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Apport des données géolocalisées individuelles dans l'étude des services écosystémiques culturels

Résumé : La demande croissante en services écosystémiques culturels au sein d'un territoire rend inévitable le besoin de développer des méthodes permettant de les évaluer pour mieux planifier leur utilisation et leur protection. La compréhension des préférences sociétales à l'égard de ces services représente un challenge, particulièrement lorsque ces préférences sont étudiées à une échelle spatio-temporelle très fine. Durant cette présentation, je parlerai de nos recherches en cours sur l'analyse de données générées par l'utilisation des nouvelles technologies de l'information et de la communication pour une meilleure compréhension des systèmes complexes en général et des services écosystémiques culturels en particulier.

Apport des données TIC dans l'étude des services écosystémiques culturels

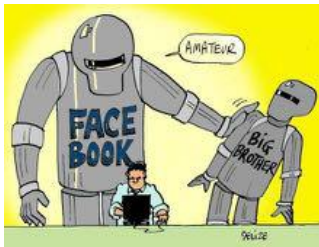
Maxime Lenormand | Irstea, France

Ecolo'Tech | Montpellier, France

Jeudi 3 novembre 2016



Big Data

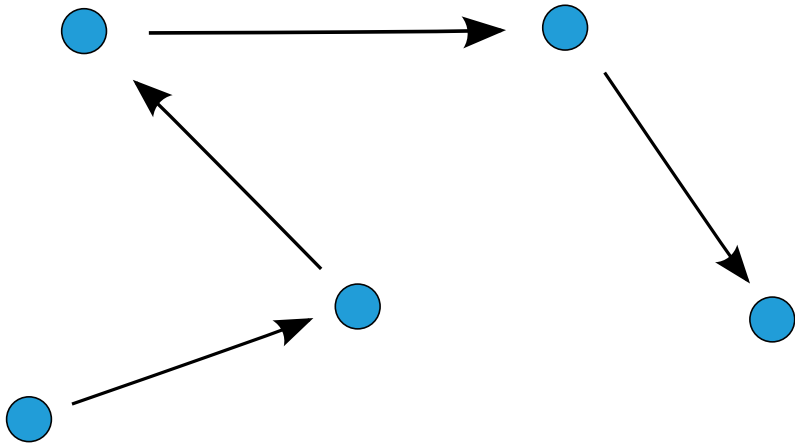


Big data is like teen sex.
Everybody is talking about it,
everyone thinks everyone else is doing it,
so everyone claims they are doing it.

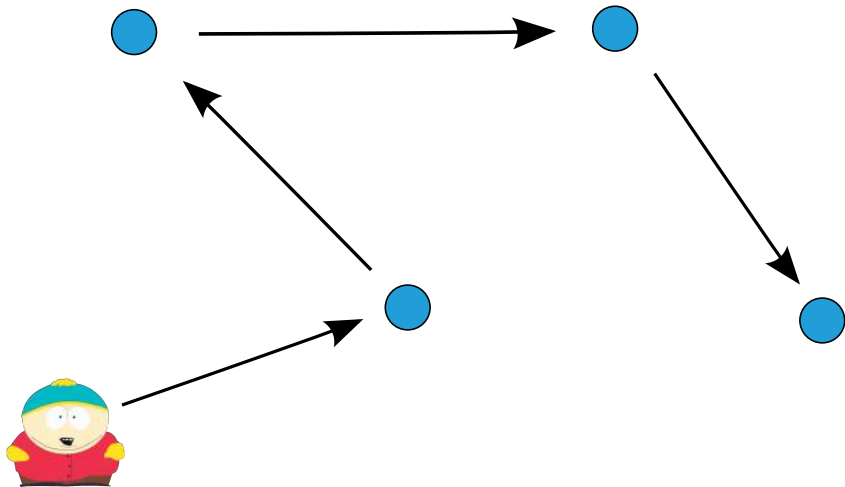
Dan Ariely,
Center for Advanced Hindsight
Duke University



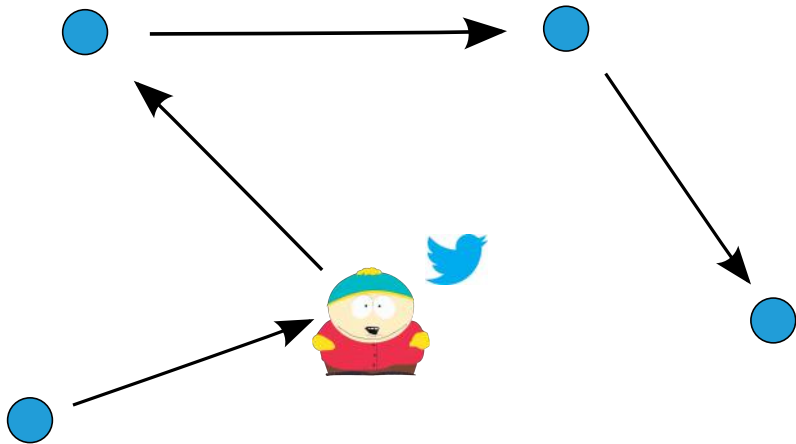
Mobilité humaine



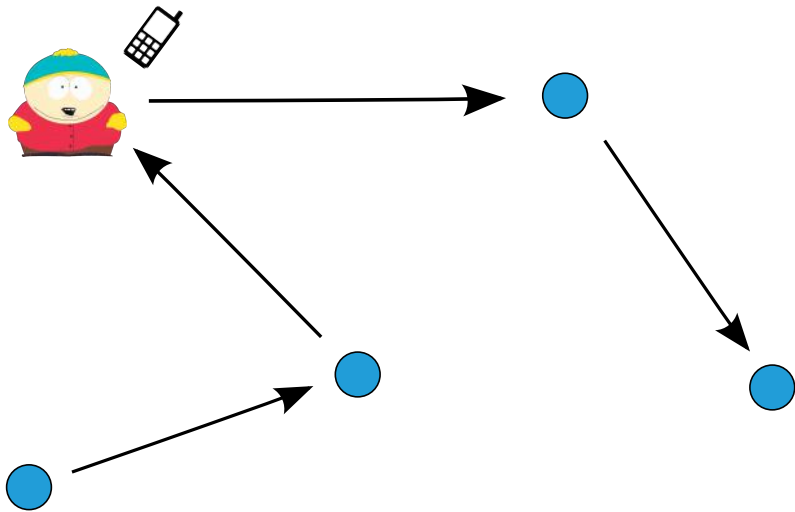
Mobilité humaine



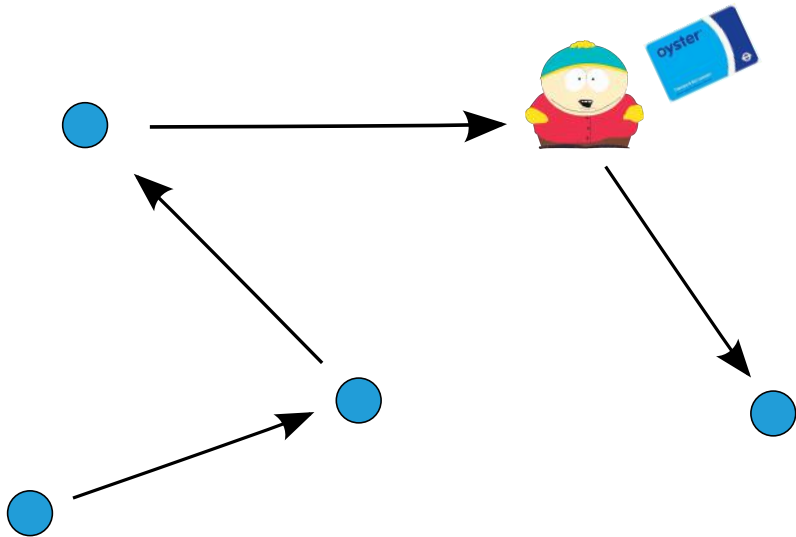
Mobilité humaine



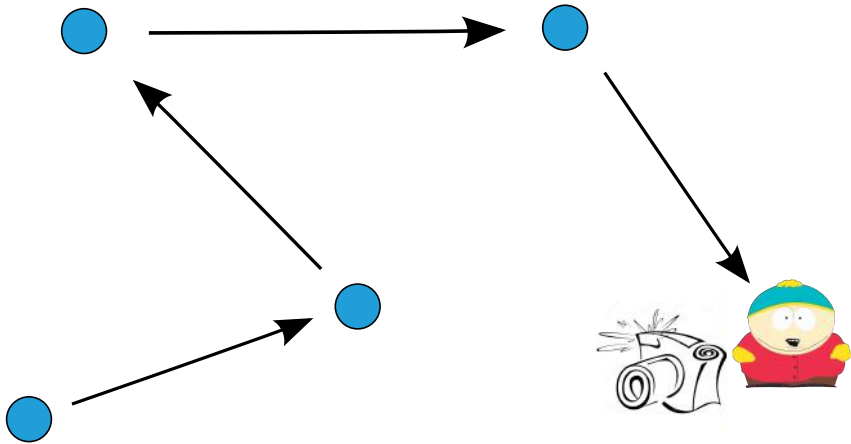
Mobilité humaine



Mobilité humaine





Mobilité humaine



Partage de photos


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Services écosystémiques culturels

Les avantages immatériels que les populations obtiennent des écosystèmes sont appelés «services culturels». Ces services sont, notamment, l'inspiration esthétique, l'identité culturelle, le sentiment d'appartenance et l'expérience spirituelle liés à l'environnement naturel.

<http://www.fao.org>

Questions ?

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Où & Quand

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Echelle

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Qui

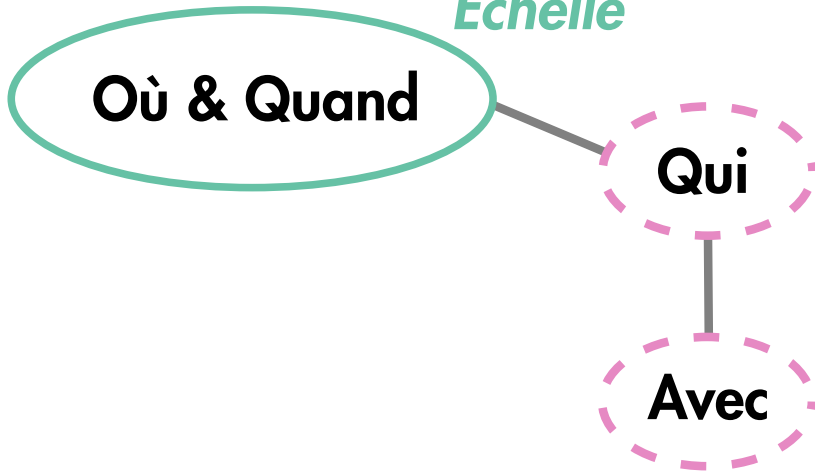
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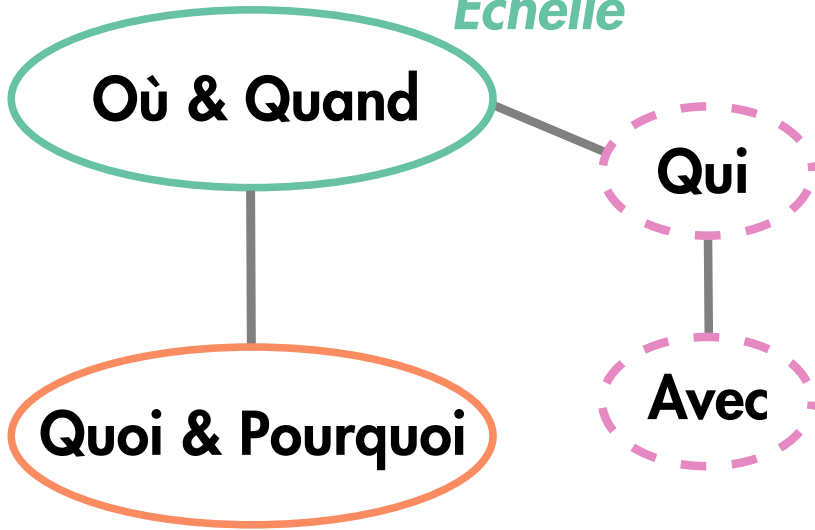
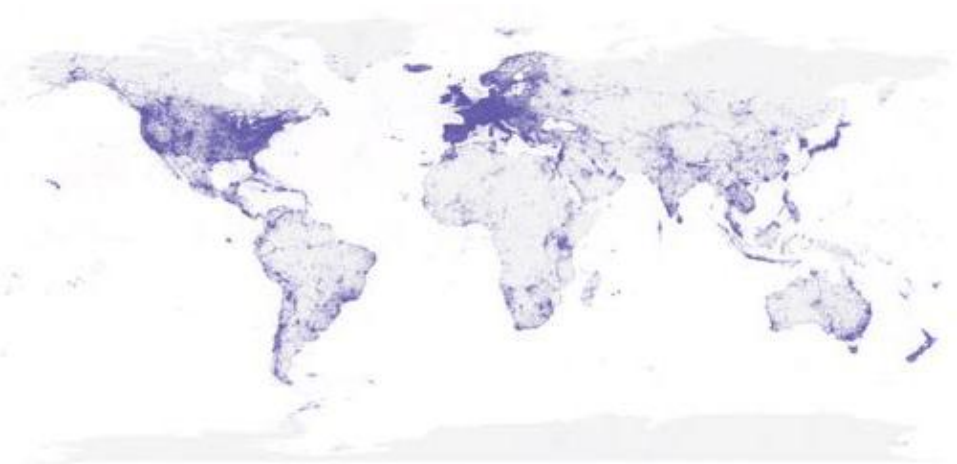


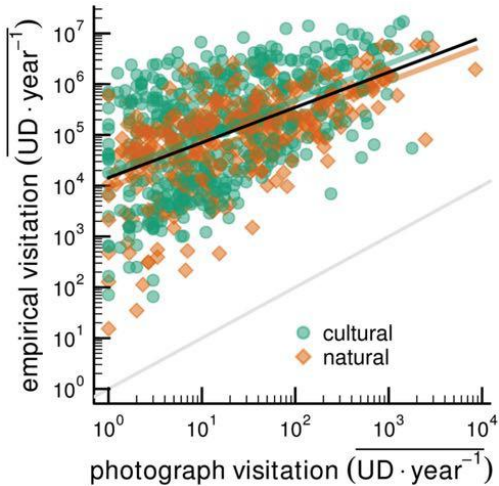
Photo Sharing



197 M de photos géolocalisées postées entre 2005 et 2012

Wood *et al.* (2013) Using social media to quantify nature-based tourism and recreation.
Scientific Reports 3, 2976.

Photo Sharing



Wood et al. (2013) Using social media to quantify nature-based tourism and recreation. *Scientific Reports* 3, 2976.

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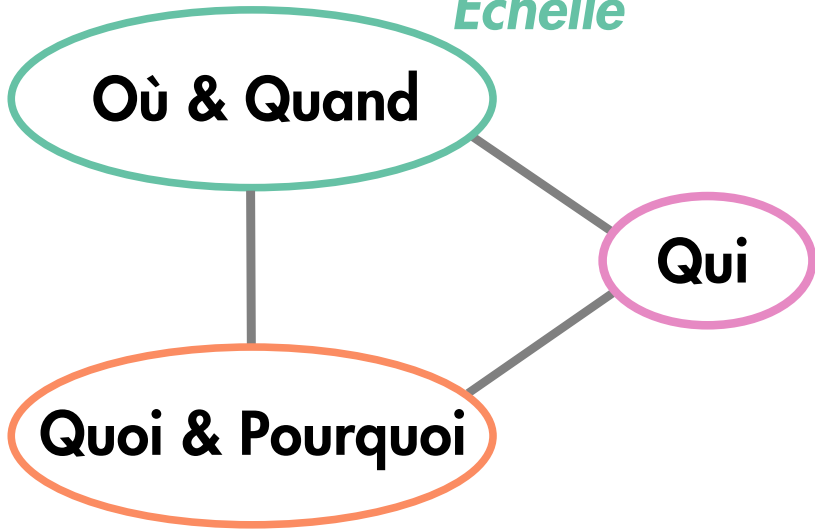
Questions ?

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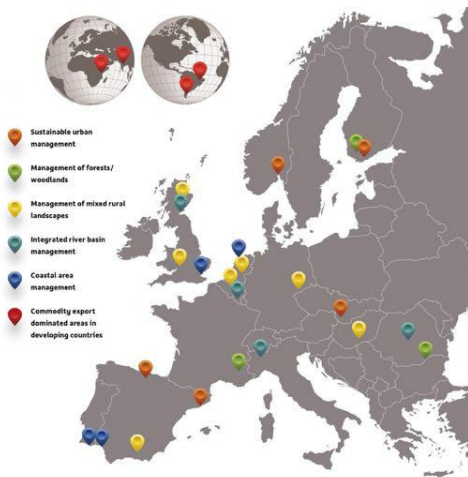
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Base de donnée Flickr



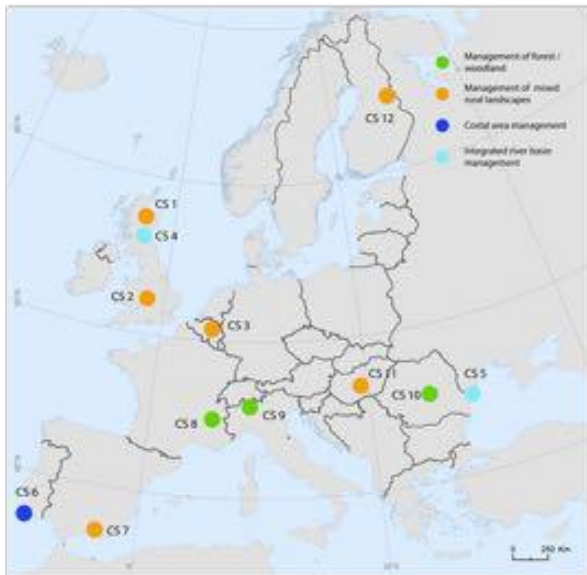
flickr™



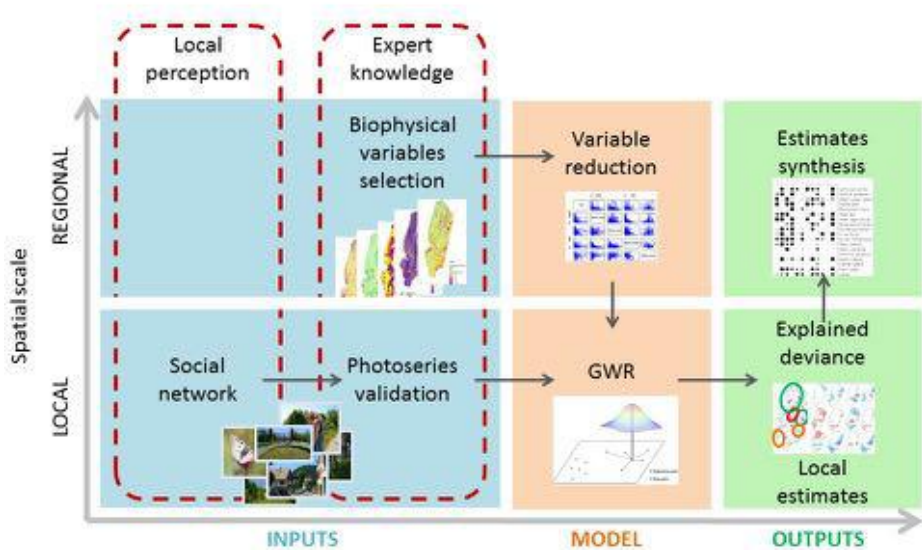
Mapping cultural ecosystem services through crowd-sourced information

Tenereli et al. 2016

Mapping cultural ecosystem services



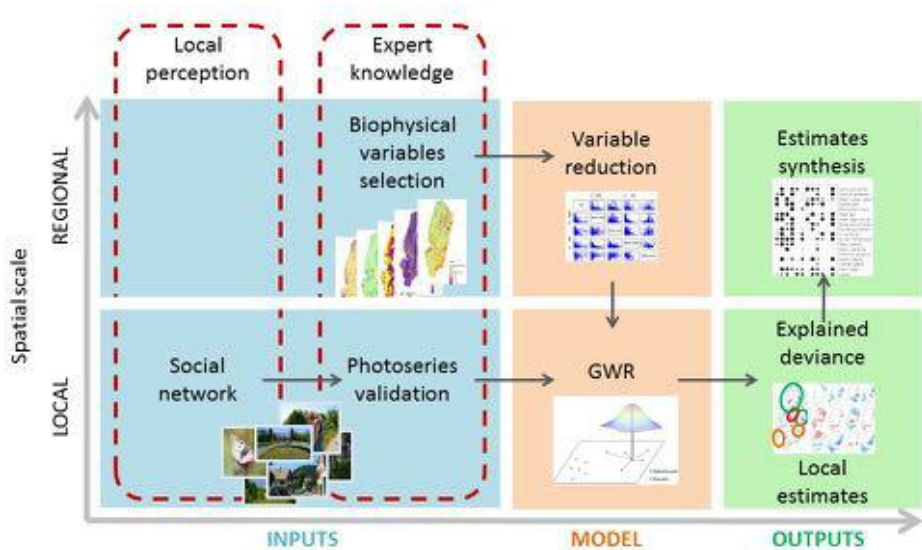
Mapping cultural ecosystem services



Mapping cultural ecosystem services

Land use	CORINE cover-2006-raster- (EEA), Level2	Variety of land use
		% of Artificial, non-agricultural vegetated areas
		% of Arable land
		% of Permanent crops
		% of Pastures
		% of Heterogeneous agricultural areas
		% of Broad-leaved forest
		% of Coniferous forest
		% of Mixed forest
		% of Scrub and/or herbaceous vegetation associations
		% of Open spaces with little or no vegetation
		% of Inland wetlands
		% of Maritime wetlands
% of Inland waters		
% of Marine waters		
DEM	SRTM) of 3 arc-second resolution (Farr et al. 2007).	Standard deviation
Natural protected areas	Natura 2000	% of land covered by N2k sites
Natural riparian areas	(Clerici et al. 2013)	% of land covered by Natural riparian areas
Road network	Teleatlas 2014 (all the levels 0-8)	Distance from main roads (Teleatlas road class 1-2-3-4-5)* Distance from local roads (Teleatlas road class 6-7-8)*
Population		Sum of population density
Infrastructure and restoration points	OpenStreetMap (26.10.2015)	Distance from infrastructure and restoration points**
Natural and cultural sites	OpenStreetMap (26.10.2015)	Distance from Natural and cultural sites, including spiritual places**
Points of Geological Interest	OpenStreetMap (26.10.2015)	Distance from Point of Geological Interest***
Sight points	OpenStreetMap (26.10.2015)	Distance from Sight points**

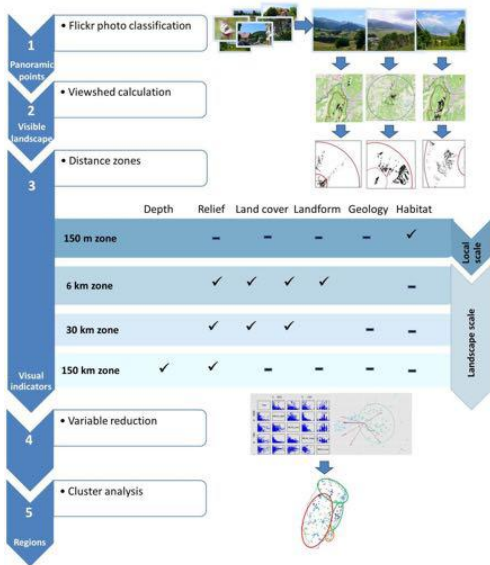
Mapping cultural ecosystem services



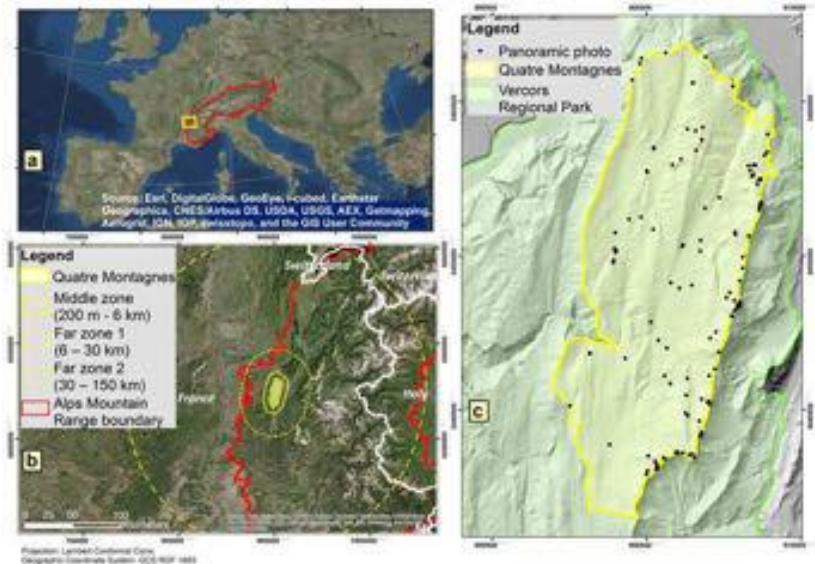
**Spatial assessment of aesthetic services in
a complex mountain region: combining
visual landscape properties with
volunteered geographic information**

Tenereli et al. 2016

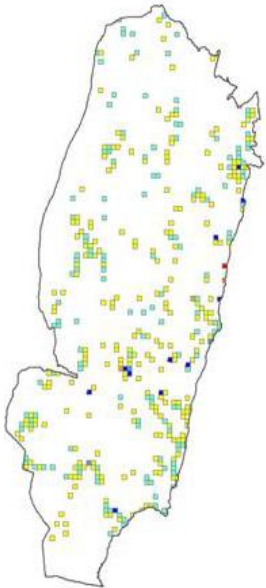
Spatial assessment of aesthetic services



Spatial assessment of aesthetic services

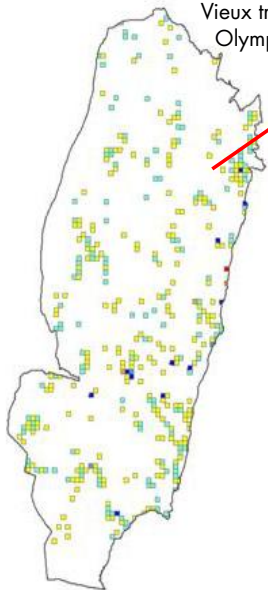


Spatial assessment of aesthetic services



Spatial assessment of aesthetic services

Vieux tremplin
Olympique

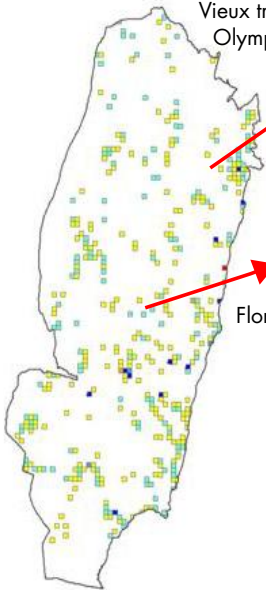


Spatial assessment of aesthetic services

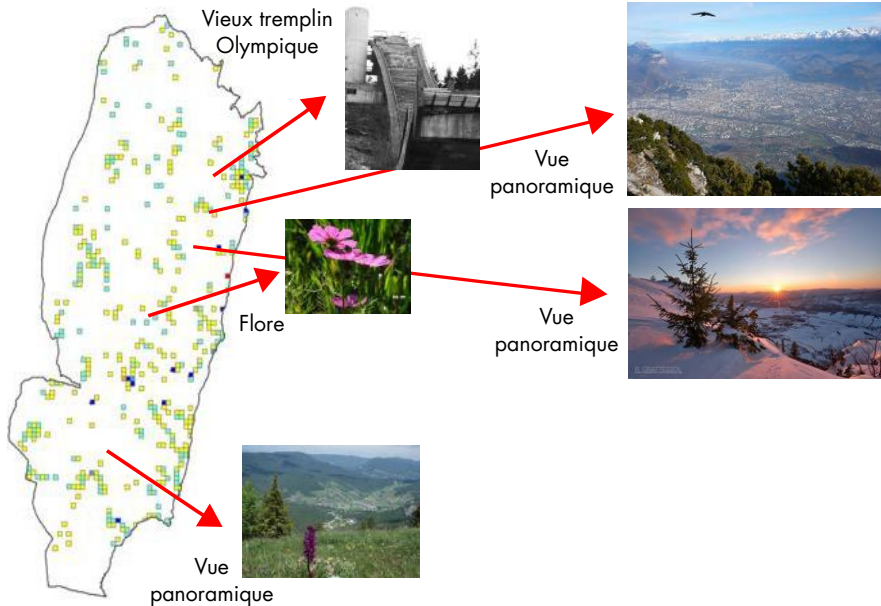
Vieux tremplin
Olympique



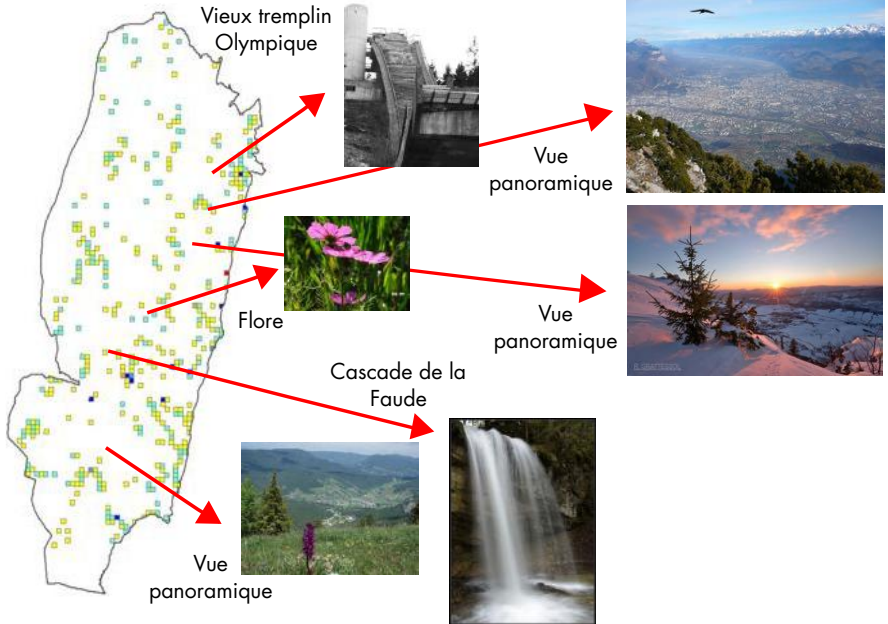
Flore



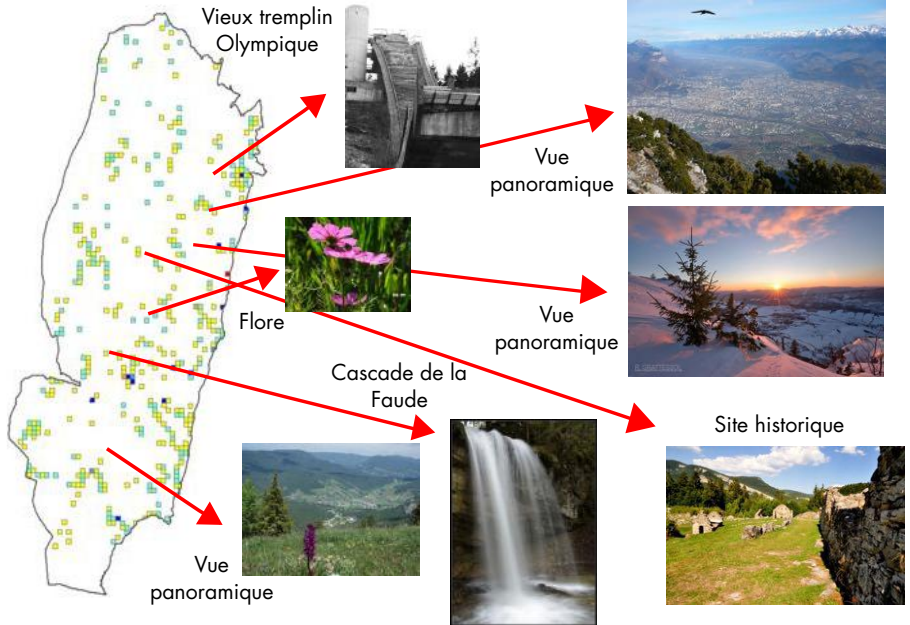
Spatial assessment of aesthetic services



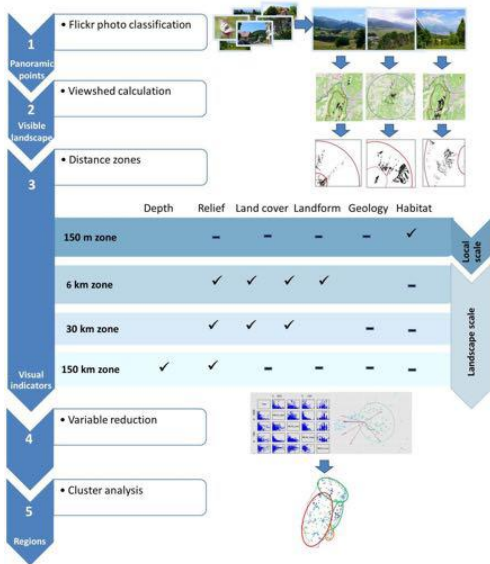
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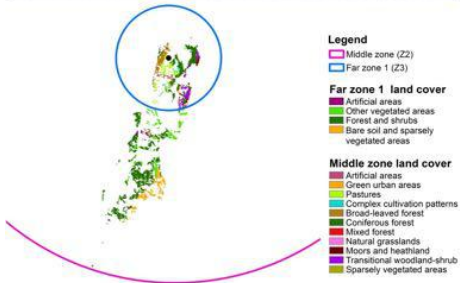
Spatial assessment of aesthetic services



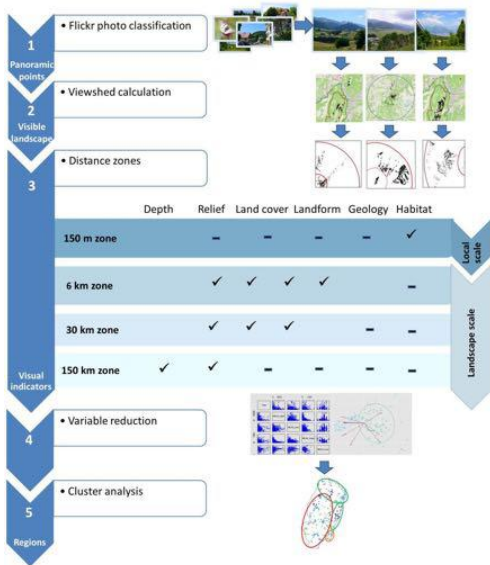
Spatial assessment of aesthetic services



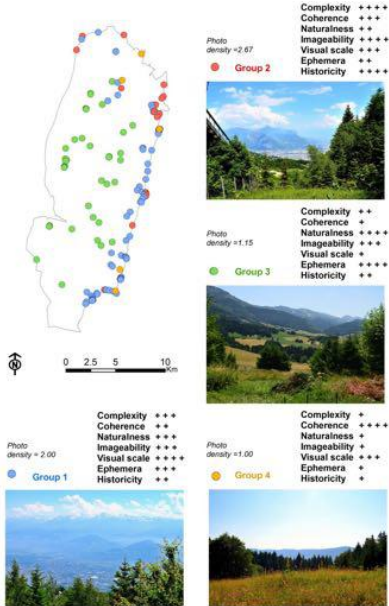
Spatial assessment of aesthetic services



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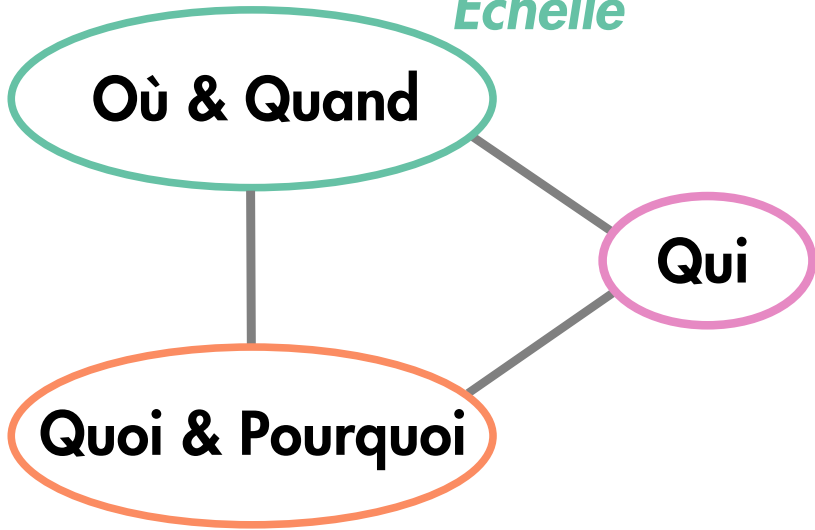
Conclusion & perspectives

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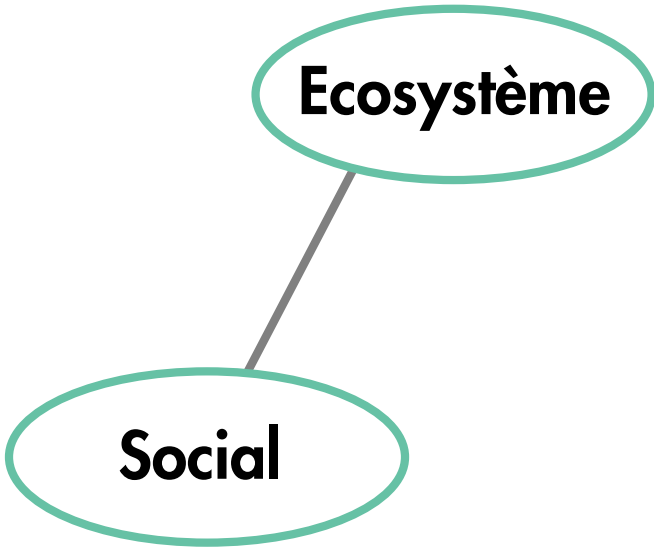
Quoi & Pourquoi



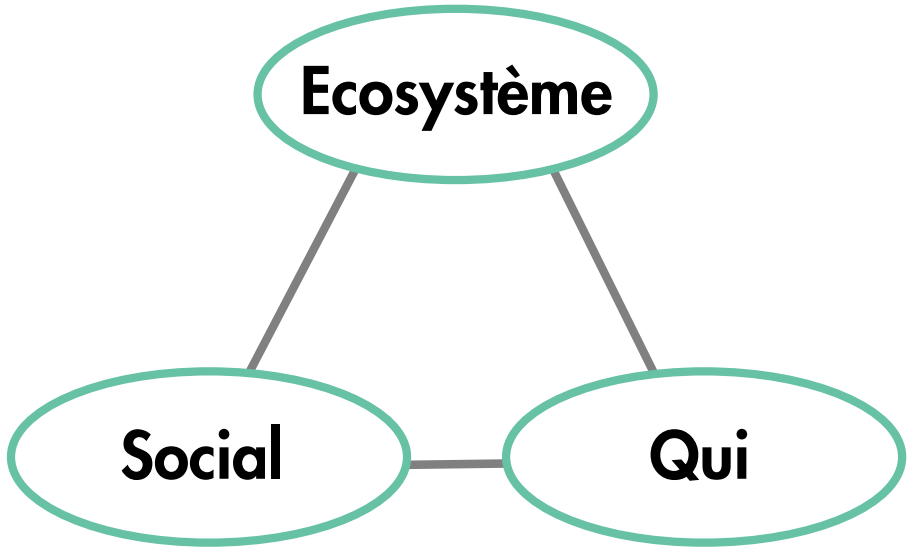
Conclusion & perspectives

Ecosystème

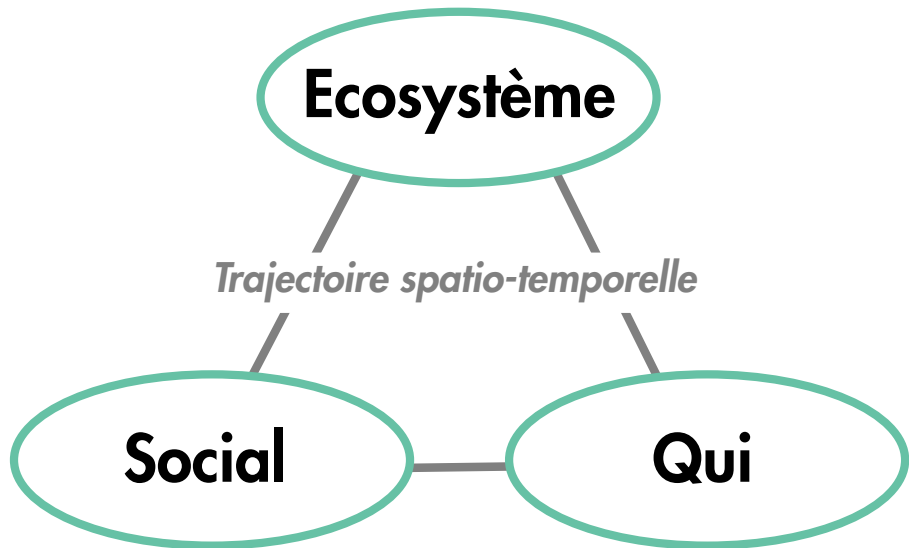
Conclusion & perspectives



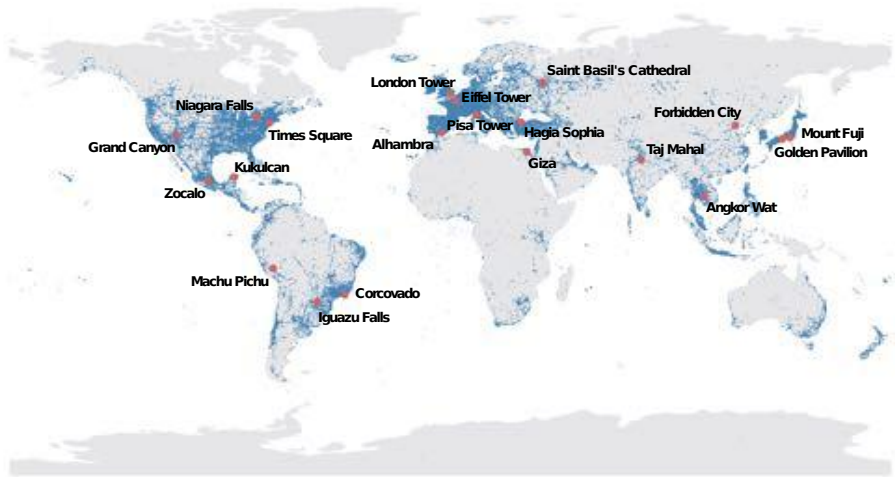
Conclusion & perspectives



Conclusion & perspectives

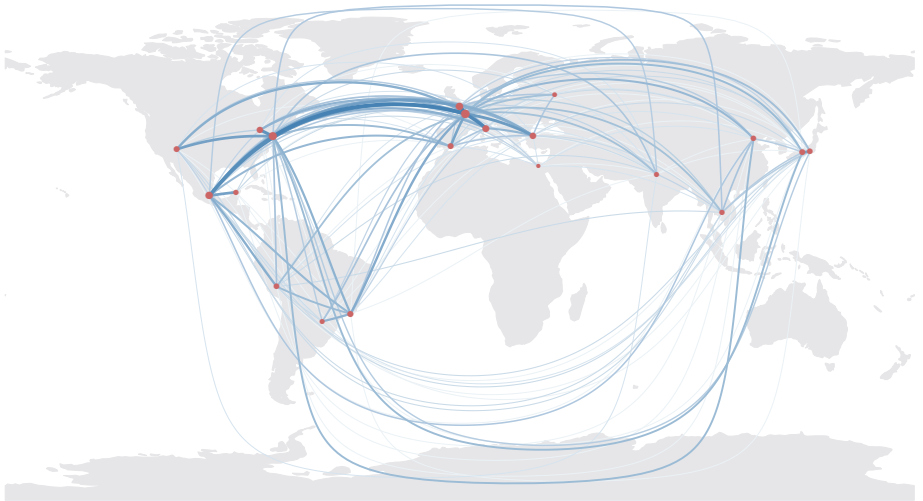


Conclusion & perspectives



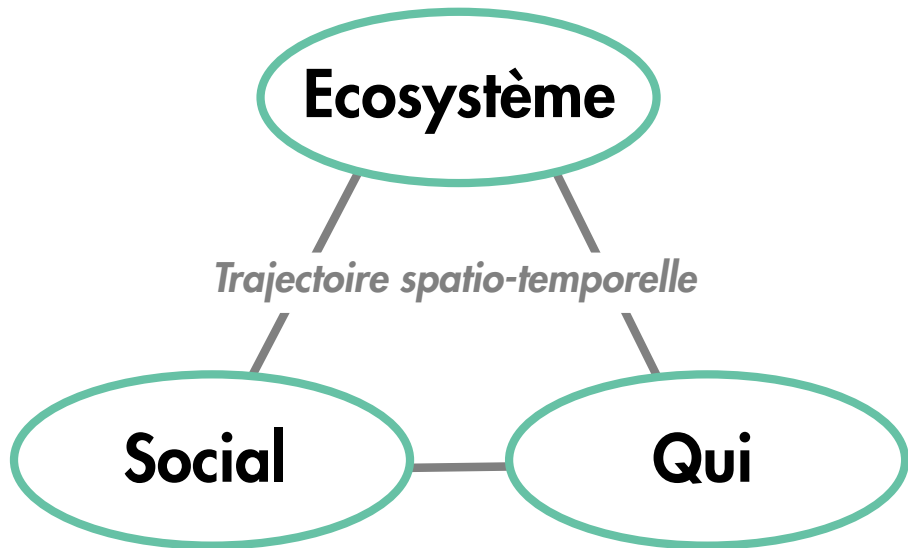
Bassolas et al. (2016) Touristic sites' attractiveness seen through Twitter
EPJ data science 5, 12.

Conclusion & perspectives

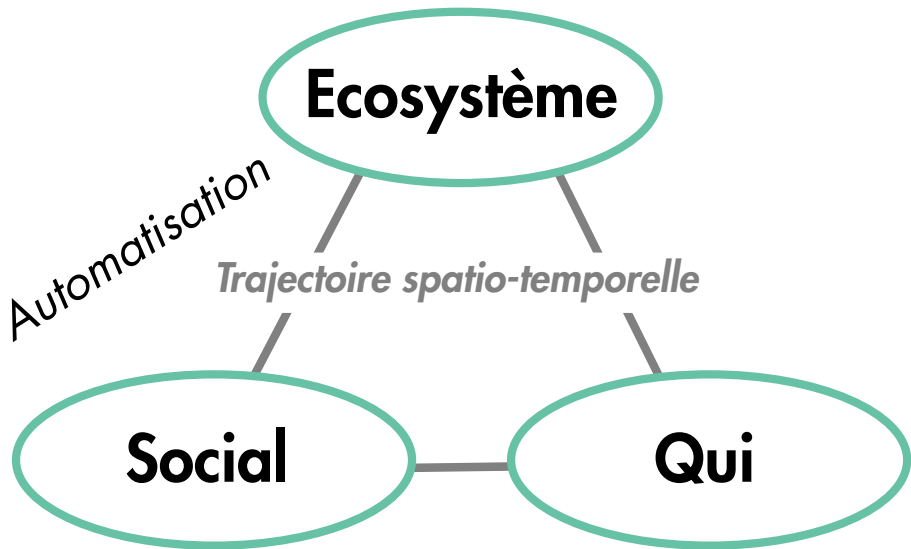


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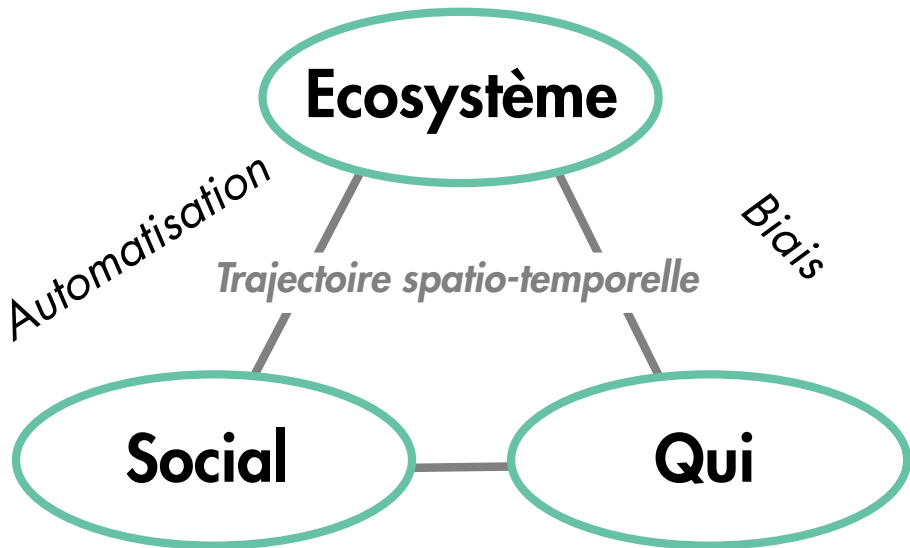
Conclusion & perspectives



Conclusion & perspectives



Conclusion & perspectives



[ictdataaccuracy.github.io](https://github.com/ictdataaccuracy)

maximelenormand.github.io