

Ecological networks in Normandy

Methodological test

ECONNECT workshop

Group 2 : territorial corridors

Thursday 5th November 2009

Ressources, territoires et habitats
Énergie et climat Développement durable
Prévention des risques Infrastructures, transports et mer

Présent
pour
l'avenir



CETE Normandy Centre

Technical Studies-Center of Ministry of Ecology :

Public engineering consulting firm for various actors (semi-public State, Territorial collectivities...)

Part of the "Scientific and technical Network" of the Ministry



500 people





Context

Fragmentation of wildlife habitat studies by transport infrastructures in Basse-Normandie (14, 61, 50)

Manche
(50km of
road) :

Species	Number of collisions 2000-2004
Large forest wildlife	26
Badger	60
Diurnal raptors	113
Nocturnal raptors	956



Methodology

Theoretical network definition by geomatic :

Determination of ecological networks elements by geomatic processing of the landuse baseline.

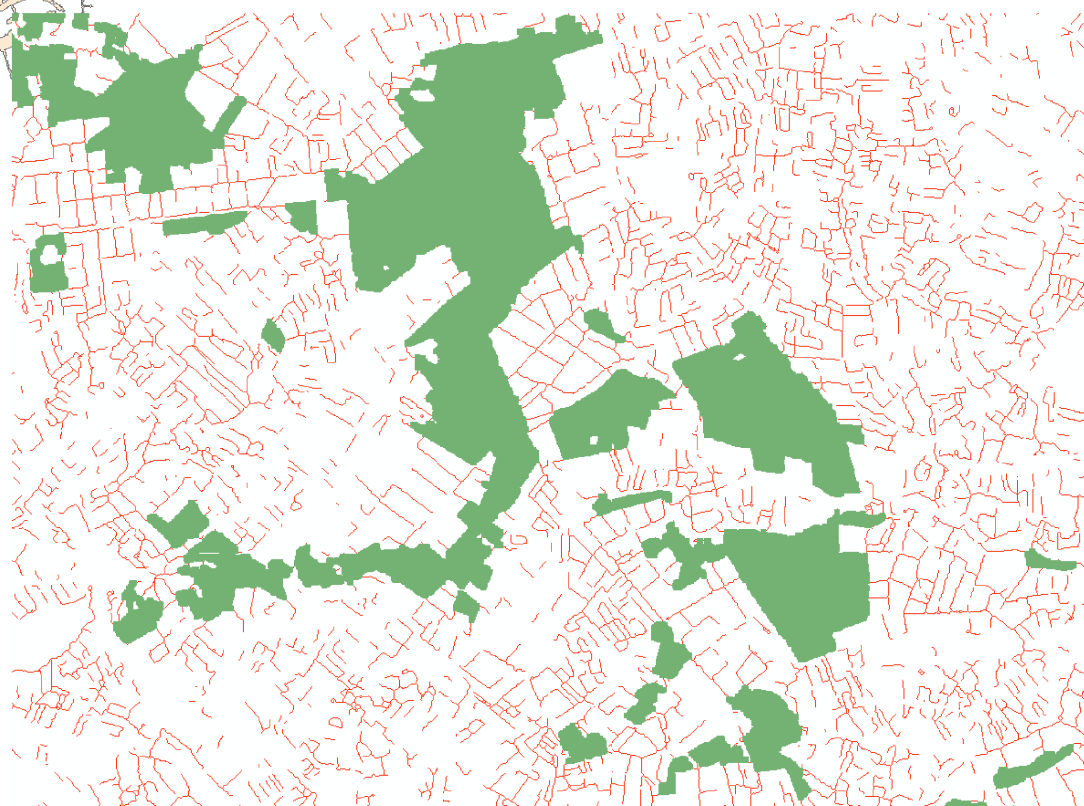
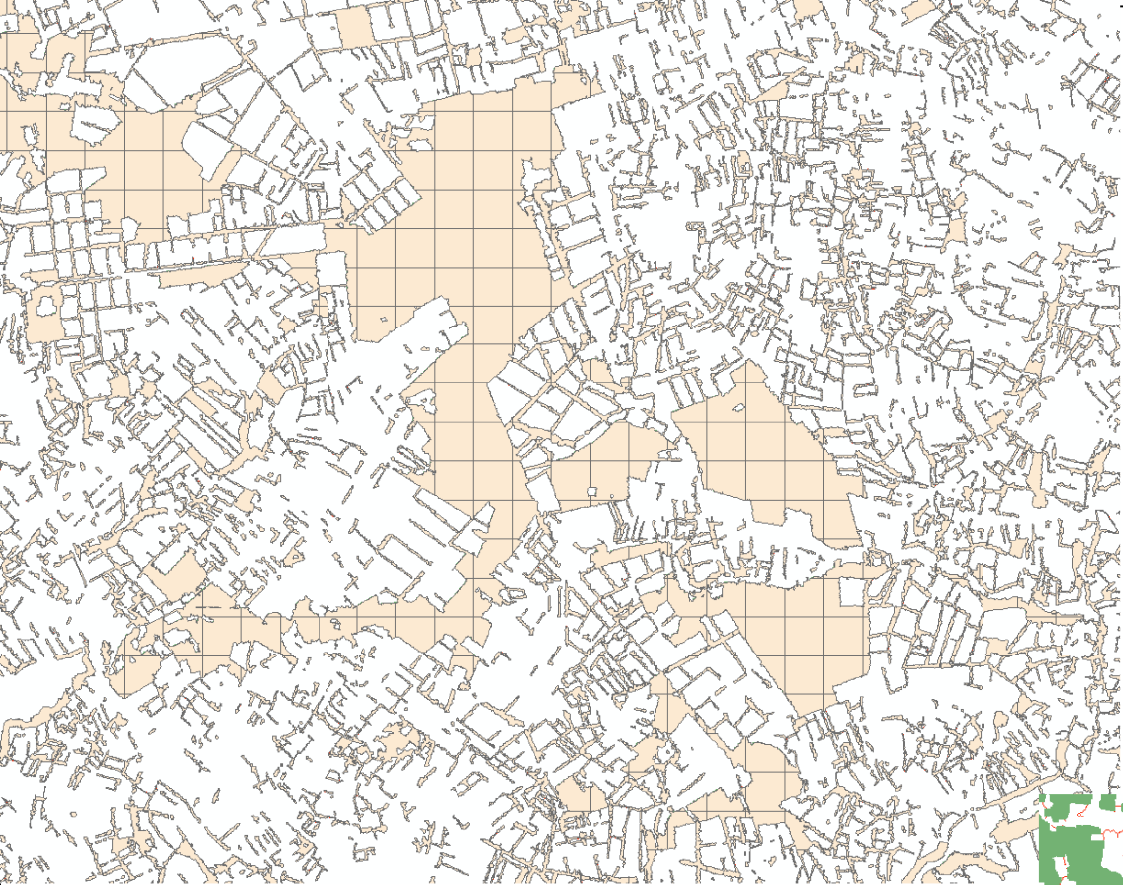


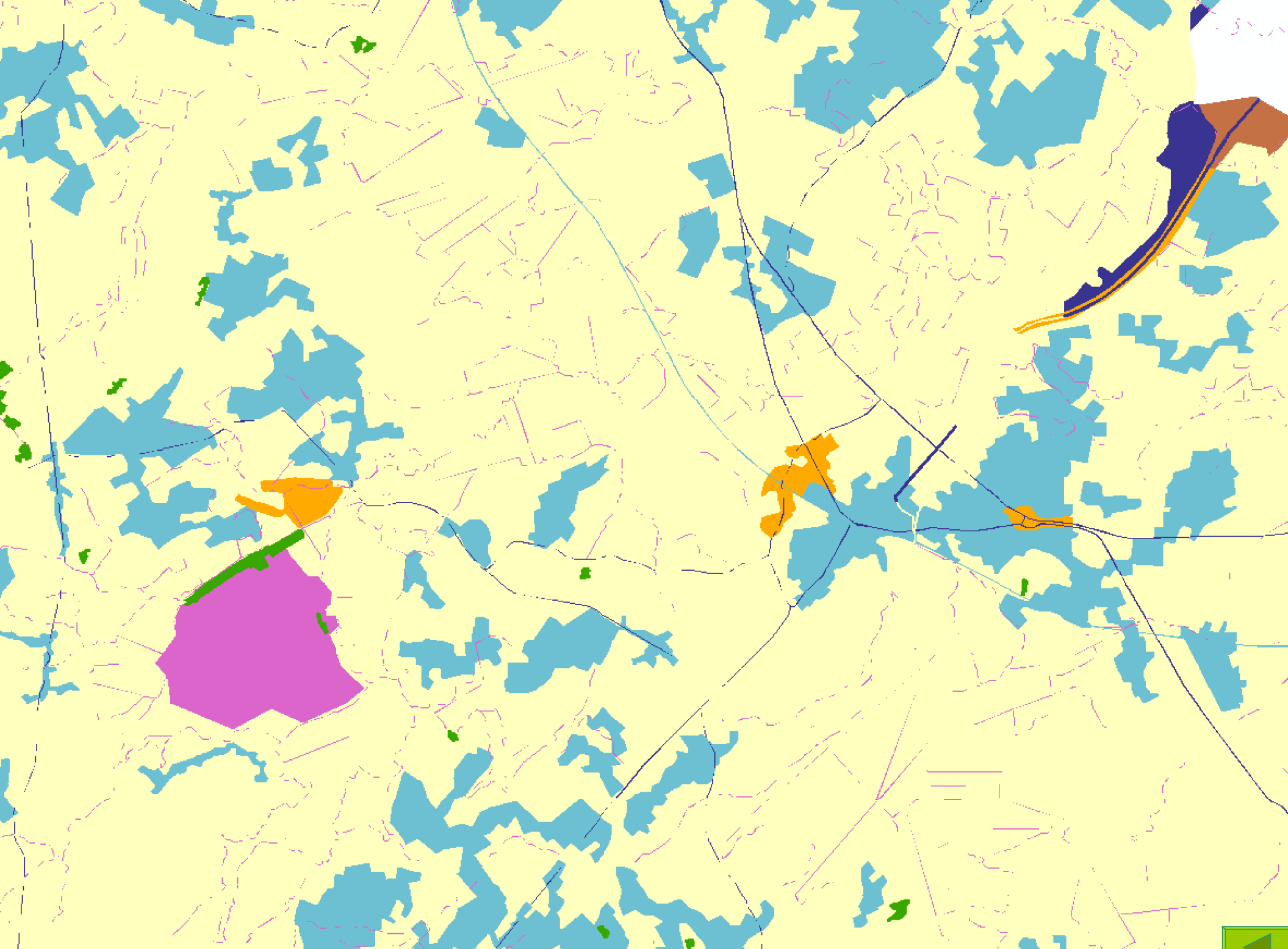
Modeling of the difficulties species have in crossing a given type of land use (25 m).



Interpretation based on the concepts involved in landscape ecology.







Comparative test of the roughness of territories

Target : Woodland and hedgerow continuum

Option : Testing and validating the chosen using coefficients which highlight the fragmentation

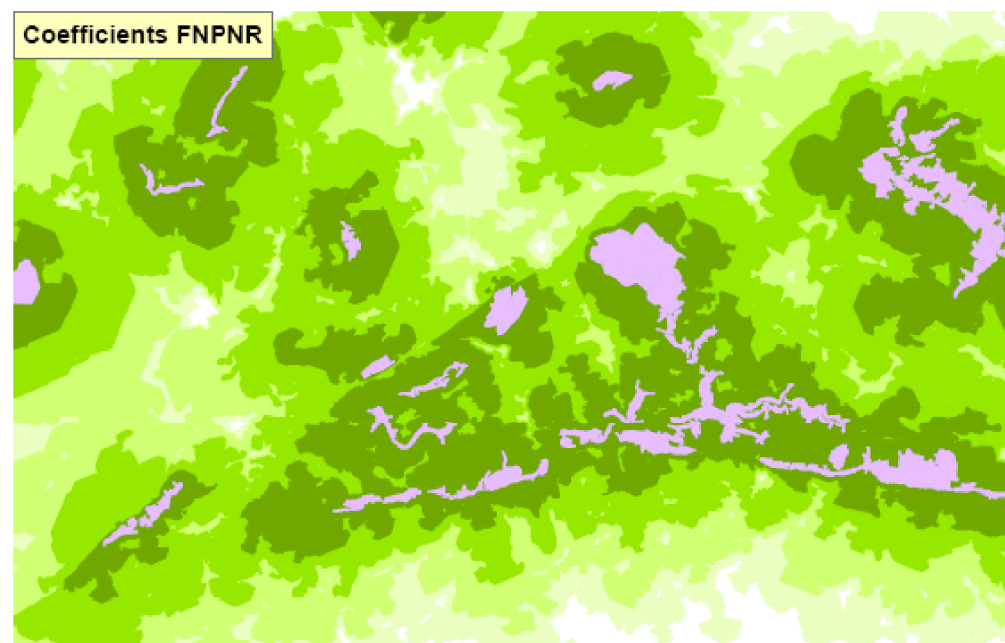
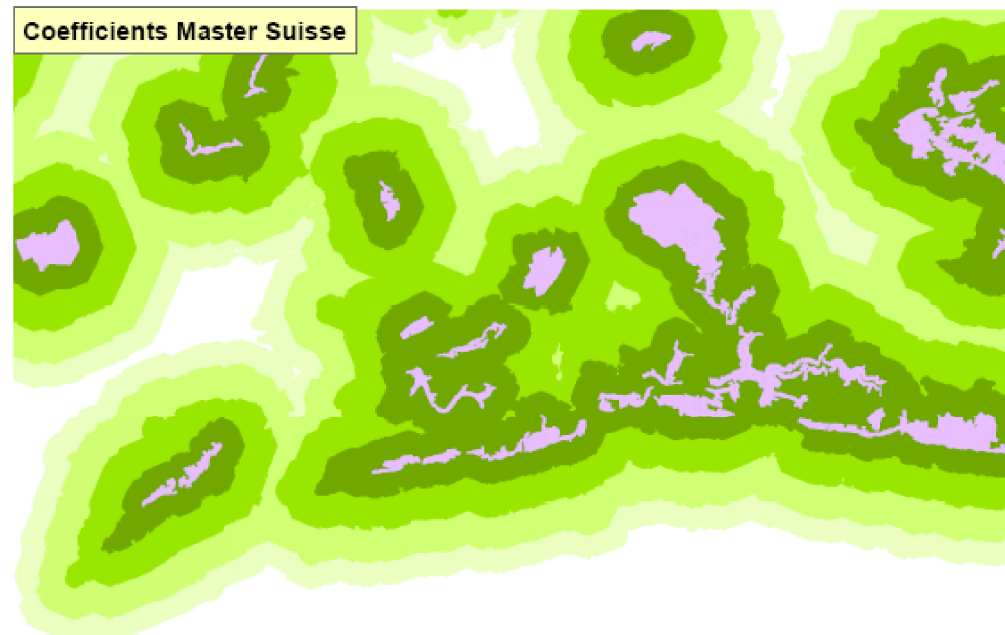
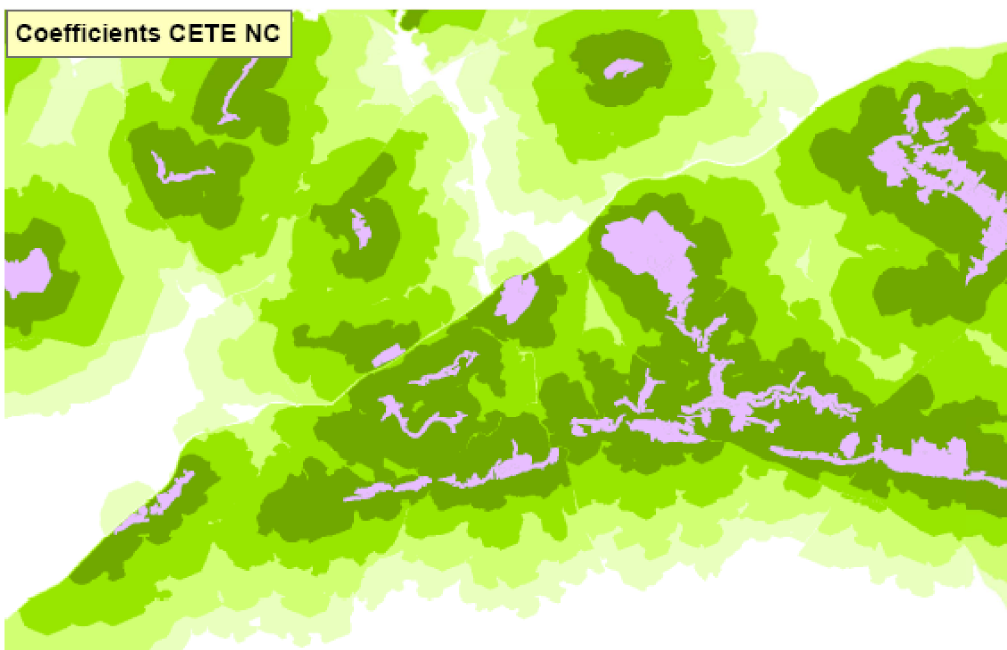
Roughness coefficients tested :

Diren Franche-comté (0 to 2000)

FNPNR (0 to 100)

Master Suisse (0 to 10)








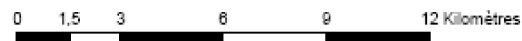
Commentaires:

L'effet de fragmentation de l'autoroute A 84 ressort bien de la modélisation à partir des coefficients du Cete.

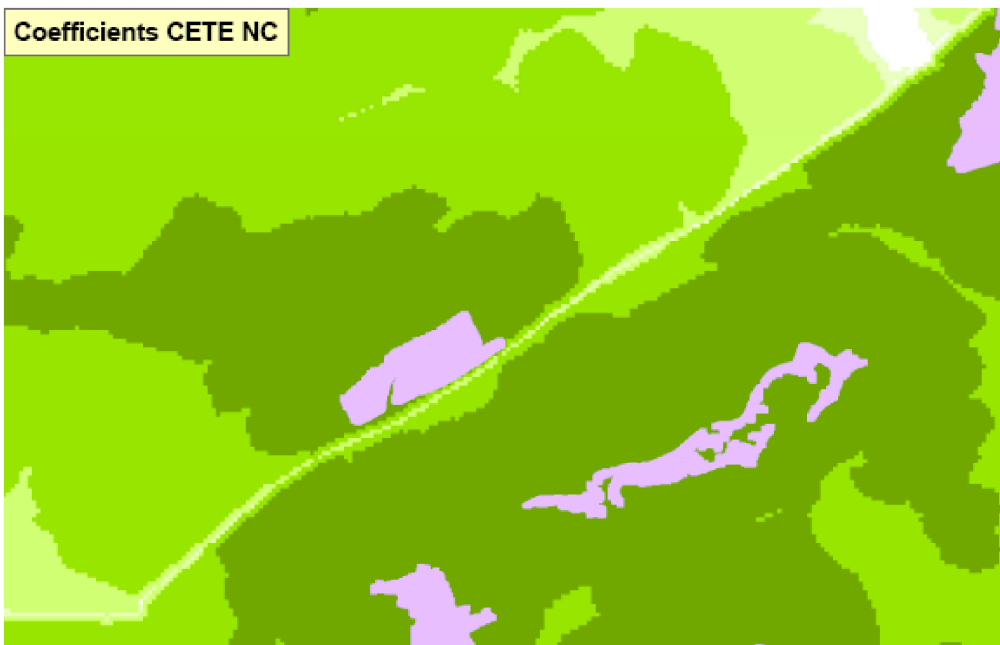
Pour les coefficients FPNR et Master Suisse, il existe une plus grande continuité. Pour la FPNR, la méthode vise à définir les continuités, il est donc normal que l'aspect fragmentation ressorte moins.

Pour le Master Suisse, l'application des coefficients semble avoir moins d'influence sur la distance aux habitats (effet buffer).

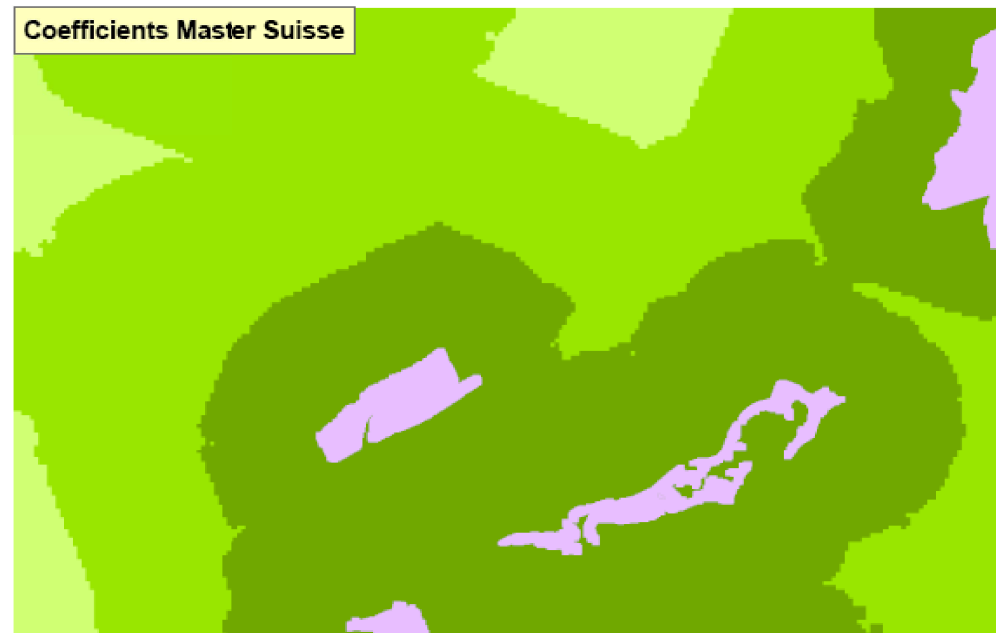
-  Massifs boisés > 20 ha
-  D'un déplacement facile...
-  ...à un déplacement difficile



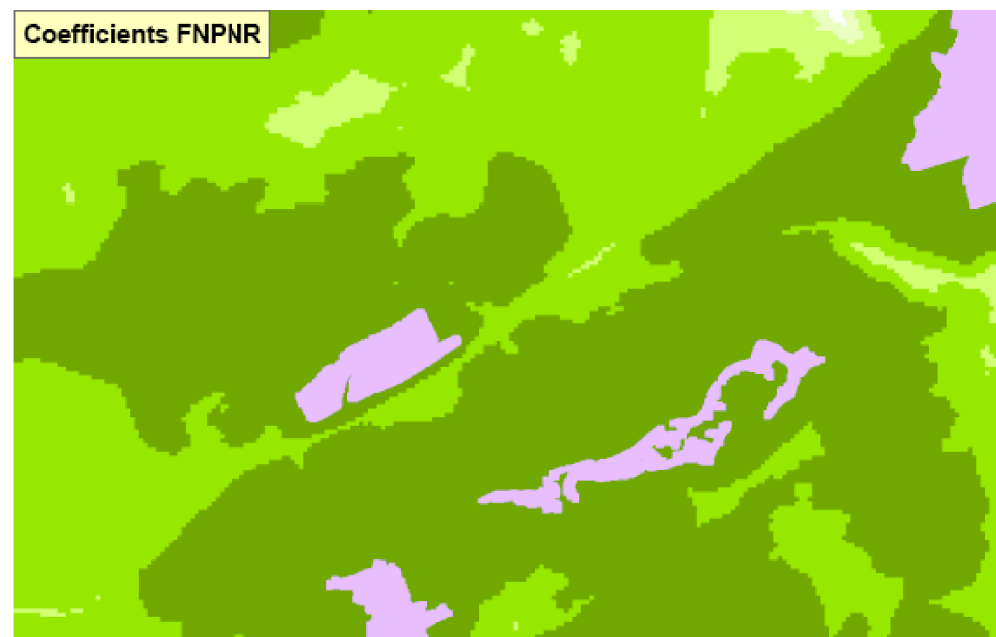
Coefficients CETE NC



Coefficients Master Suisse



Coefficients FPNR






Commentaires:

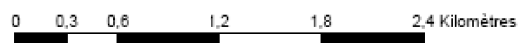
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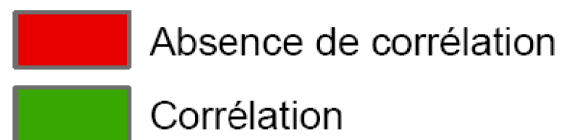
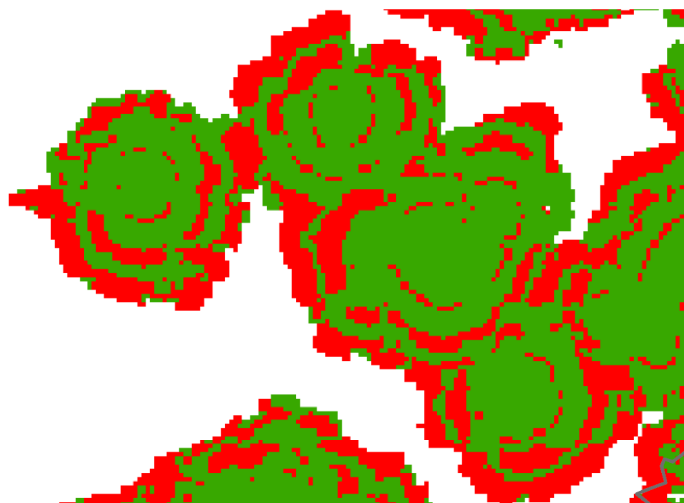
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Results of comparative test and discussion

For each class, results of the correlation test:



CETE NC / FNPNR : 56 %

CETE NC / Master Suisse : 57 %



Results of comparative test and discussion

Results on grouped classes :

Good correlation between the series of coefficients (+ of 90%)

Smoothing effect for somehow similar coefficients

The proportionality of the coefficients is more important than their value

Very different coefficients highlight the effect of fragmentation and facilitate the interpretation



Limits of the comparative test

Extrapolation of the coefficients of roughness for elements added to the common reference table of the three studies

Our study uses the coefficients without taking into account the whole methods



Thanks for your attention

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