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## Edges between agriculture and forest viewed as interfaces between social and ecological systems

Marc Deconchat, Annie Ouin, Audrey Alignier, Anthony Roume, Brice Giffard, Sylvie Ladet, Anne Sourdril

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# Edges between agriculture and forest viewed as interfaces between social and ecological systems

Marc Deconchat, Annie Ouin, Audrey  
Alignier, Anthony Roume, Brice  
Giffard, Sylvie Ladet, Anne Sourdril

UMR1201 Dynafor INRA/INP ENSAT/ INP EIPurpan  
Dynamiques et écologie des paysages agriforestiers  
[dynafor.toulouse.inra.fr](http://dynafor.toulouse.inra.fr)



## 2 Take home messages

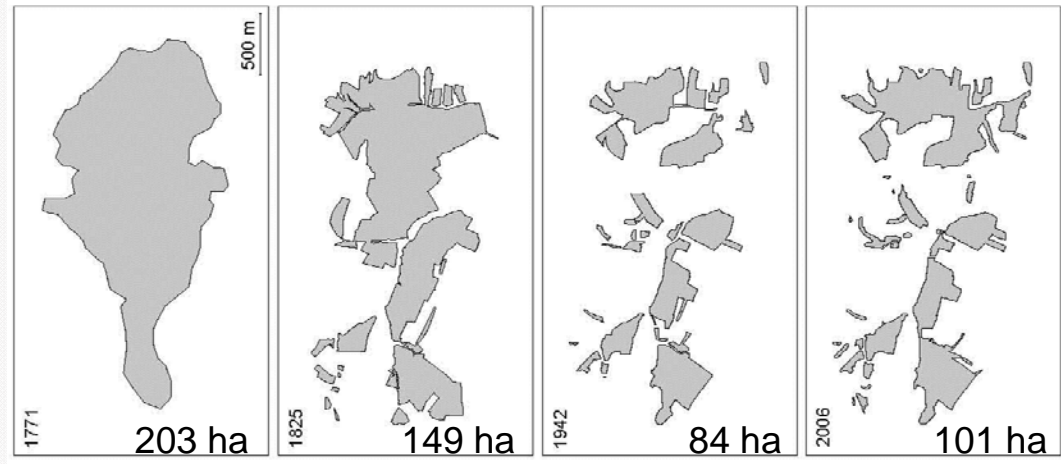
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Edges are important features of landscapes deserving a better understanding to promote their management for ecosystem services

Social-ecological system framework needs improvements to be able to cope with characteristics of edges



# Many forest edges in temperate landscapes



Landscape and Urban Planning 103 (2011) 109–117

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Landscape and Urban Planning

journal homepage: [www.elsevier.com/locate/landurbplan](http://www.elsevier.com/locate/landurbplan)



History and spatial complexity of deforestation and logging in small private forests

Emilie Andrieu<sup>a,b,\*</sup>, Sylvie Ladet<sup>a,b</sup>, Wilfried Heintz<sup>a,b,c</sup>, Marc Deconchat<sup>a,b</sup>



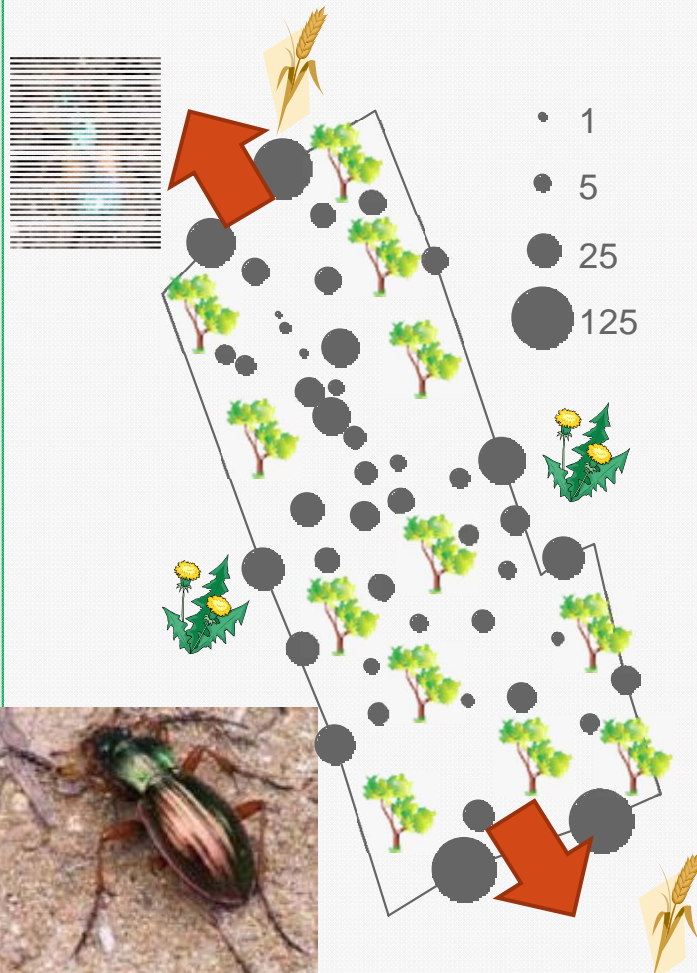
# Ecosystem services around edges

Density of overwintering carabids ( $m^{-2}$ )

*Entomol. J. Entomol.* **108**: 615–622, 2011  
<http://www.ejournals.org/scripts/viewabstract.php?abstract=166>  
ISSN 1210-5759 (print), 1802-8829 (online)

**Abundance and species richness of overwintering ground beetles (Coleoptera: Carabidae) are higher in the edge than in the centre of a woodlot**

ANTHONY ROUME<sup>1</sup>, ANNIE OUIN<sup>2</sup>, LAURENT RAISON<sup>1</sup> and MARC DECONCHAT<sup>1</sup>



Edges as overwintering sites for syrphid larvae feeding on wheat aphids

Sarthou *et al.* 2005; Arrignon *et al.* 2007



# Forest edges as social boundaries



F&S



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Sourdriil, A., E. Andrieu, A. Cabanettes, B. Elyakime, and S. Ladet. 2012. How to maintain domesticity of usages in small rural forests? Lessons from forest management continuity through a French case study. *Ecology and Society* 17(2): 6.  
<http://dx.doi.org/10.5751/ES-04746-170206>

Research, part of a Special Feature on Public policies and management of rural forests: lasting alliance or fool's dialogue?  
**How to Maintain Domesticity of Usages in Small Rural Forests? Lessons from Forest Management Continuity through a French Case Study**

*Anne Sourdriil*<sup>1</sup>, *Emilie Andrieu*<sup>2</sup>, *Alain Cabanettes*<sup>2</sup>, *Bernard Elyakime*<sup>2</sup>, and *Sylvie Ladet*<sup>2</sup>

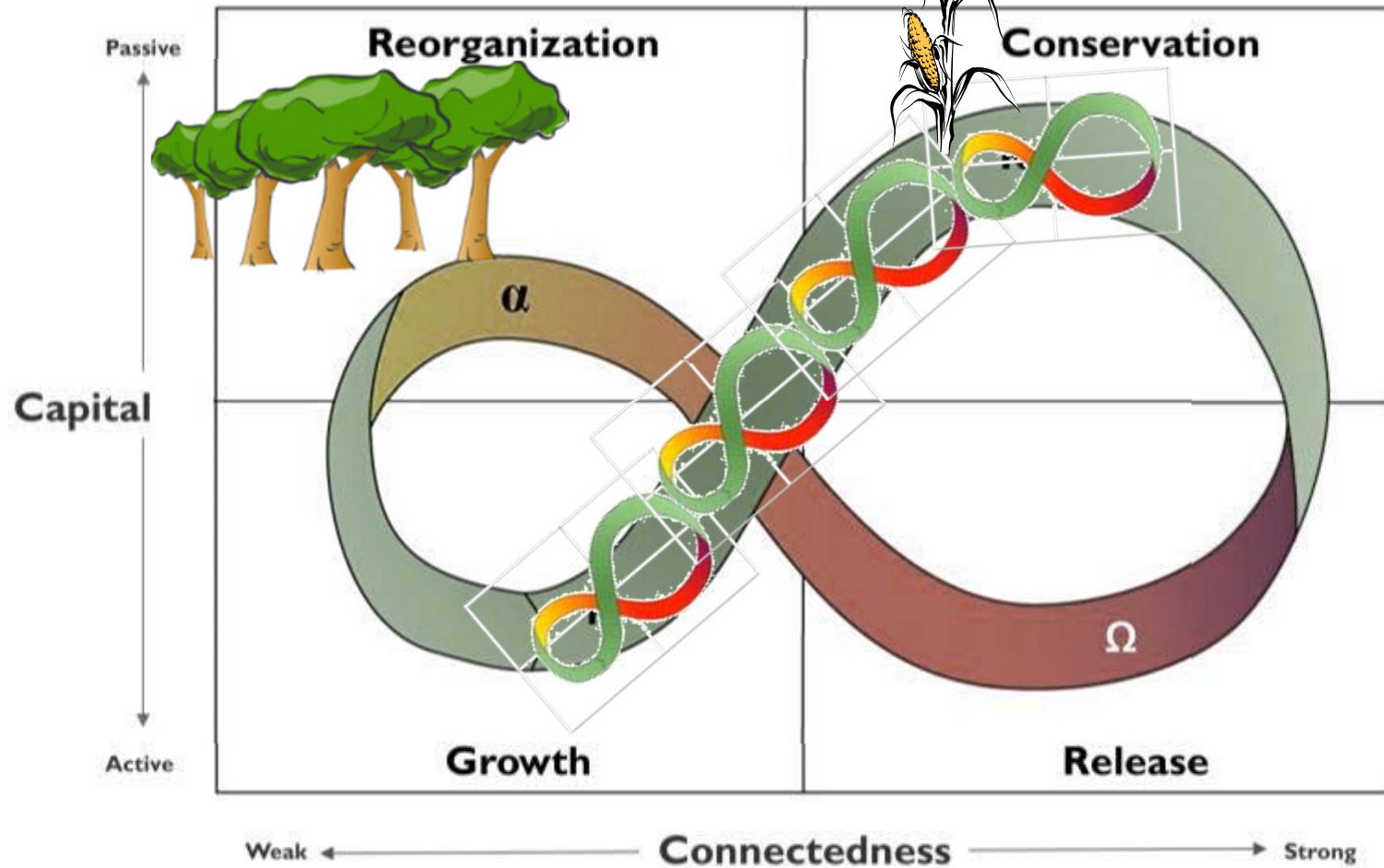


# 2 rates of disturbance / types of management / land covers

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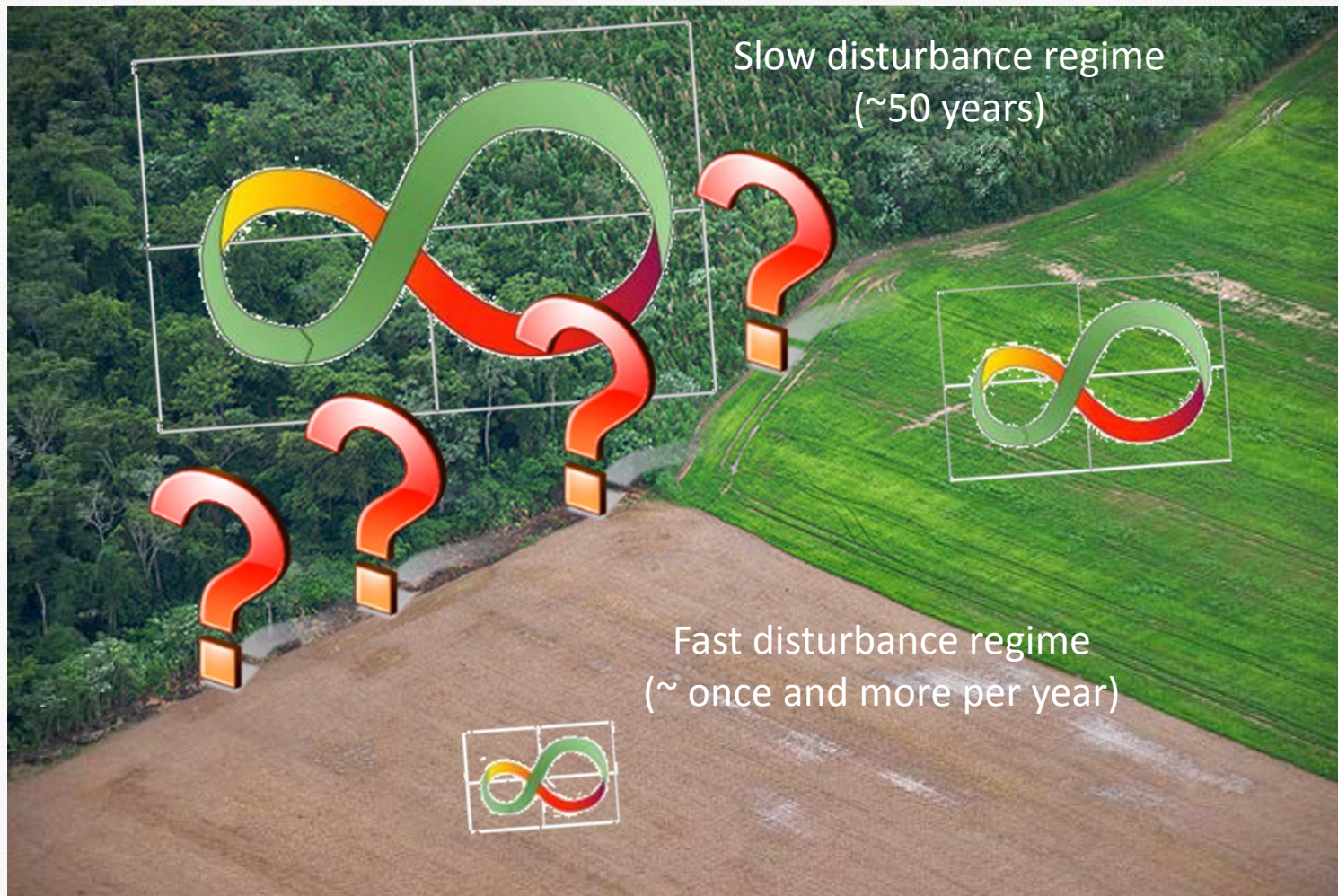


# Forest and agriculture as dynamic complex systems





# What about their spatial contacts?

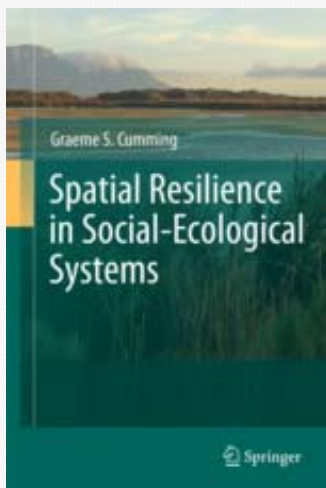




# Conclusion

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- How to deal with spatial interfaces between several complex social-ecological dynamic systems?



- How to improve the spatial resilience concept?