



Collaborative Landscape Research In Reunion Island



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Implementation of the ELC in Reunion Island

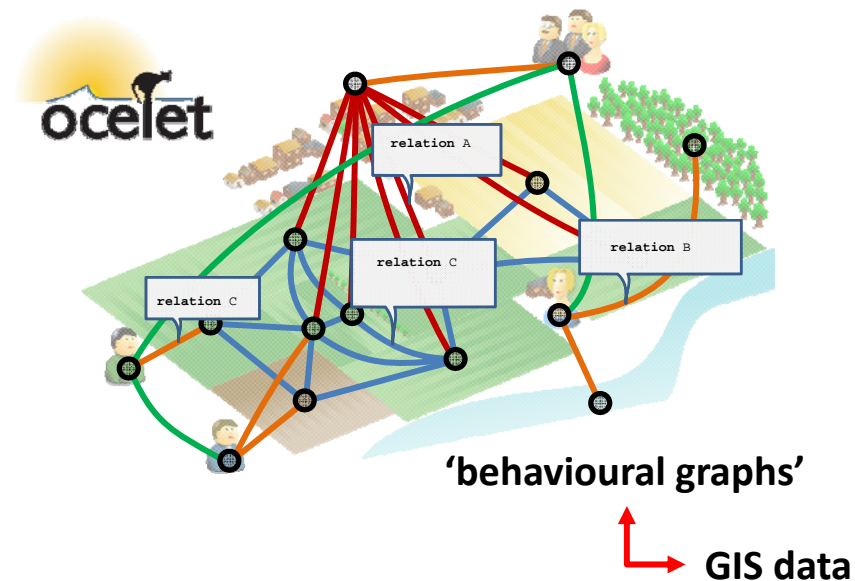
- National “landscape law” was enacted in 1993. Diagnostic studies conducted... but limited follow up
- First landscape charter adopted by the inter-municipality of the West Coast (TCO) in 2007
 - Preservation of agricultural and natural lands, improvement of built environments and the transportation network
 - Translation in legal documents and operational plans for peri-urban fringes and ravines
- Regional/island-scale landscape inventory published online in 2013

Challenges for policy and research

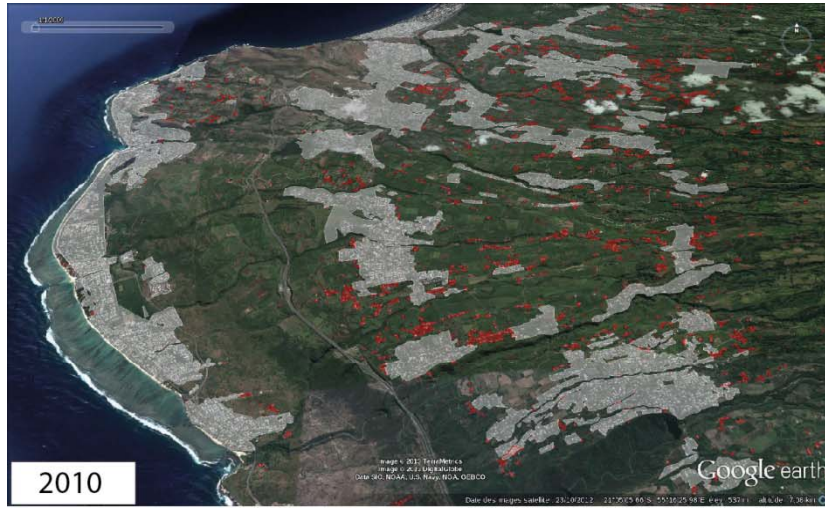
- Landscape charter = No interest and engagement from the agricultural sector
 - Charter remains a tool for urban planners (landscaping) and environmental managers (conservation)
 - Integrated landscape planning is impossible
- Need to bring new perspectives and a wider audience in the landscape debate
 - ⇒ Collective exploration of the multi-functionality of landscapes
 - ⇒ Dynamic perspective on the future of landscapes







Approach and tools

- Participatory scenario planning framework
 - Institutional arena (= flexible social network)
 - Collaborative work in fora
- Spatial modelling and simulation toolbox
 - Ocelet language
 - Dynamic maps



Typical simulation outputs



	Past (2009-2010)	Scenario #1 (2020)	Scenario #2 (2020)
Planned urbanisation			
Uncontrolled urban sprawl			



Scenario #1:

Planned urbanisation = 'business-as-usual'
Urban sprawl = preferentially near existing built areas



Scenario #2:

Planned urbanisation = accelerated completion rate
Urban sprawl = preferentially near road network



Key preliminary results

- Project inception (March 2012)...
 - Stakeholder meeting, debates on land-use planning challenges and concerns, and broad positioning of the research
- ... Urban sprawl model as demonstrator...
 - Iterative and participatory modelling process (model development <-> consultation)
- ... Establishment of a science-policy bridging organization (March 2013)
 - Signing of a charter of partnership with TCO
 - Joint organization of a workshop on urban sprawl (simulation, impacts and regulation)

Assessing salience, credibility, legitimacy of the research framework

- **Salience** <-> Perceived relevance of the research questions, approach and methods
- **Credibility** <-> Strength of the arguments and evidence produced during the collaborative research process
- **Legitimacy** <-> Acceptance by stakeholders of the knowledge and institutions produced

Saliency, credibility, legitimacy:

Strategies and trade-offs

	Saliency	Credibility	Legitimacy
Long-standing involvement of researchers in Reunion Island	+	+	+
Build on stakeholders' own concerns regarding land-use planning	+		+
Charter of partnership with the TCO inter-municipality		+	+/- (political risk)
Spatial modelling (accounting for land-use interactions and multi-functionality)		+	- (complexity)
Dynamic, spatially explicit simulations (mapping different futures)		- (uncertainty)	+

Trade-offs

Conclusion

- Success in setting up a functional, legitimate institutional arena for collaborative landscape research
- Spatially explicit models and simulations have been instrumental for raising expectations among stakeholders and facilitating dialogue across sectors
- Important trade-offs must be managed on a day-to-day basis (political risk, complexity, uncertainty)
- Perspectives:
 - forums on political-economic and land-use scenario planning
 - coupled models on urban sprawl and agricultural dynamics
 - integration of ecosystem services (water regulation...)



Thank you !

For additional information...

Project website: www.projet-descartes.fr

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