

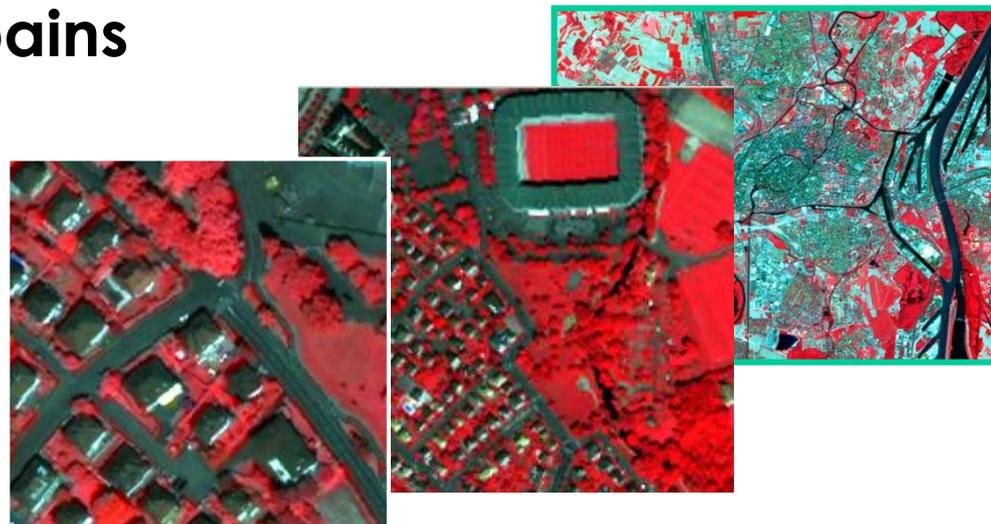
# La télédétection pour cartographier et mesurer l'évolution de l'occupation des sols et des ressources naturelles

## Exemple des espaces urbains

*Anne Puissant – LIVE*

avec des contributions de :

F. Guttler, S. Rougier, Q. Poterek,  
G. Skupinski

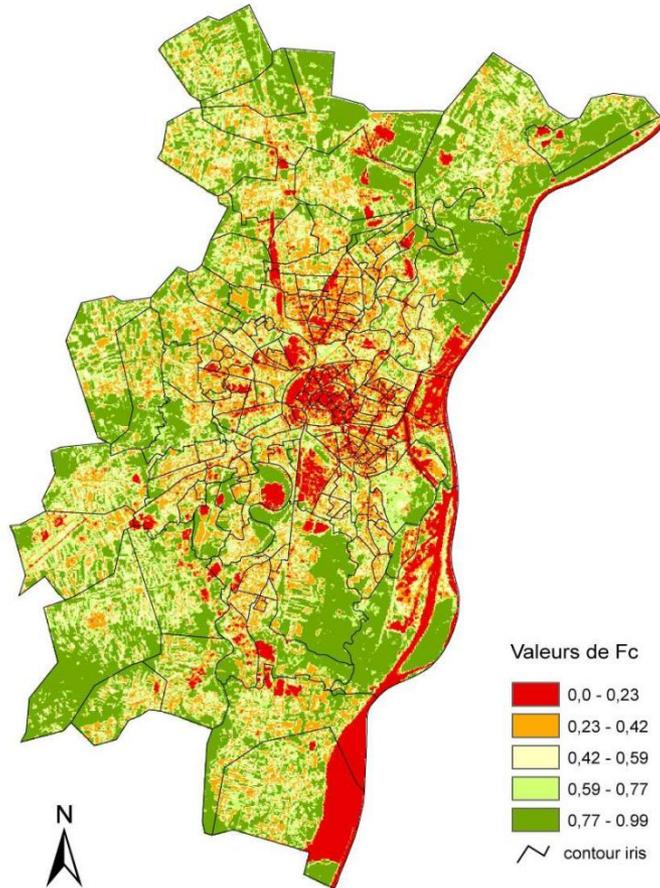


# A partir des images satellites optiques HRS

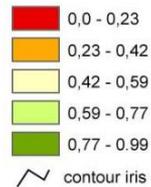
- Des indicateurs 'biophysiques' de l'état des surfaces

1/25 000 – 1/50 000

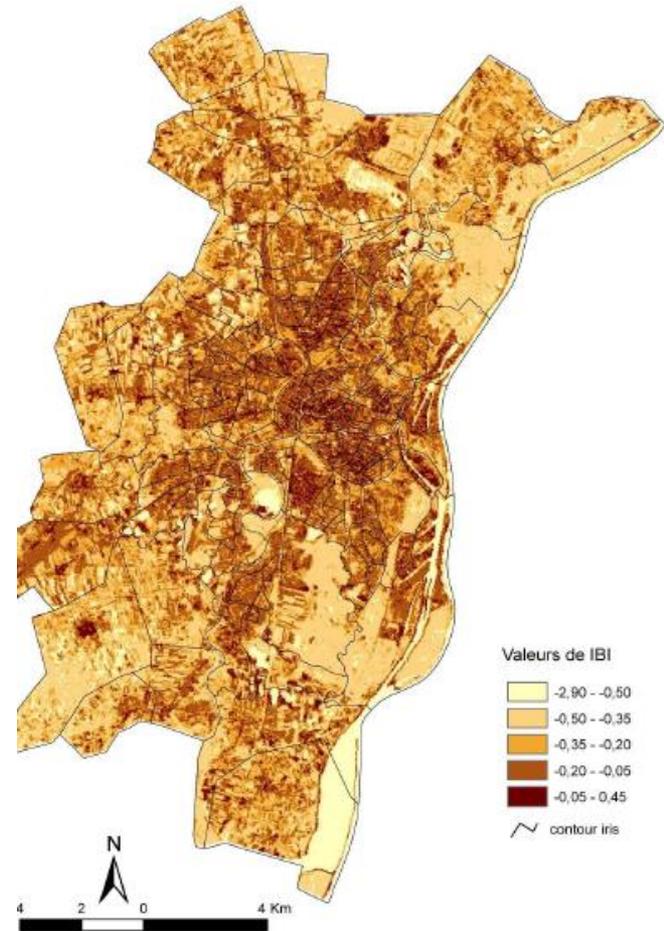
Végétation



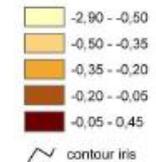
Valeurs de Fc



Imperméabilisation

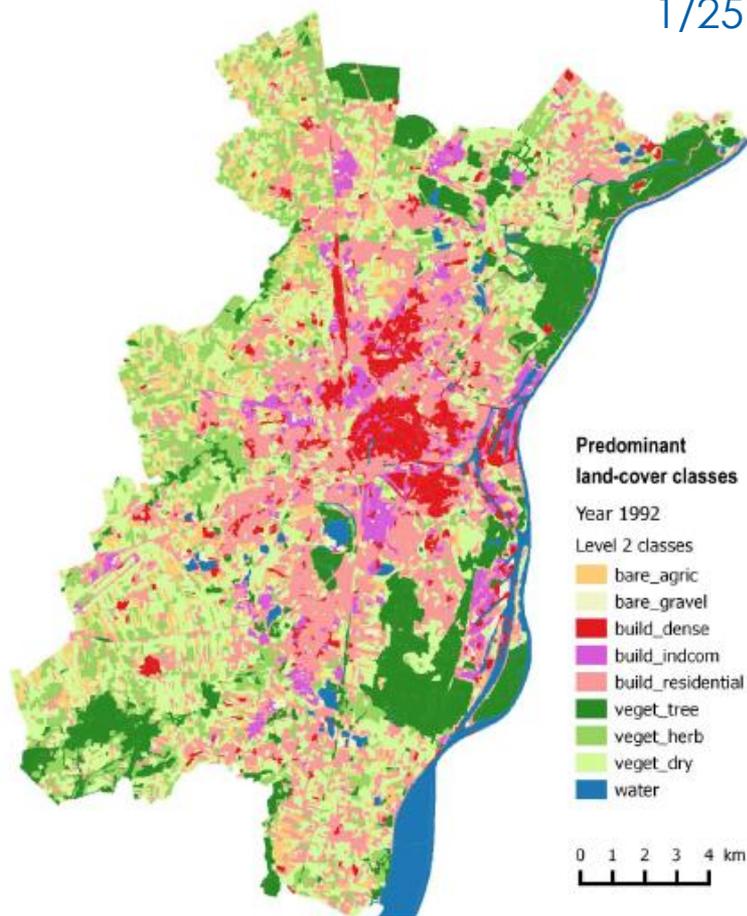


Valeurs de IBI

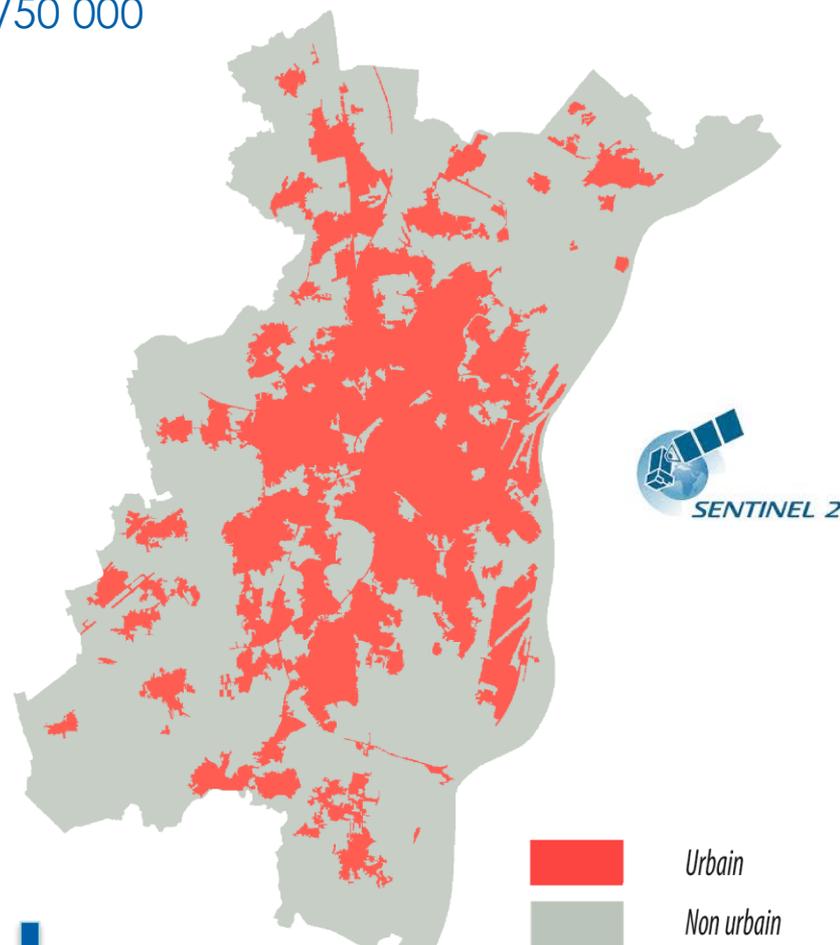
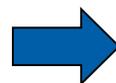


# A partir des images satellites optiques HRS

- Une cartographie de l'occupation des sols / des surfaces artificialisées  
1/25 000 – 1/50 000



CES Occupation des sols

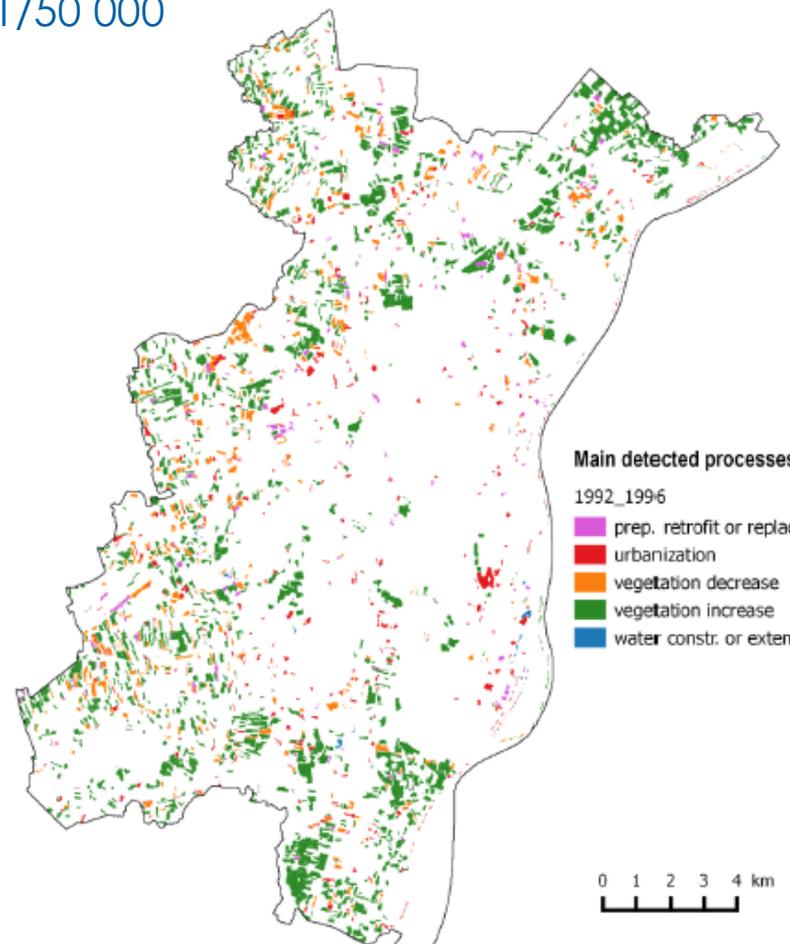
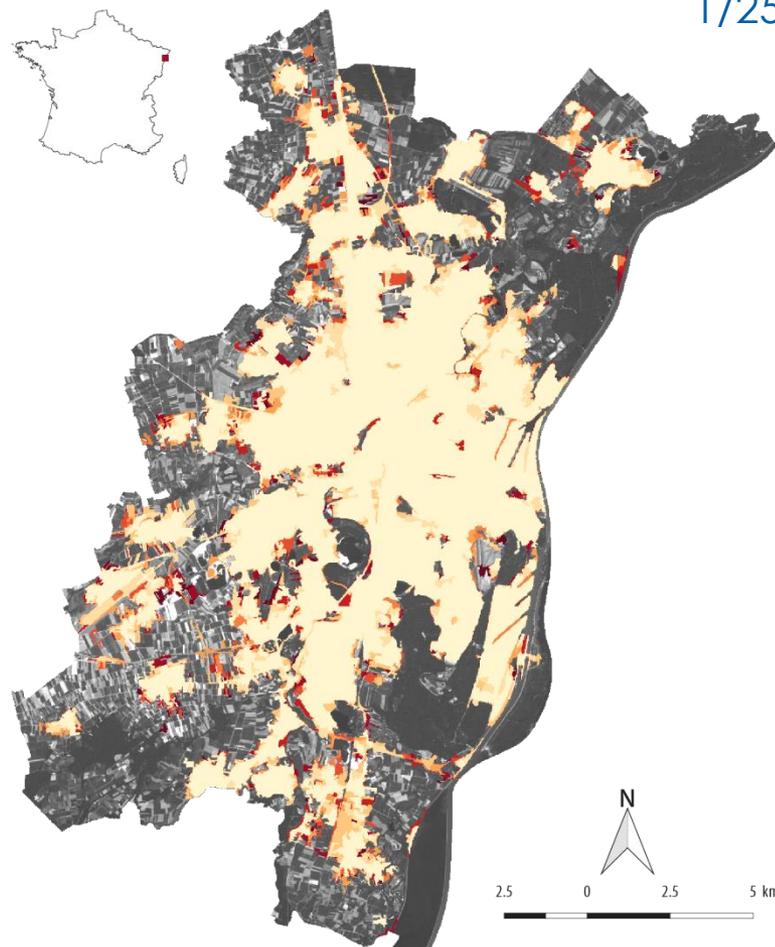


CES Artificialisation / urbanisation

# A partir des images satellites optiques HRS

- La quantification de l'artificialisation / l'identification des processus

1/25 000 – 1/50 000



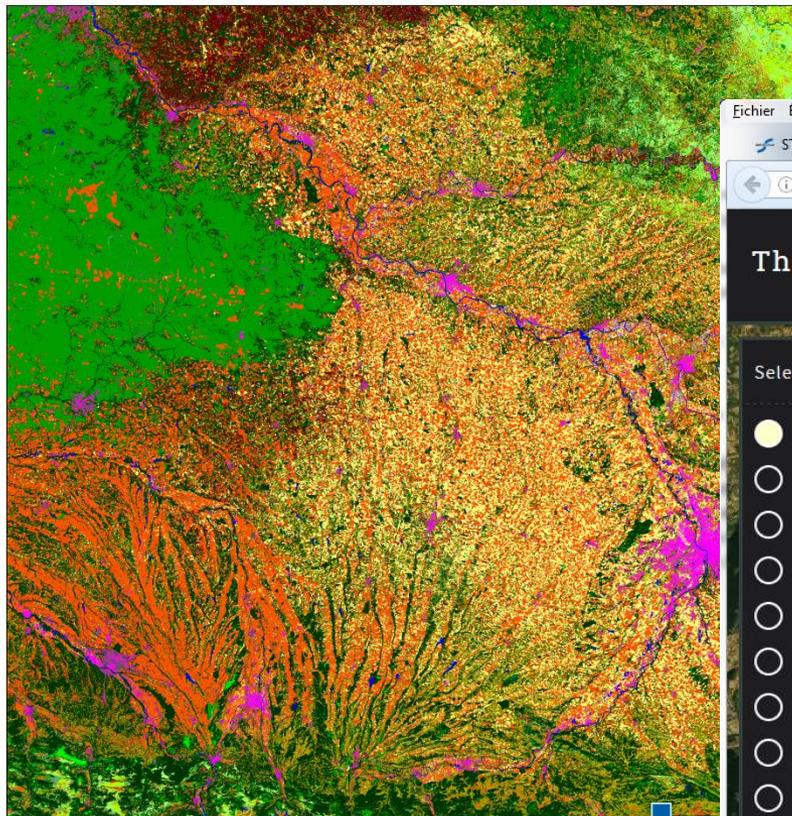
Main detected processes

1992\_1996

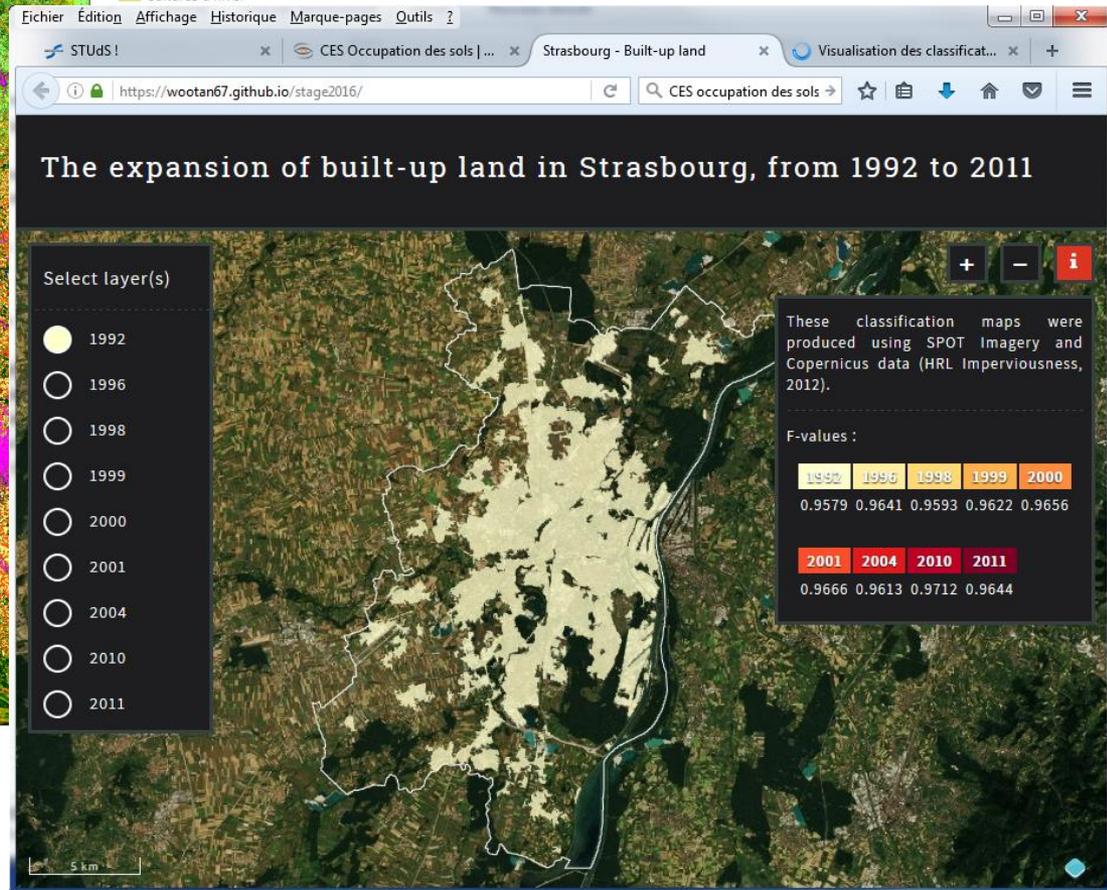
- prep. retrofit or replac.
- urbanization
- vegetation decrease
- vegetation increase
- water constr. or exten.



# Vers la mise à disposition de 'produits' ....



**Légende**  
OccupationSol\_2013\_16classes  
Cultures d'été  
Cultures d'hiver



**CES Occupation des sols**  
**Production : France entière**

[http://www.cesbio.ups-tlse.fr/multitemp/wp-content/uploads/2016/02/SudOuestMosaic\\_France2014\\_V1\\_ColorIndexedT.html](http://www.cesbio.ups-tlse.fr/multitemp/wp-content/uploads/2016/02/SudOuestMosaic_France2014_V1_ColorIndexedT.html)

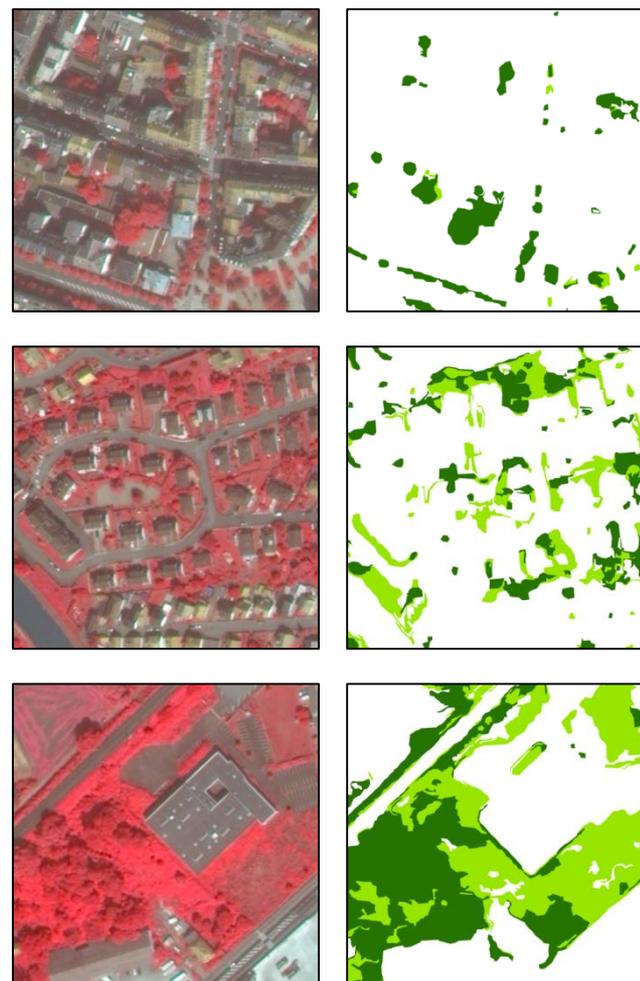
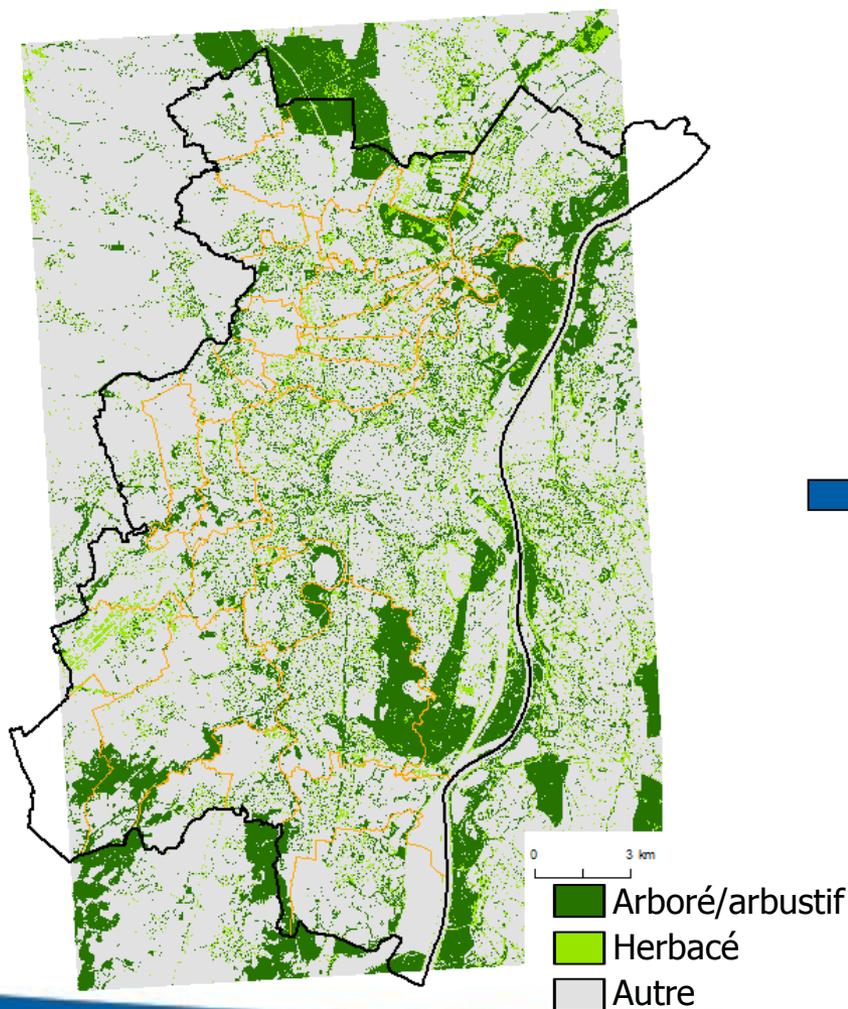


**CES Artificialisation / urbanisation**  
**Prototype SPOT-S2 / en développement**



# A partir des images satellites optiques THRS

- Une cartographie fine de la trame verte (1/5 000 – 1/10 000)



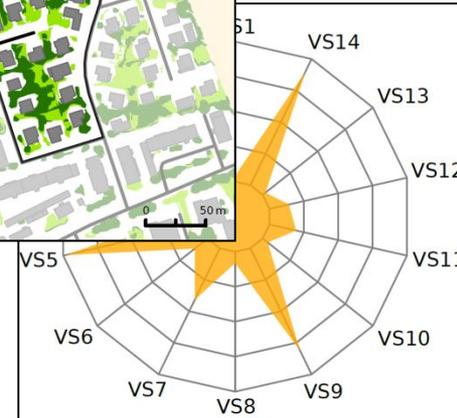
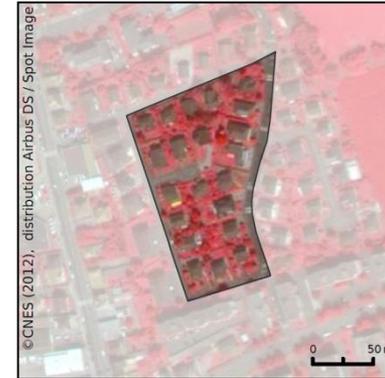
# Combinaison avec des données exogènes

Trame verte

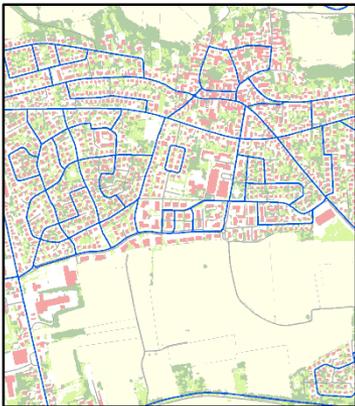


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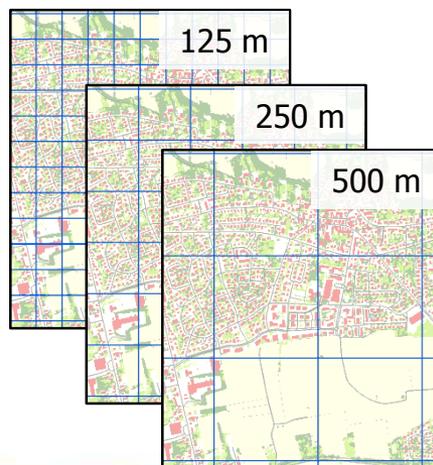
Trame grise



Îlot



Grille carrée



- Indicateurs paysagers (fragmentation / connectivité)
- Données d'entrée dans modèle (climatologie urbaine)