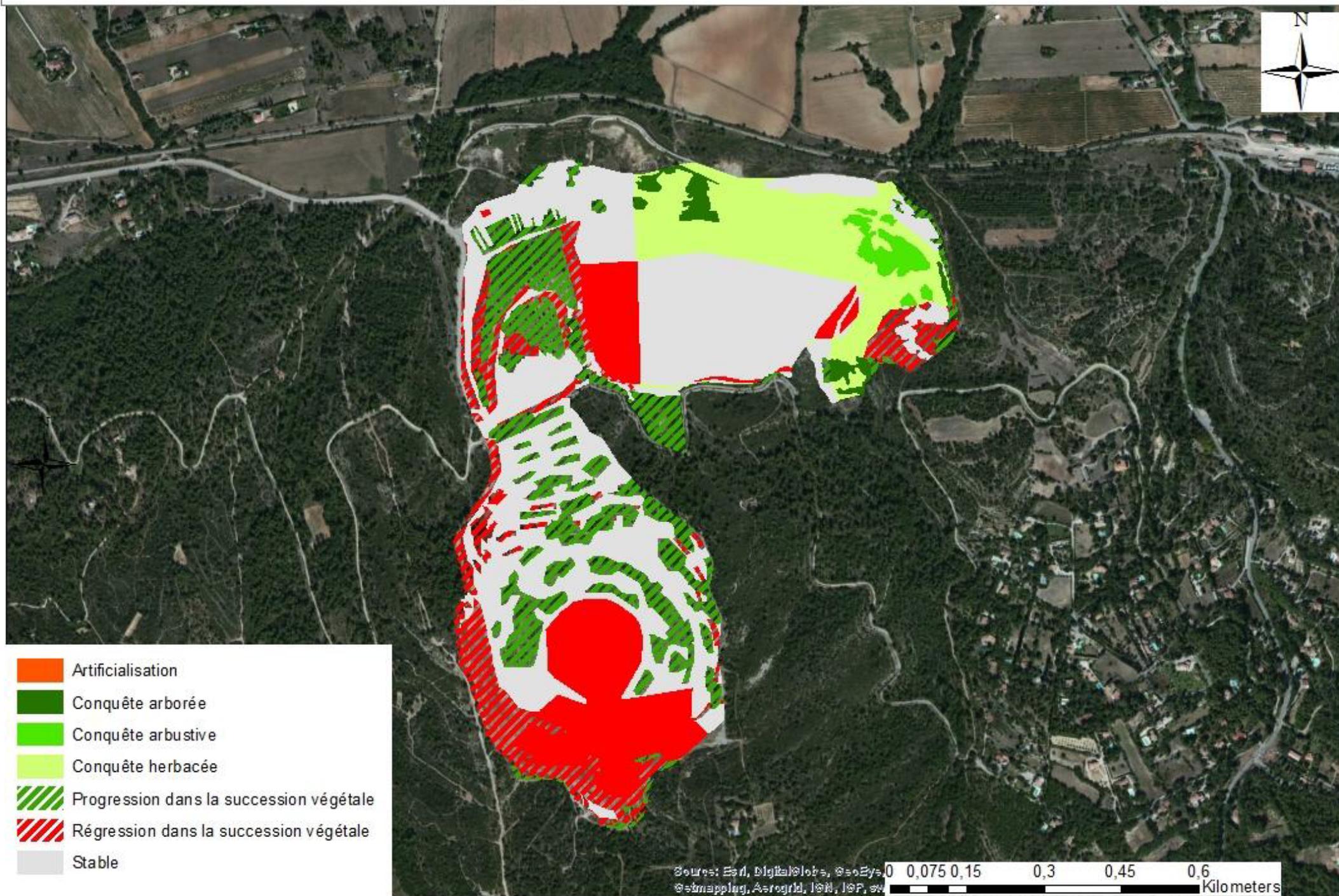
Sauvaires



Profil des terrils du BMP



Carte de l'évolution de la végétation du terril de Bramefan entre 2002 et 2014



Carte de l'évolution de la végétation des terrils des Molx entre 2002 et 2014

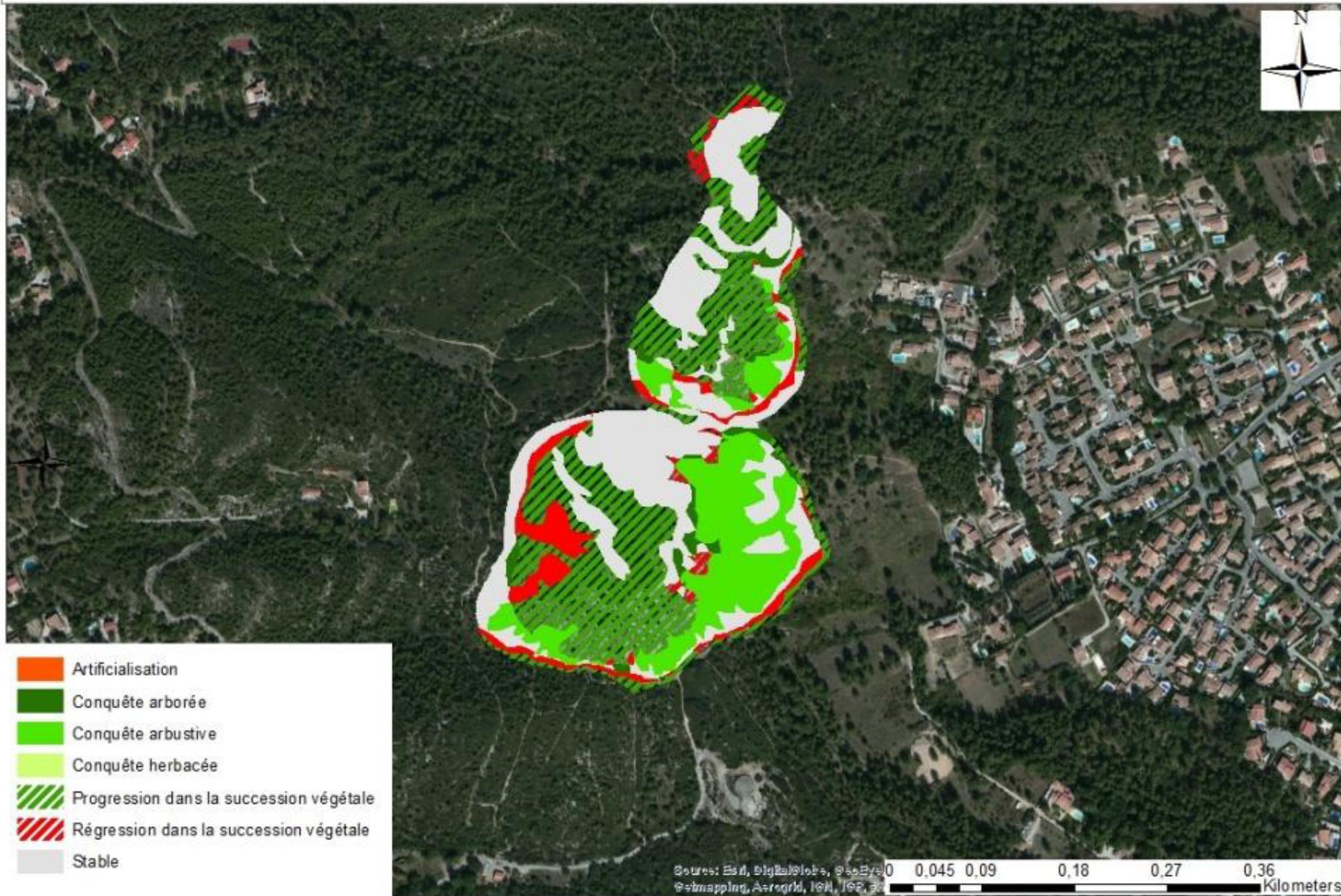


Tableau des évolutions de la végétation des terrils entre 2002 et 2014 (W.-A. Byache, 2015)

| Nom du terril | Notre Dame | Puits Gérard | Puits Hély d'Oissel | Puits l'Huillier | Saint Pierre | Sauvaires | Armand | Défens |
|---|-------------------|---------------------|----------------------------|-------------------------|---------------------|------------------|---------------|---------------|
| <i>Taux d'évolution de la surface végétale totale</i> | -0.15% | -18.34% | -5.63% | 17.91% | 0.75% | -57.71% | 6.47% | -0.95% |
| <i>Taux d'évolution de la surface herbacée</i> | 50,89% | -100% | -11,44% | -100% | -11,44% | -86,24% | -123,00% | -34.20% |
| <i>Taux d'évolution de la surface arbustive</i> | 0% | 0% | -100% | -100% | -100% | -100% | -44,82% | -64.15% |
| <i>Taux d'évolution de la surface arborée</i> | -28% | -13.14% | 159.49% | 757.79% | 58.20% | 82.24% | 168,94 % | 53.03% |
| <i>Taux d'évolution de la surface du bâti</i> | 0.89% | 0% | 24.98% | 0 % | -40.12% | -100% | 0% | 6,39% |

Merci de votre attention !



Journée « Terrils », 7 décembre 2015, Aix-en-Provence

Tableau des évolutions de la végétation des terrils entre 2002 et 2014 (W.-A. Byache, 2015)

| Nom du terril | Biver | Bramefan | Félicie | Germain | Grappon | Léonie | Mme d'Andrée | Les Molx |
|--|---------|----------------|---------|---------|----------|---------|--------------|----------------|
| Taux d'évolution de la surface végétale totale | 0% | -0.97% | 0% | 5.14% | 6.32% | -1.79% | -9.45% | 34.45% |
| Taux d'évolution de la surface herbacée | -100% | -24,22% | 0% | -65,23% | 1938,72% | 168,46% | -24,18% | -100% |
| Taux d'évolution de la surface arbustive | -100% | -68,64% | 0% | 100% | 0% | 100% | 0% | 333,56% |
| Taux d'évolution de la surface arborée | 280.37% | 2006.33% | 0% | 4.80% | -61.89% | -48.13% | -1.09% | 112.89% |
| Taux d'évolution de la surface du bâti | 0% | 972,66% | 0% | 12,40% | 0% | 0% | 9.32% | 0% |