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A tool-box for designing an agroecological transition with local stakeholders

Elise Audouin, Jacques-Eric Bergez, Gaël Plumecocq, Olivier Therond

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tatabox



Transition Agroécologique des Territoires Agricoles

AGENCE NATIONALE DE LA RECHERCHE
ANR

PROGRAMME ANR - AGROBIOSPHERE 2013

Projet ANR-13-AGRO-0006-01

TATABOX

Transition agroécologique des territoires : une boîte à outil pour concevoir et mettre en œuvre une transition agroécologique des territoires agricoles avec les acteurs locaux.

Date de début du projet: 16 janvier 2014

Durée: 48 mois

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Dissemination Level		
PU	Public	<input checked="" type="checkbox"/>
AN	Restreint aux membres d'autres projets ANR (Commission ANR incluse)	<input type="checkbox"/>
RE	Restreint à un groupe désigné par le consortium (Commission ANR incluse)	<input type="checkbox"/>
CO	Confidentiel, uniquement pour les membres (Commission ANR incluse)	<input type="checkbox"/>

TATABOX vise à tester et adapter une méthodologie pour aider les acteurs agricoles locaux à développer une vision de la transition agroécologique souhaitable et à la gérer. Le projet implique 9 unités de recherche et 986 ETP. Les chercheurs sont de différentes disciplines permettant une bonne analyse des différents processus en jeu : agronomes, zootechniciens, écologues, sciences de l'informatique, ergonomes, sciences de gestion, géographie sociale, économistes. Le cas d'étude est un grand bassin versant agricole dans la partie sud-ouest de la France (Aveyron et Tarn-et-Garonne).

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Ce manuscrit a été rédigé dans le cadre du projet TATABOX, financé par l'Agence Nationale de la Recherche au travers du programme AGROBIOSPHERE 2013. Son contenu ne représente en aucun cas la position officielle de l'Agence Nationale de la Recherche et est entièrement sous la responsabilité de son(s) auteur(s). L'information contenue dans ce document est délivrée telle quelle. Il appartient au lecteur d'utiliser ces informations avec discernement.

tatabox



Territorial Agroecological Transition in Action

A tool-box for designing an agroecological transition with local stakeholders

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Gaël Plumecocq

Olivier Therond

UMR AGIR

INRA Centre Occitanie Toulouse, France



12th ESEE conference
21th of June 2017

Session: Science-society contributions to sustainability
transformation: Citizens Science, Community-Based Research,
Participatory Action Research, Responsible Research and Innovation

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ANR-13-AGRO-0006



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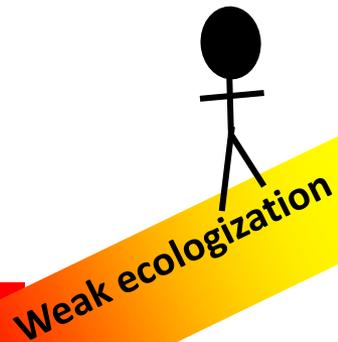
Agroecological transition: a challenge that requires new tools



**Multiple challenges
Conventional agriculture**



Agroecological transition: a challenge that requires new tools

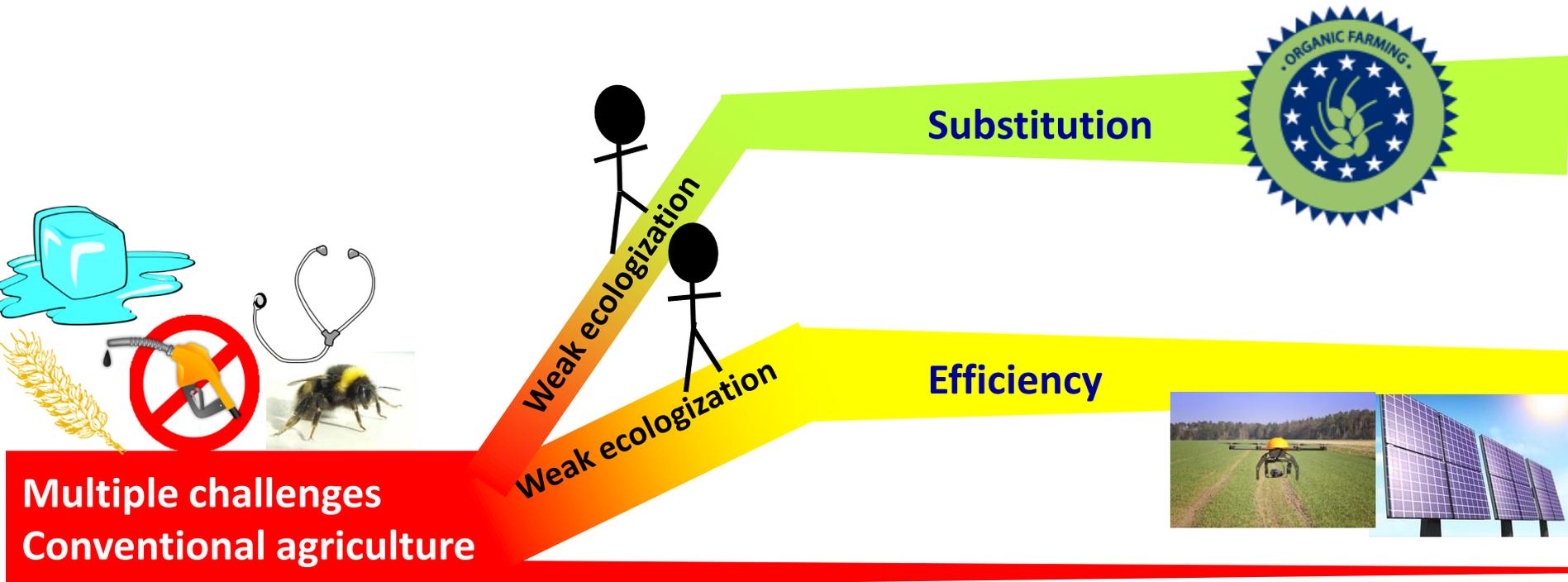


Efficiency

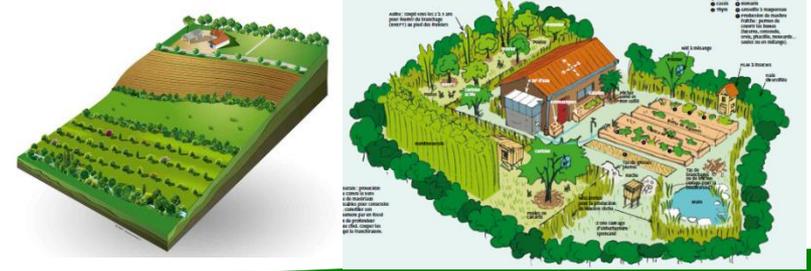


**Multiple challenges
Conventional agriculture**

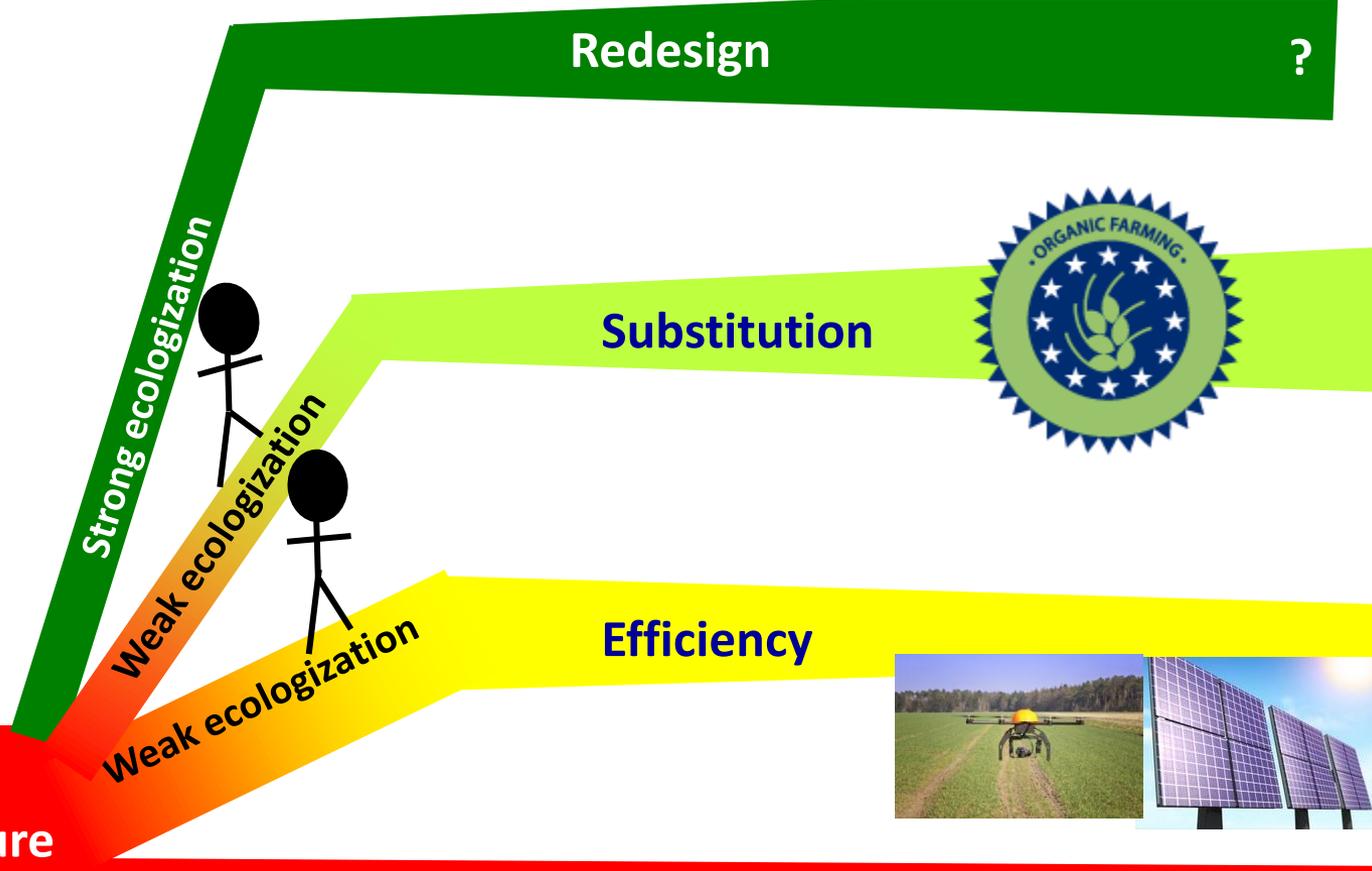
Agroecological transition: a challenge that requires new tools



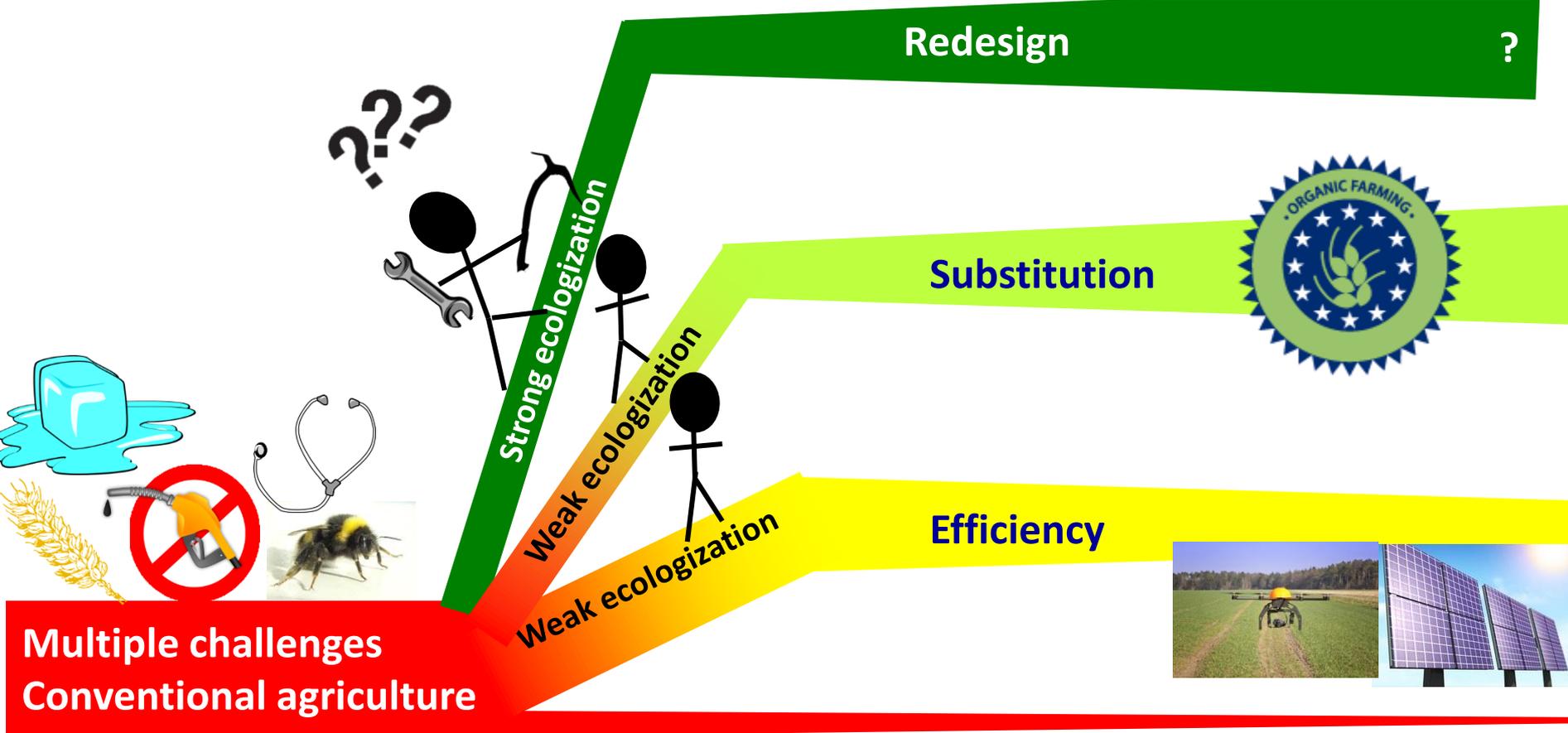
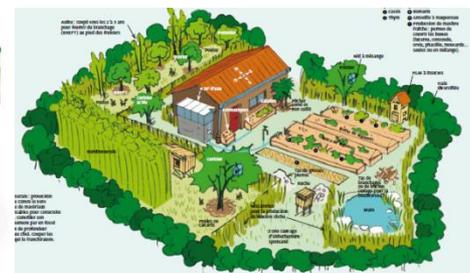
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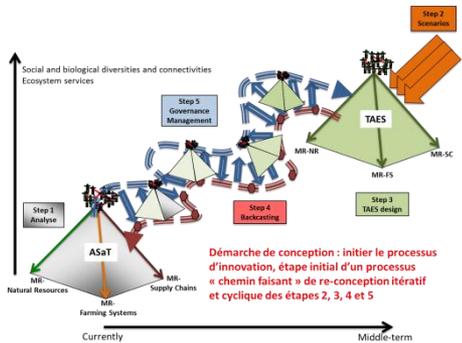
**Multiple challenges
Conventional agriculture**



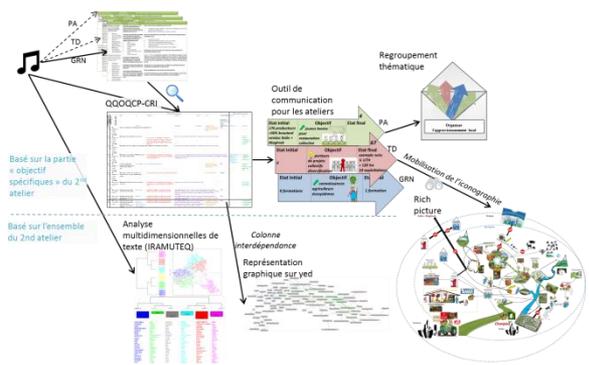
Agroecological transition: a challenge that requires new tools



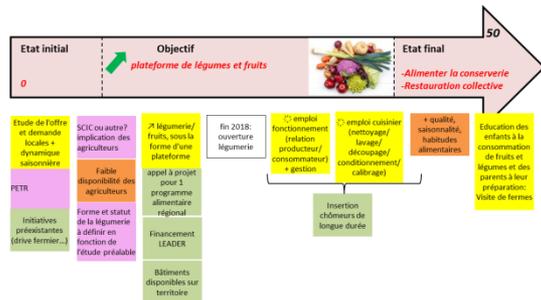
This presentation focuses on the participatory methods and tools design and application on 2 territories



Frameworks for agroecological transition

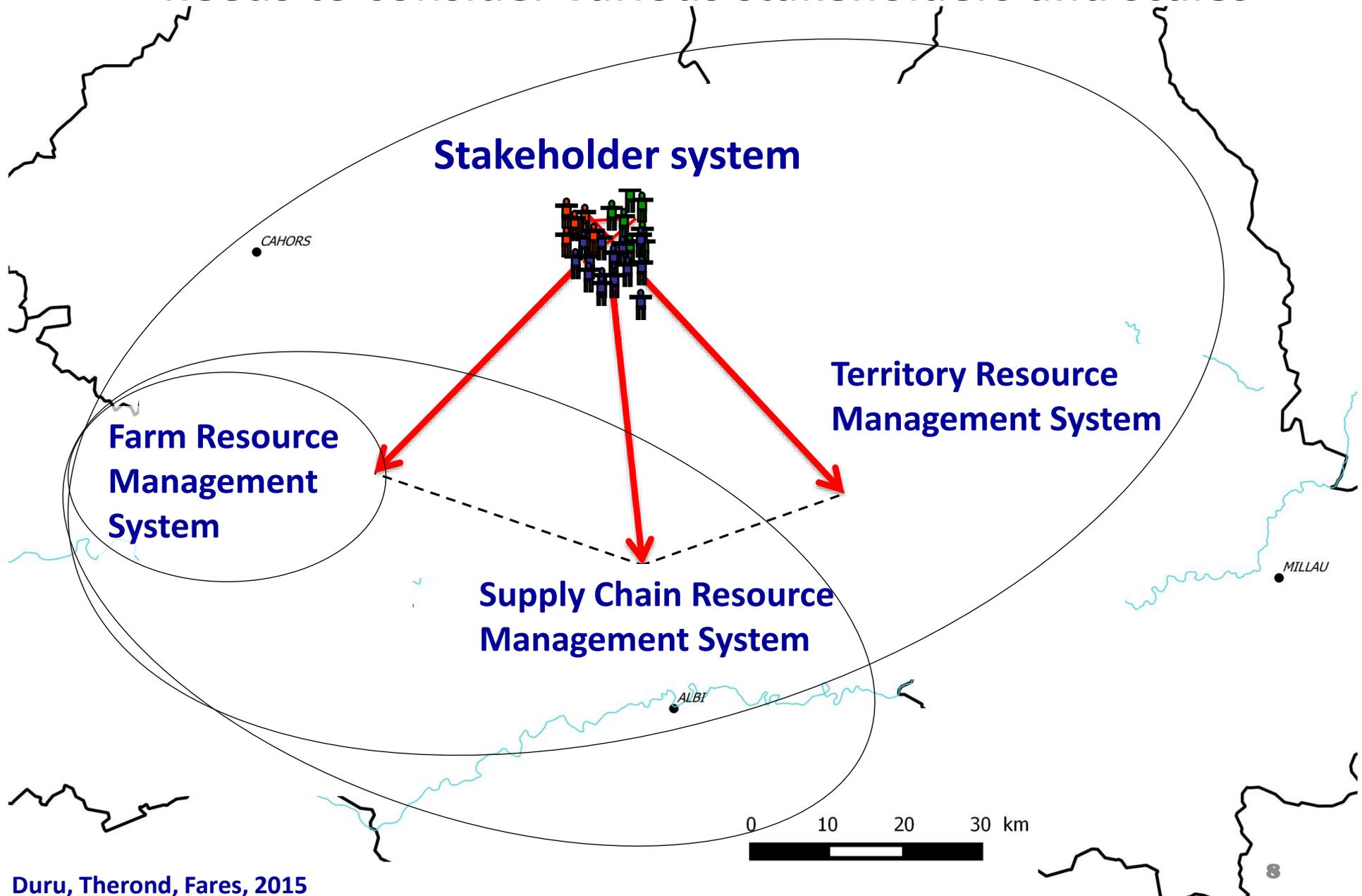


Methods and tools design

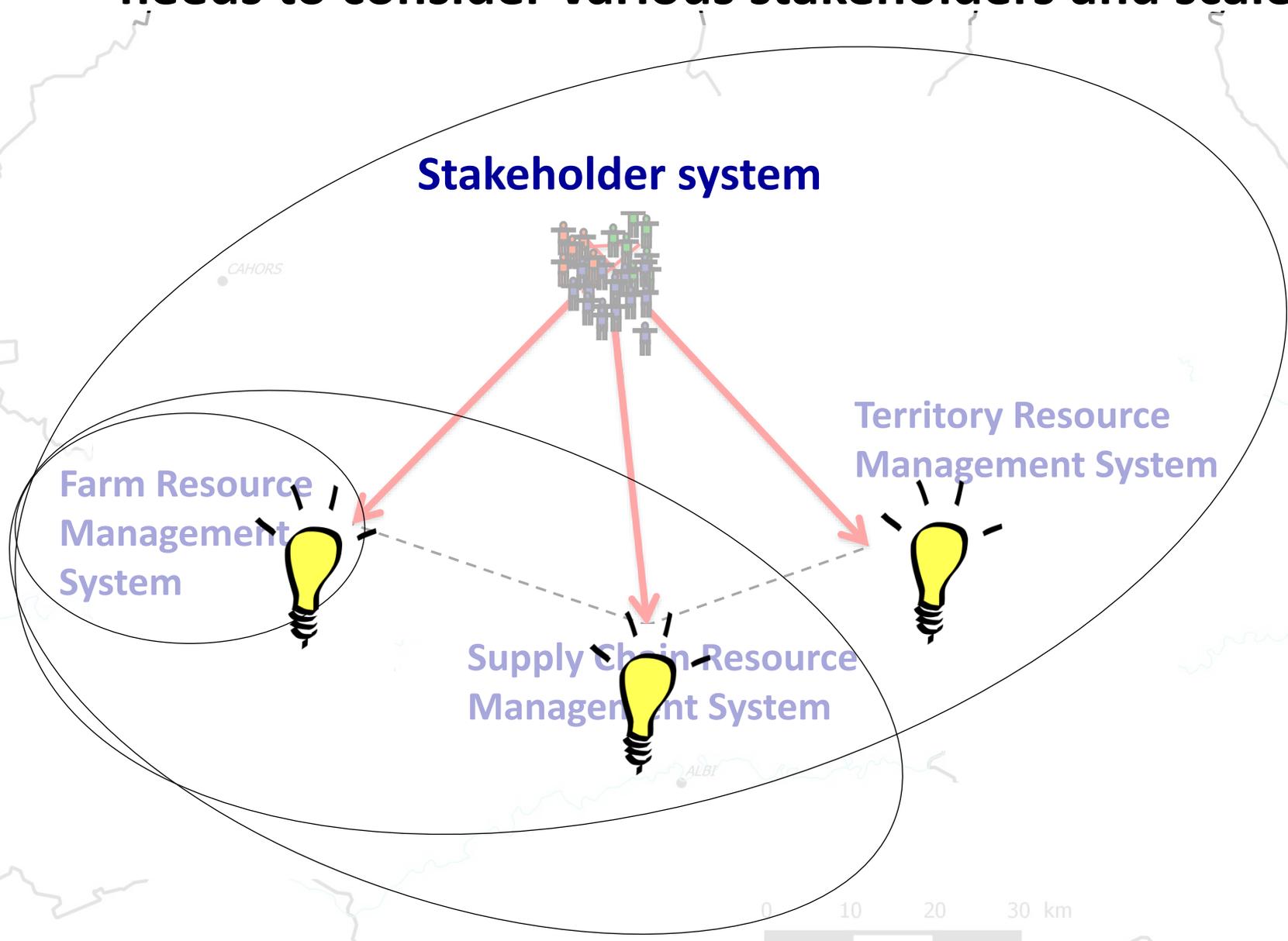


Results obtained

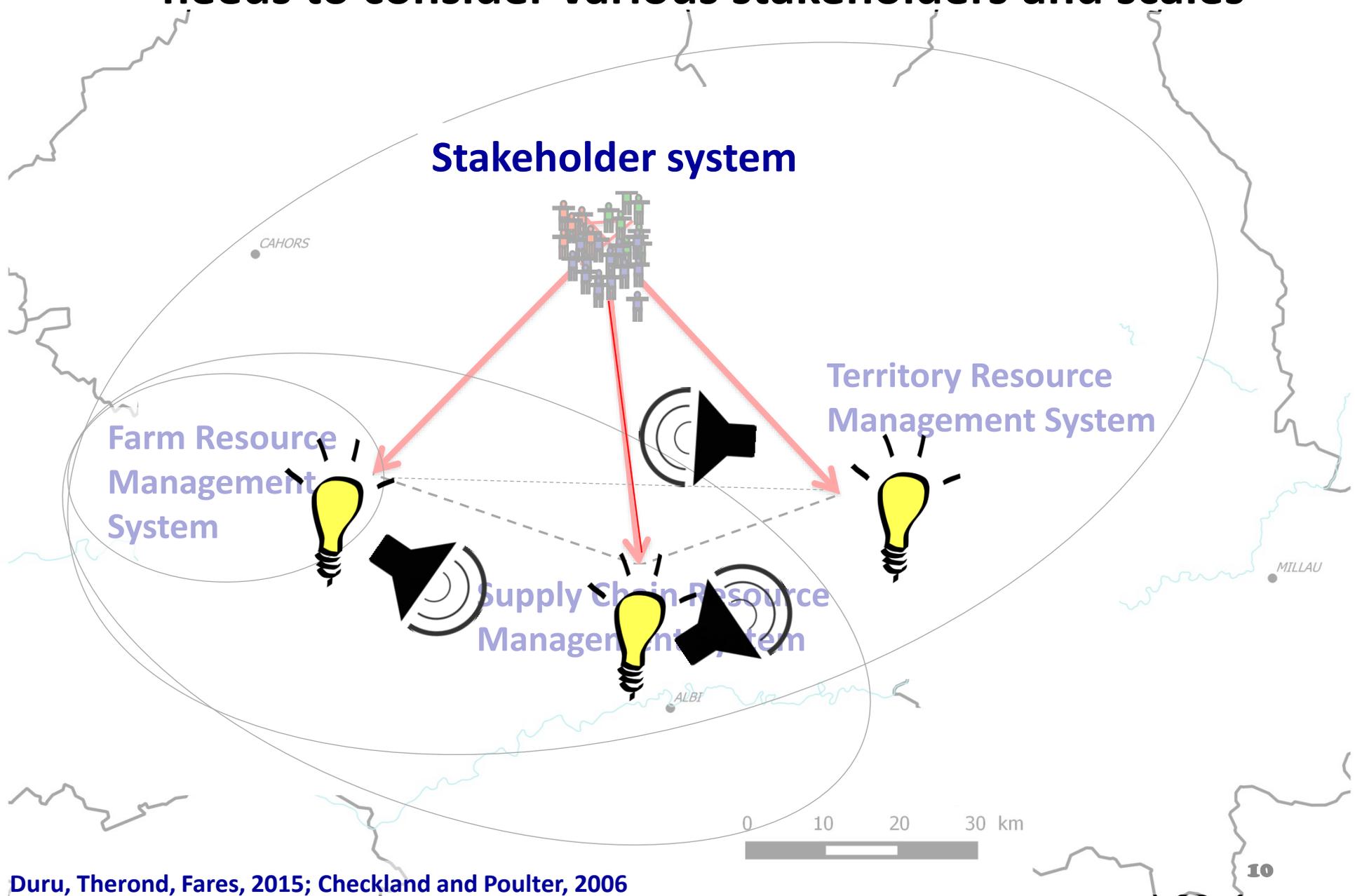
Conceptual framework: agroecological transition needs to consider various stakeholders and scales



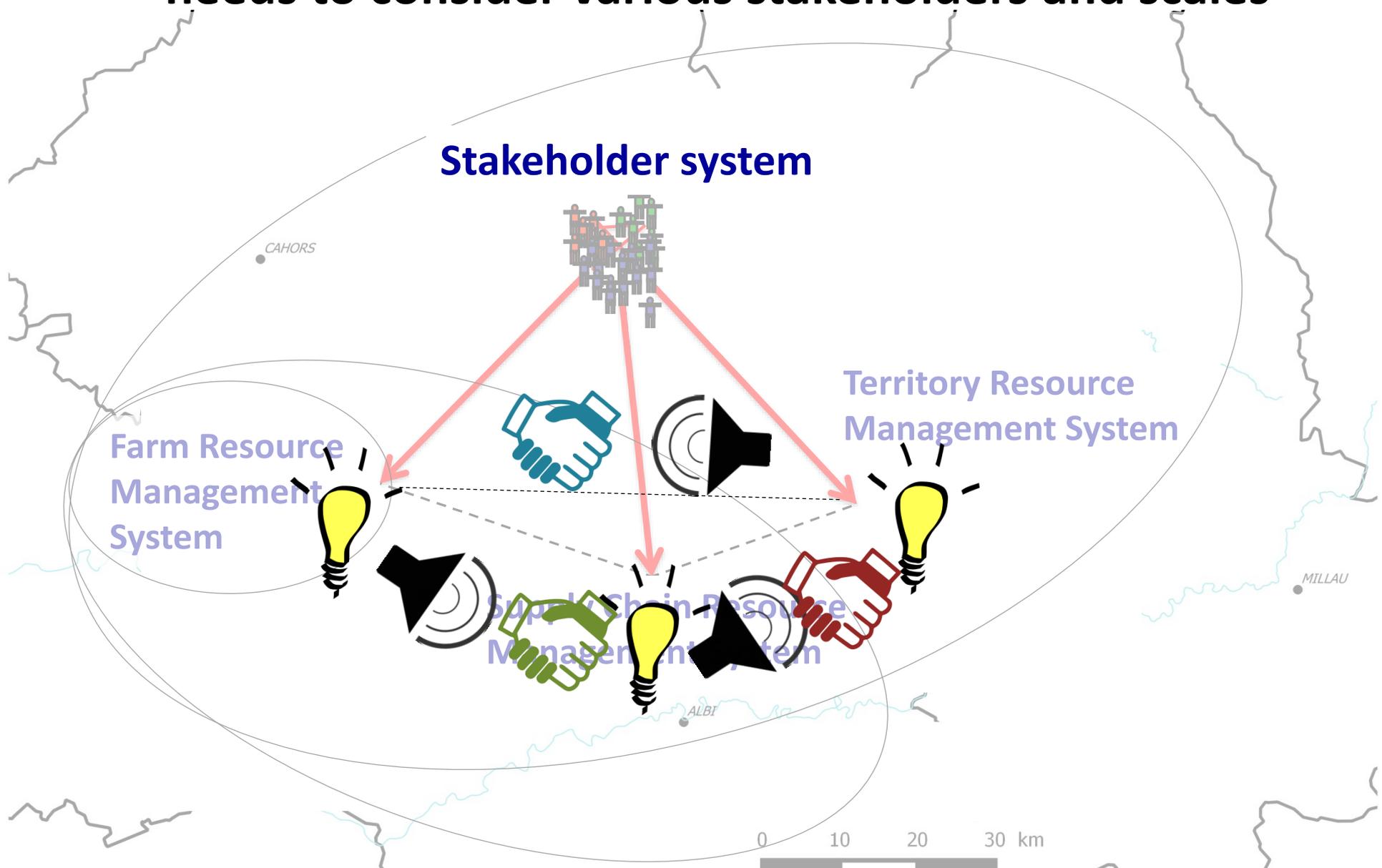
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Conceptual framework: agroecological transition needs to consider various stakeholders and scales



Conceptual framework: agroecological transition needs to consider various stakeholders and scales

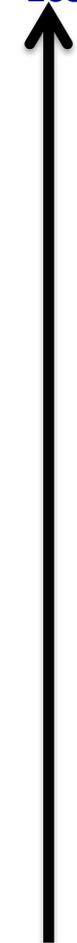




Agroecological transition in a 5-step iterative process

Social and biological diversities and connectivities

Ecosystem services



Step 1
Analysis



MR-
Natural Resources

MR-
Supply Chains

MR-
Farming Systems

Currently

Medium term



Agroecological transition in a 5-step iterative process

Step 2
Scenarios



Social and biological diversities and connectivities
Ecosystem services



Step 1



MR-
Natural Resources

MR-
Supply Chains

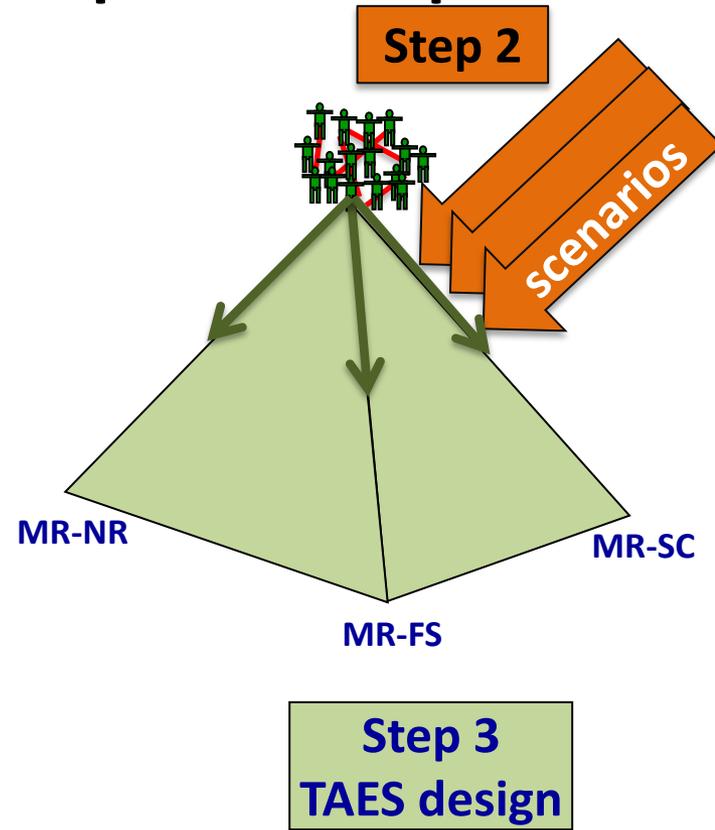
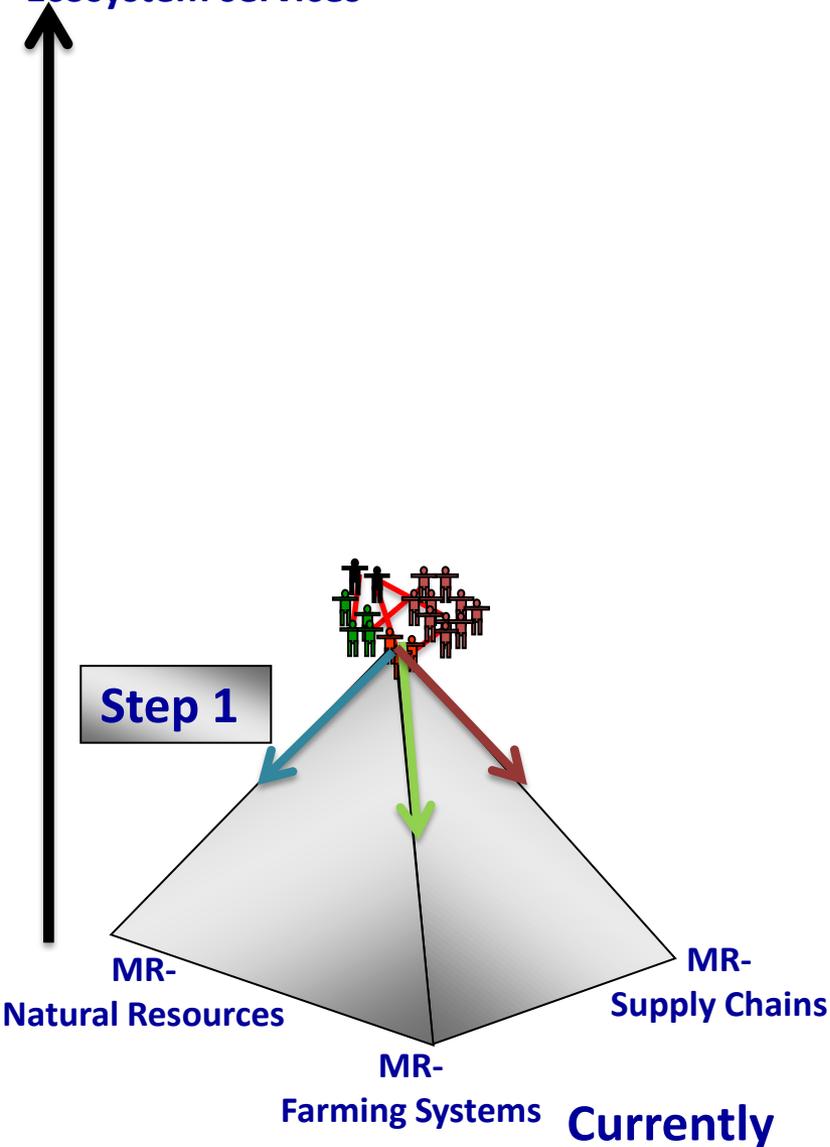
MR-
Farming Systems

Currently

Medium term

Agroecological transition in a 5-step iterative process

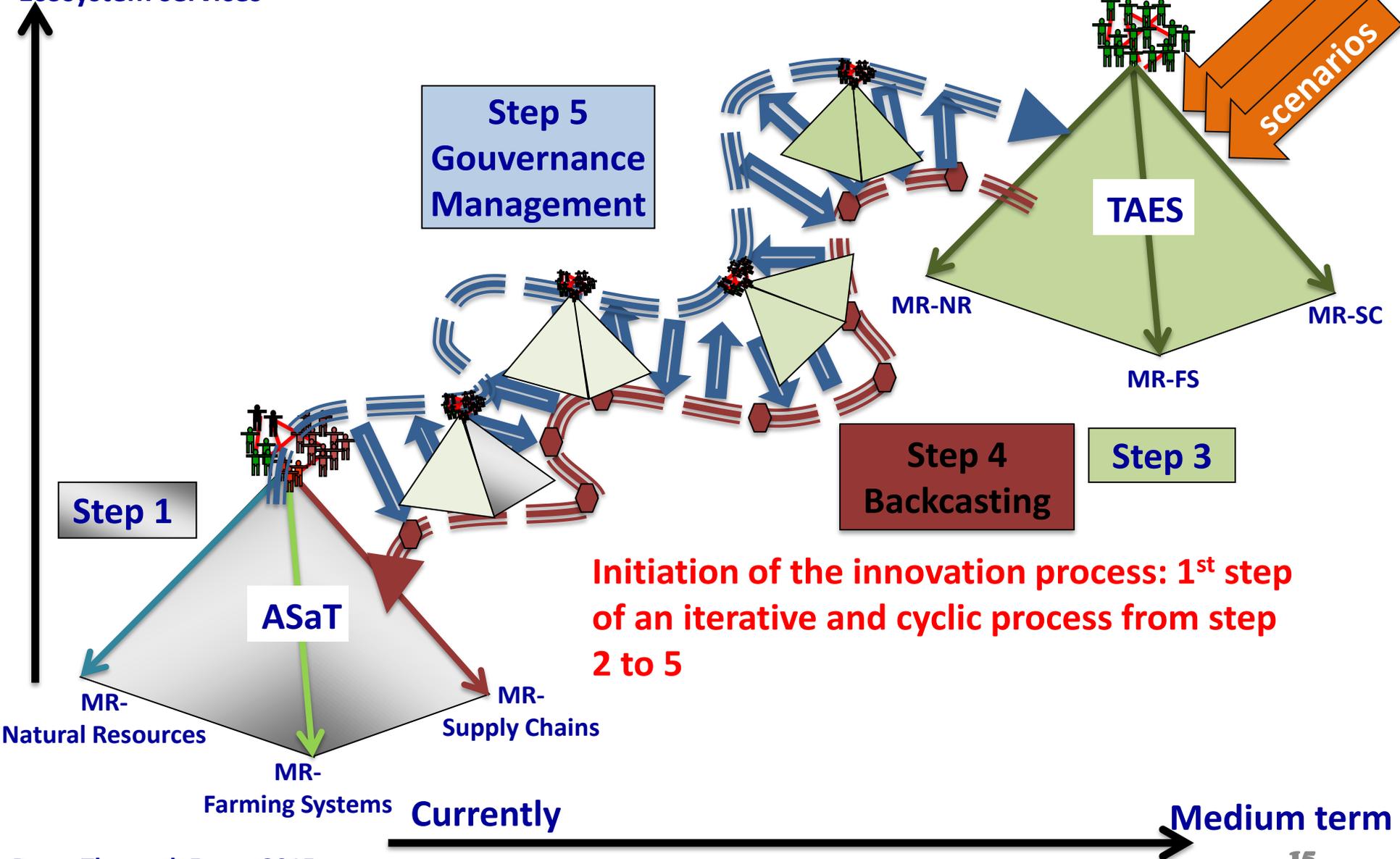
Social and biological diversities and connectivities
Ecosystem services



Medium term

Agroecological transition in a 5-step iterative process

Social and biological diversities and connectivities
Ecosystem services



Initiation of the innovation process: 1st step of an iterative and cyclic process from step 2 to 5

Almost as many researchers as participants

42 pluridisciplinary researchers



+ *Ergonomics* + *Sociology*



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Almost as many researchers as participants

42 pluridisciplinary researchers



+ *Ergonomics* + *Sociology*

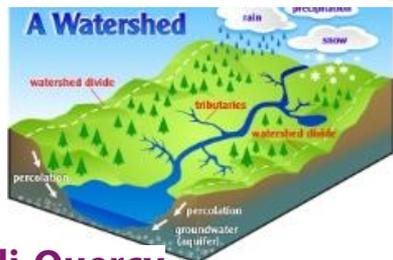
Selection



le cnam



Territory partners:



Pays Midi-Quercy

Pôle d'Equilibre Territorial Rural



Almost as many researchers as participants

42 pluridisciplinary researchers



+ *Ergonomics* + *Sociology*

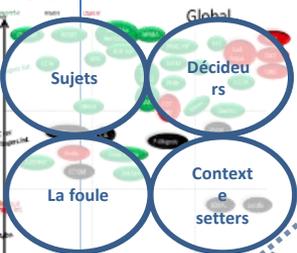


Selection

Selection

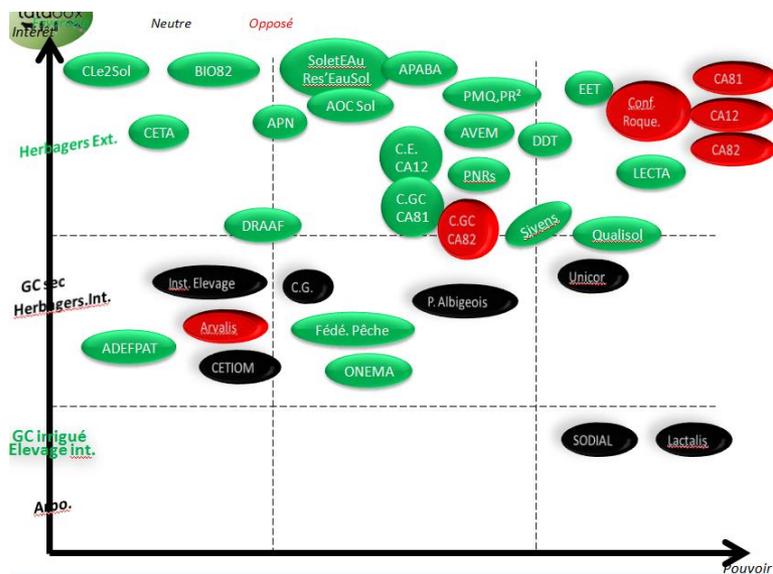


Territory partners:



Workshops' participants

Key individual stakeholders part of a global representativeness of local agricultural system



Organisme	Agriculteurs	Fonction	Contact	Mail	Contact de	Tel	Adresse1
ADEAR Tarn		Animateur	Rémi Gachenot	adear.tarn@free.fr	Etienne	05 63 51 03 70	ADEAR Maison des associatio
ADEFPAT		Directrice	Anne Froment	anne.froment@adefpat.fr	Etienne		
Albigeois		Chef projet Plan Climat Territorial	Julien frat	ifrat@pays-albigeois-bastig	Etienne	05.63.36.87.01	Pays de l'Albigeois et des Bas
APABA	X	président	Olivier izard	olivierizard@hotmail.fr	Marc		
Bio82		animatrice	Virgil Bezin	techniquebio82@gmail.com	Guillaume		
CA12		Conseillers d'entreprise	Héloïse Gonzalo-Turpin	heloise.gonzalo-turpin@ay	Marc		
CA12		conseiller élevage bio	Stéphane Doumayzel	stephane.doumayzel@tjv	Guillaume	05.65.73.77.13	
CA12		conseiller agronomie fourrages	Benoit Delmas	benoit.delmas@tjv	Guillaume	05 65 71 37 00	
CA81		conseiller fourrages élevage	Jean-Bernard Mis	jb.mis@tarn.chambagri.fr	Guillaume	05.63.48.83.87	
CA81		Conseillère agronomie-environnement	Cécile Frayse	c.frayse@tarn.chambagri.fr	Etienne	05.63.48.83.83	Chambre d'agriculture du Tar
CA81		Conseillère agronomie-environnement	Antoine Delaunois	a.delaunois@tarn.chambagri.fr	Etienne	05.63.48.83.83	Chambre d'agriculture du Tar
CA82		Conseillère Grande Cultures conventionnel et bio	Ingrid Barrier	ingrid.barrier@agri82.fr	Etienne	05.63.65.07.11	
CA82		Conseillère installation bio	Marie Cabarès	marie.cabares@agri82.fr	Etienne	05.63.63.09.95	
CA82		Responsable du pôle végétal	Didier Lafage			05.63.63.63.46	
CFPPA albi							
Clé 2 Sol	X	présidente	Sarah Singla	s.singla@laposte.net	Etienne, JPS	05.65.73.61.70	
CRAMP		Pôle économie et prospective	Nelly Grillet	nelly.grillet@mp.chambagri	Olivier, Etienne	05.61.75.75.81	
FDCUMAR2							
féde pêche 12		Ingénieure	Martine Guilmet		Alexandre		
Fermes de Figeac		Directeur	Dominique Olivier	dominique.olivier@fermesdefigeac.coop			
GPLV		Animatrice (permanence le mardi)	benedicta Canredon			565451957 06 75 12 22 55	
Lactalis							
PMO		Chargé de Responsab					
QUALISOL		président					
Res'Eausol		directrice					
Ruthénois		directrice					
SODIAL							
Sol et Eau	X	Président					
UNICOR							

Stakeholder analysis

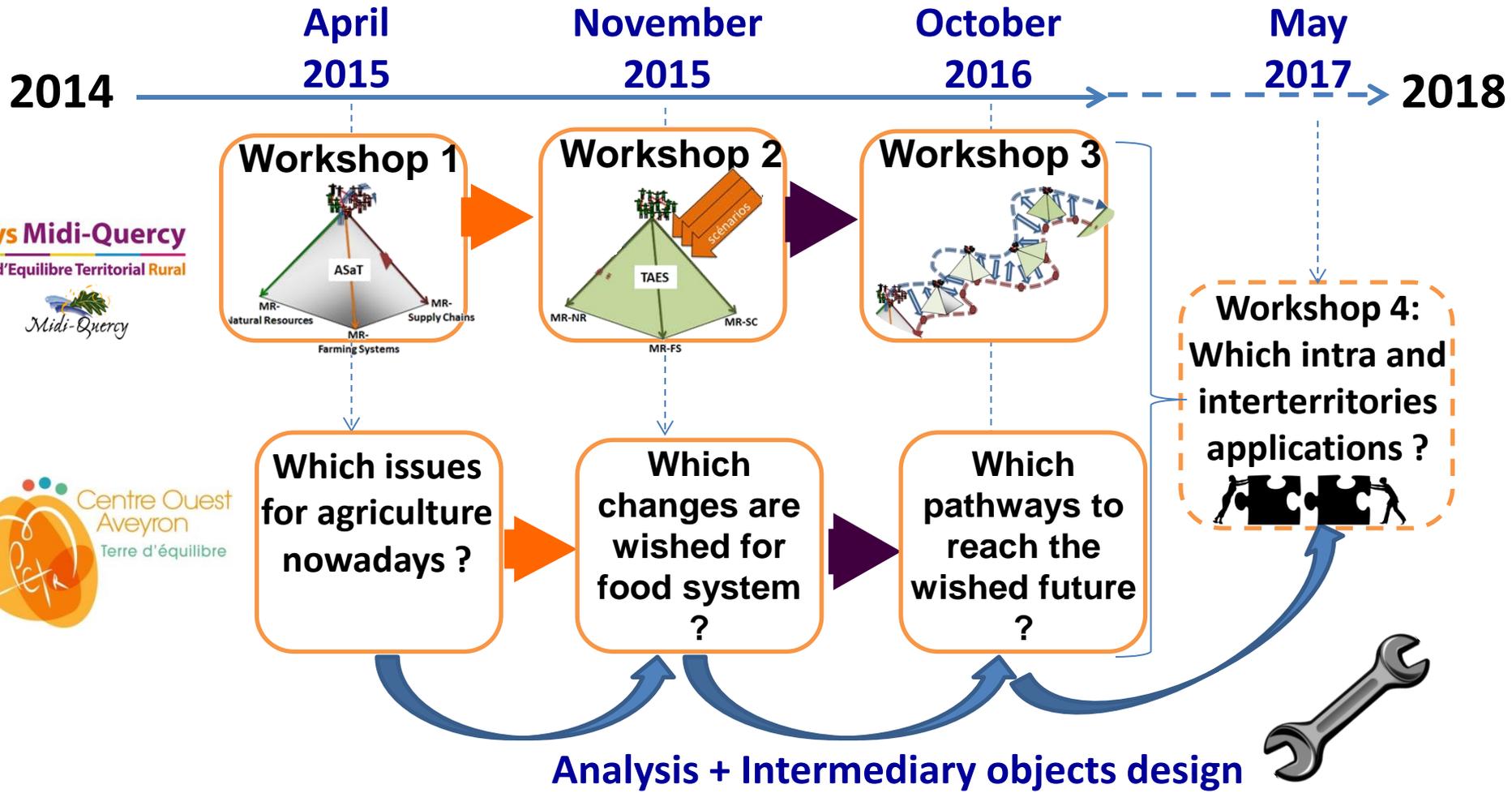
Workshops' participants:

- Farmers
- Farmer groups
- Civil society (consumers or environmental associations)
- Advisory groups
- Institutions
- Supply chain (cooperative, label)



Stakeholders data basis

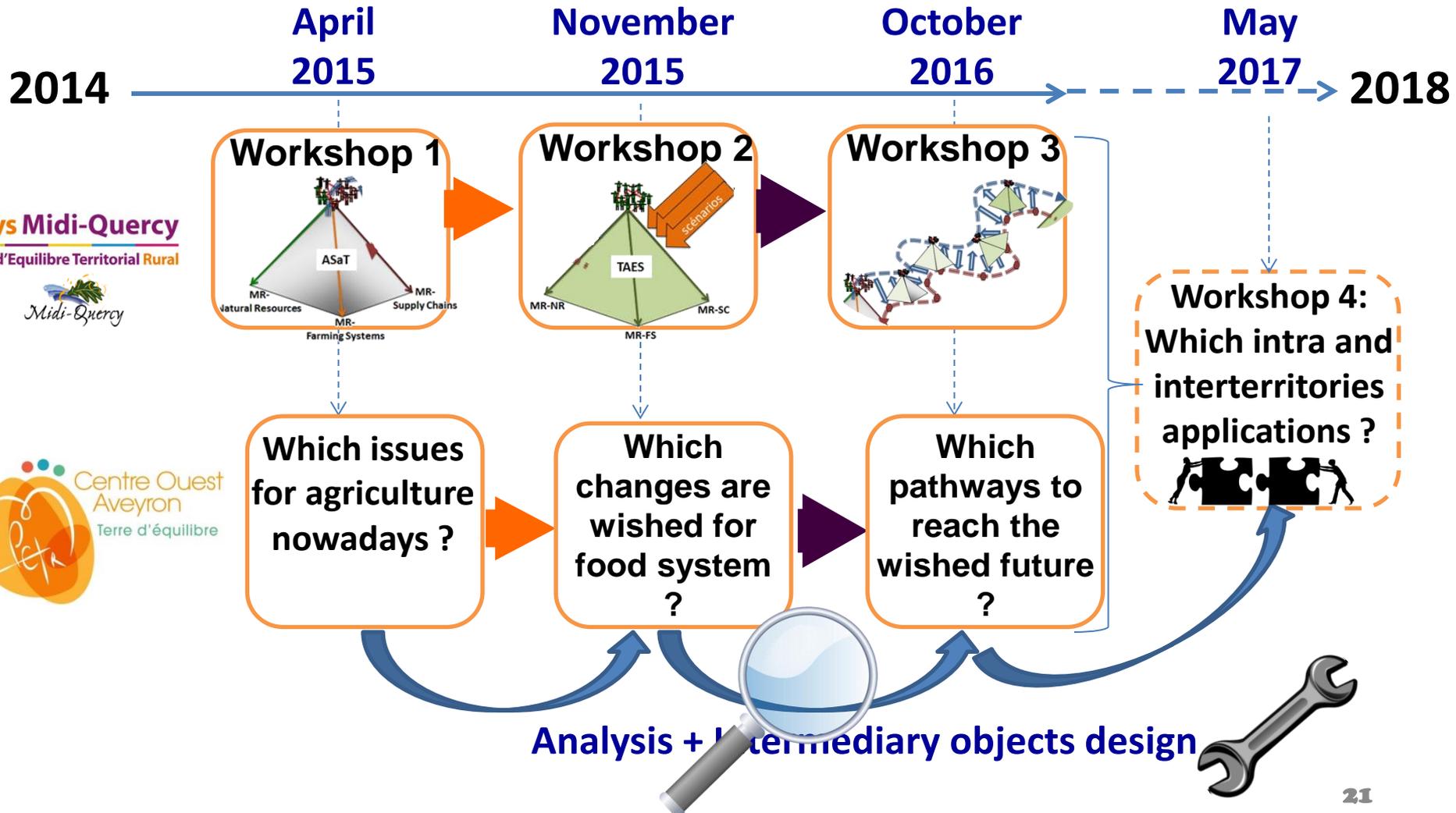
An operationalization of the conceptual framework in 3+1 steps



Pays Midi-Quercy
Pôle d'Equilibre Territorial Rural
Midi-Quercy

Centre Ouest Aveyron
Terre d'équilibre

An operationalization of the conceptual framework in 3+1 steps

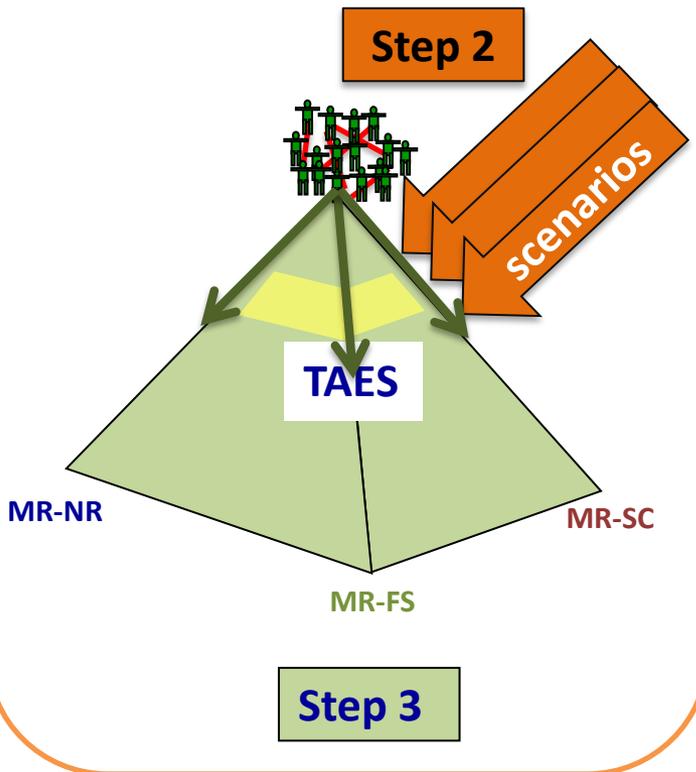


Pays Midi-Quercy
Pôle d'Equilibre Territorial Rural
Midi-Quercy

Centre Ouest Aveyron
Terre d'équilibre

83+65 targets for an agroecological system in 2025 represented at different scales

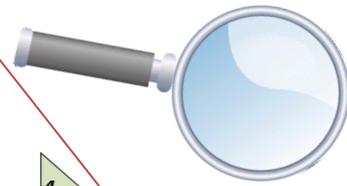
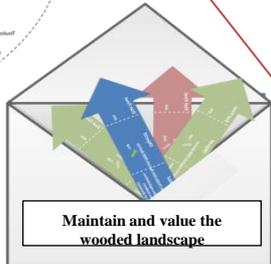
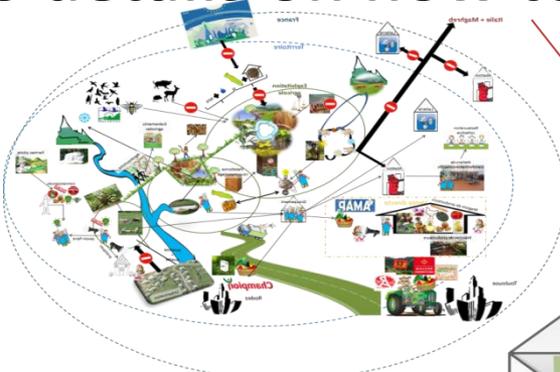
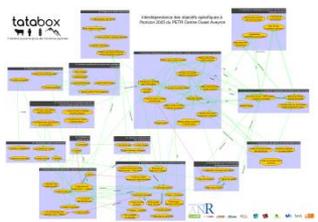
Workshop 2



- ↗ crop rotation's length
- spread calving time to optimize the use of mountain lands
- create common compost platform
- ↗ pilot farm to test innovations
- ↗ direct selling
- ↗ certification label to export
- ↗ wooded network
- ↘ urbanization dynamics
- ↗ soil cover

...

A diversity of methods and tools to go progressively into details on how to reach the targets



What did you already produced?

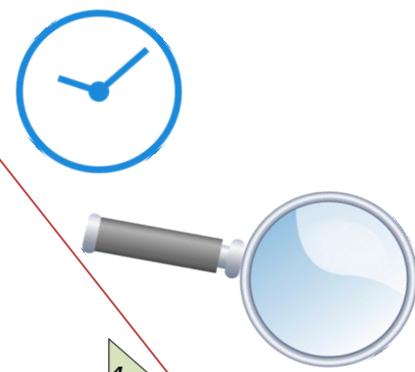
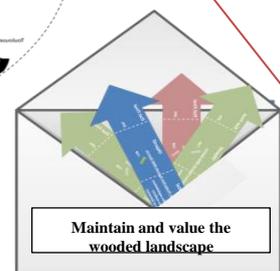
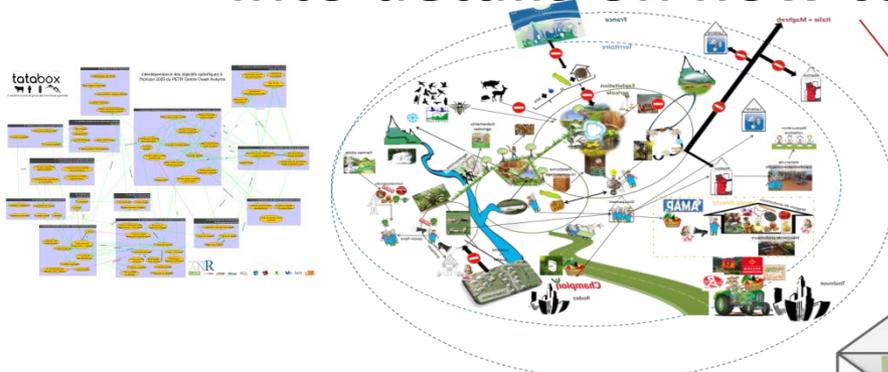
Are there priority clusters?



How do you organize the targets in each cluster?

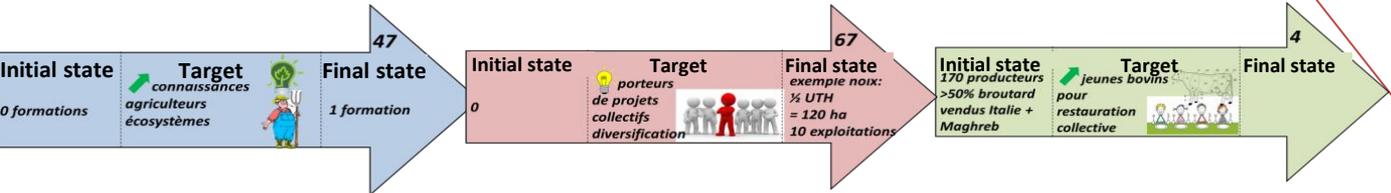


A diversity of methods and tools to go progressively into details on how to reach the targets

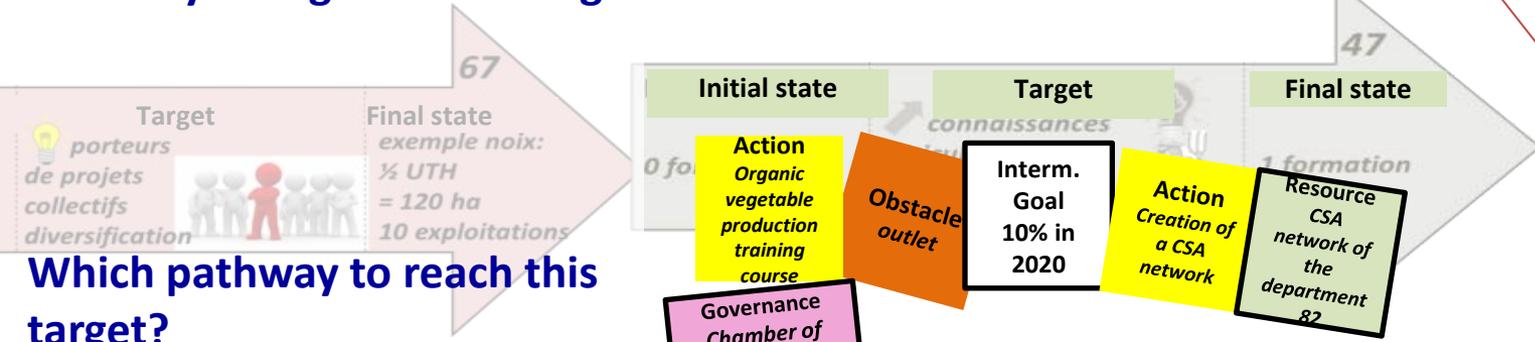


What did you already produced?

Are there priority clusters?



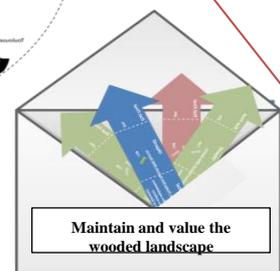
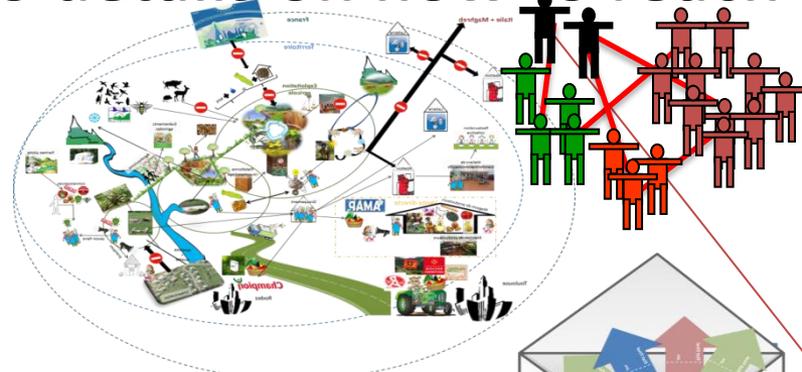
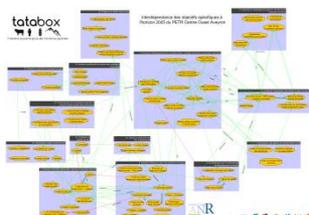
How do you organize the targets in each cluster?



Which pathway to reach this target?

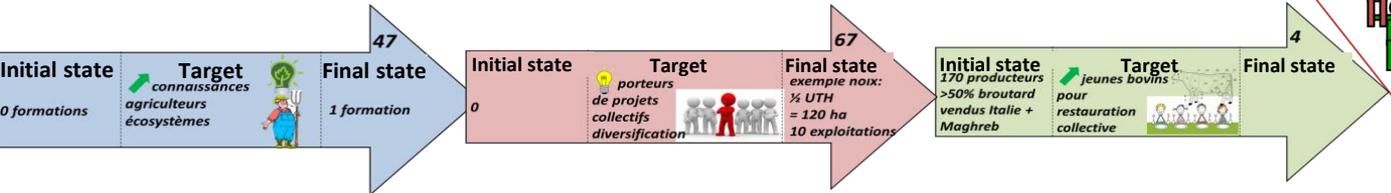


A diversity of methods and tools to go progressively into details on how to reach the targets

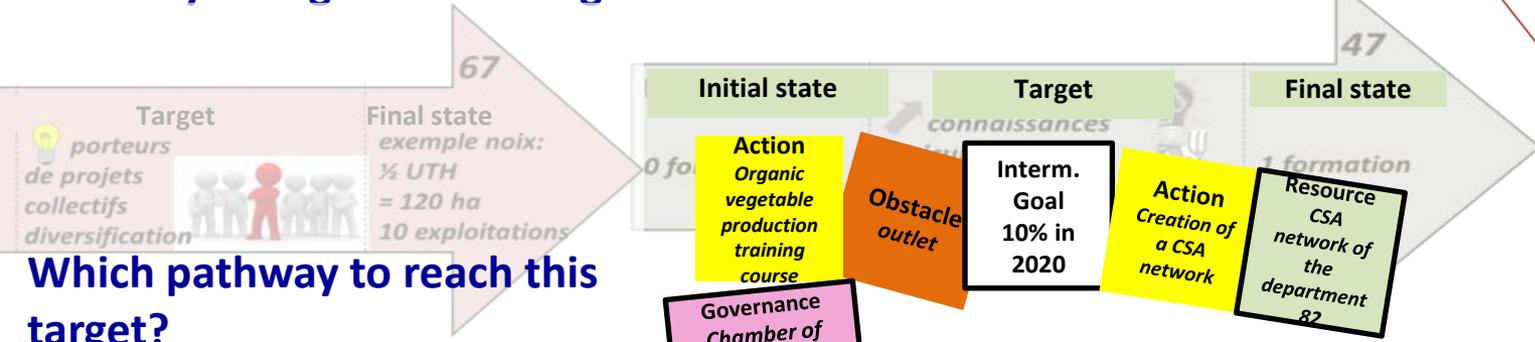


What did you already produced?

Are there priority clusters?

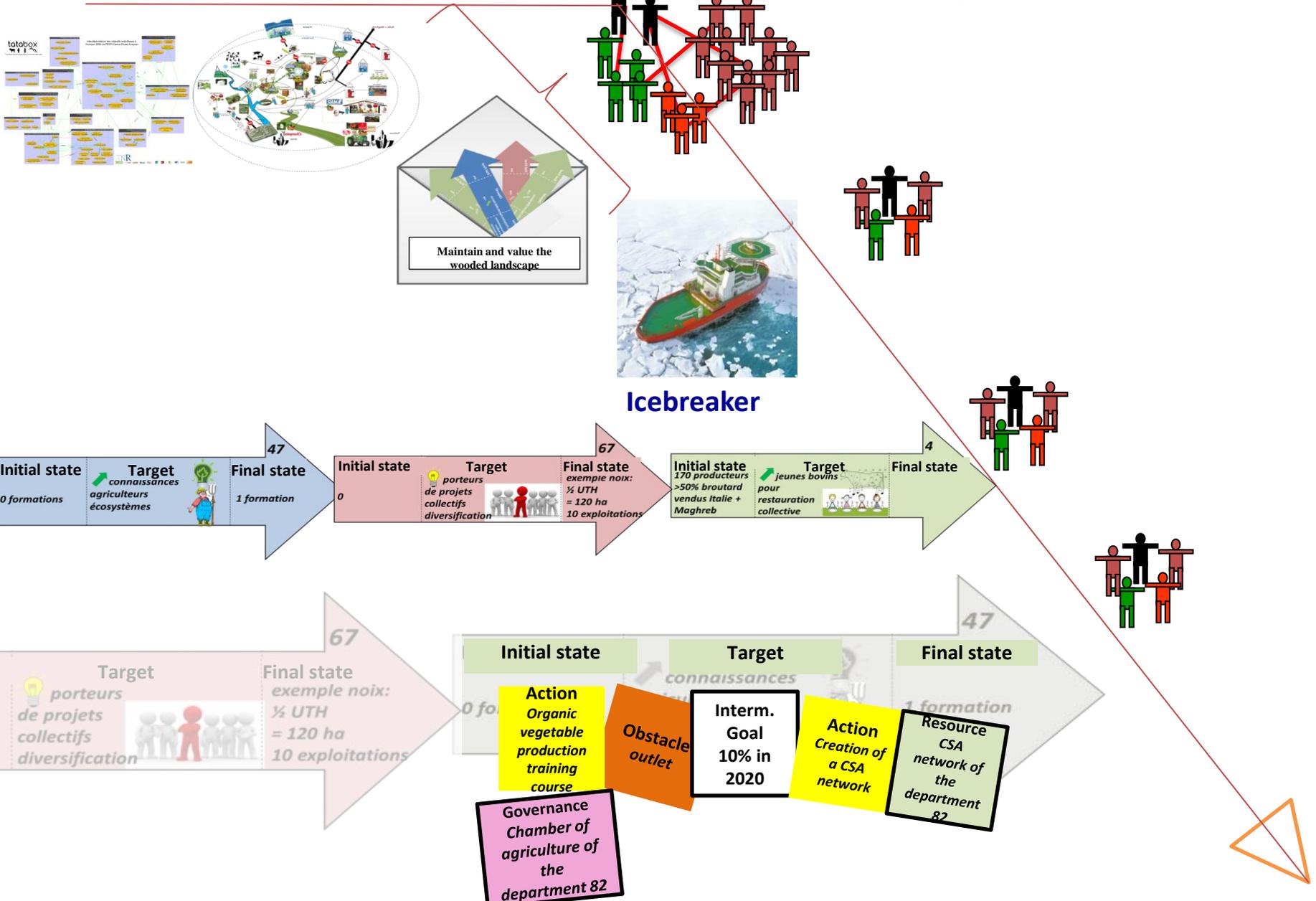


How do you organize the targets in each cluster?

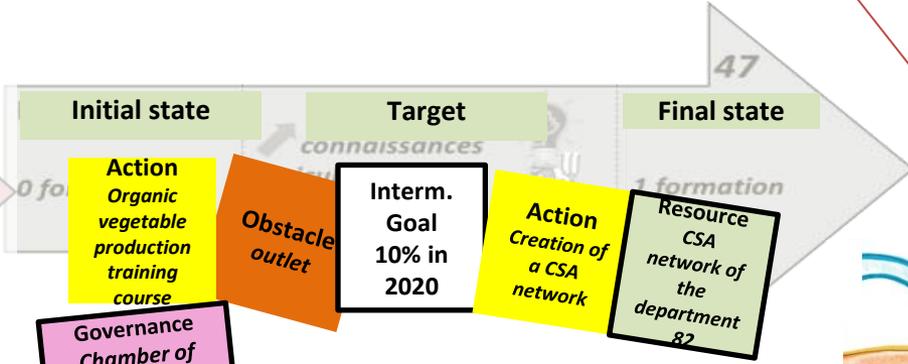
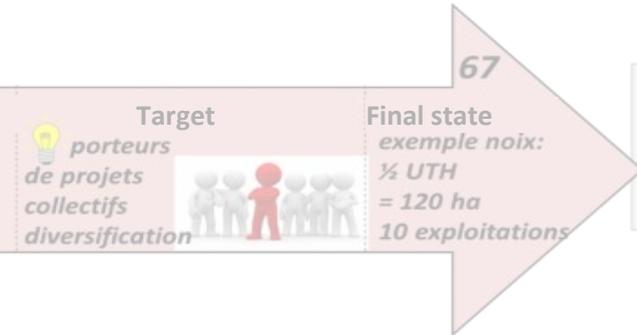
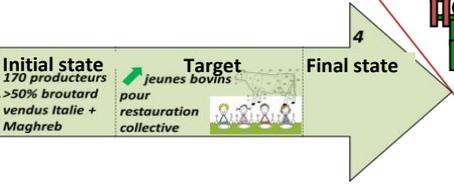
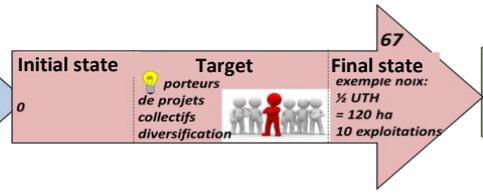
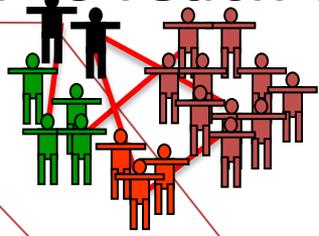
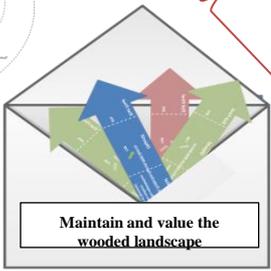
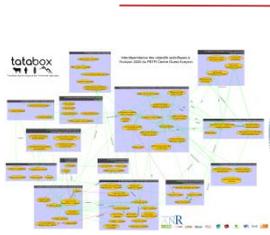


Which pathway to reach this target?

A diversity of methods and tools to go progressively into details on how to reach the targets



A diversity of methods and tools to go progressively into details on how to reach the targets



Convergence

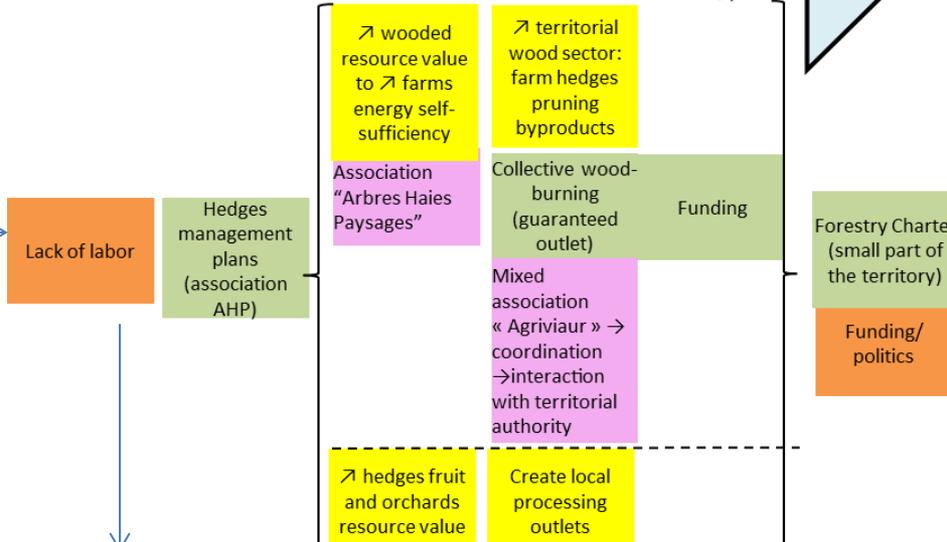
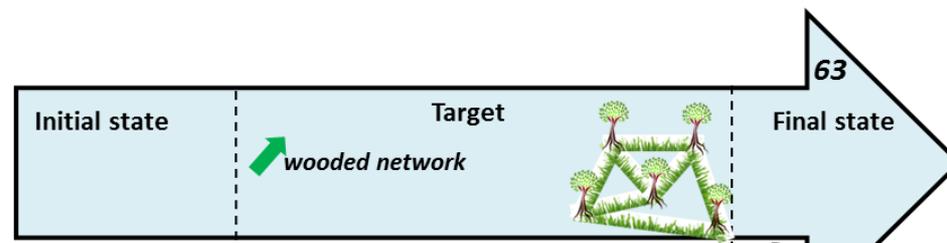


Dense outputs





Processing results to create useful tools for the territorial planning



Action plan

Target cluster	Semester jan-16		jan-17		jan-18	
	Target	jan-16	jan-17	jan-17	jan-18	jan-21
Maintain and value the wooded landscape	Create a regular wooded network between farms	-> wooded resource value to farms energy self-sufficiency	-> territorial wood sector: farm hedges pruning byproducts	-> wooded resource value to farms energy self-sufficiency	-> territorial wood sector: farm hedges pruning byproducts	-> wooded resource value to farms energy self-sufficiency
		Association "Arbres Haies Paysages"	Mixed association « Agrivieur » → coordination → interaction with territorial authority	Association "Arbres Haies Paysages"	Mixed association « Agrivieur » → coordination → interaction with territorial authority	Association "Arbres Haies Paysages"
		-> hedges fruit and orchards resource value	-Create local processing outlets	-> hedges fruit and orchards resource value	-Create local processing outlets	-> hedges fruit and orchards resource value
		Associations « Terres paysannes » and « Les amis du verger »	Create employment to manage fruit trees in a farm network	Associations « Terres paysannes » and « Les amis du verger »	Create employment to manage fruit trees in a farm network	Associations « Terres paysannes » and « Les amis du verger »
		-Create employment to manage tree fruits in a farm network	Start up	-Create employment to manage tree fruits in a farm network	Start up	-Create employment to manage tree fruits in a farm network
		Start up	Start up	Start up	Start up	Start up

References

- Berg, T., & Pooley, R. (2013). Rich Pictures: Collaborative Communication Through Icons. *System Practice and Action Research*, 26(4), pp361-376.
- Cash, D. W., Clark, W. C., Alcock, F., Dickson, N. M., Eckley, N., Guston, D. H., ... Mitchell, R. . (2003). Knowledge systems for sustainable development. In *Proceedings of the National Academy of Sciences of the United States of America* 100 (pp. 8086–8091).
- Checkland, P., & Poulter, J. (2006). *Learning for Action: A Short Definitive Account of Soft Systems Methodology and its Use, for Practitioners, Teachers and Students* (John Wiley).
- Duru, M., Therond, O., & Fares, M. (2015). Designing agroecological transitions; A review. *Agronomy for Sustainable Development*. <https://doi.org/10.1007/s13593-015-0318-x>
- Duru, M., Therond, O., Martin, G., Martin-Clouaire, R., Magne, M. A., Justes, E., ... Sarthou, J. P. (2015). How to implement biodiversity-based agriculture to enhance ecosystem services: a review. *Agronomy for Sustainable Development*, 35(4), 1259–1281. <https://doi.org/10.1007/s13593-015-0306-1>
- Grimble, R., & Wellard, K. (1997). Stakeholder methodologies in natural resource management: a review of principles, contexts, experiences and opportunities. *Agricultural Systems*, 55(2). Retrieved from <http://www.sciencedirect.com/science/article/pii/S0308521X97000061>
- Hill, S. B., & MacRae, R. J. (1995). Conceptual framework for the transition from conventional to sustainable agriculture. *Journal of Sustainable Agriculture*, 7(1), 81–87.
- Horlings, L. G., & Marsden, T. K. (2011). Towards the real green revolution? Exploring the conceptual dimensions of a new ecological modernisation of agriculture that could “feed the world” *Global Environmental Change*, 21(2), 441–452. <https://doi.org/10.1016/j.gloenvcha.2011.01.004>
- Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141(10), 2417–2431. <https://doi.org/10.1016/j.biocon.2008.07.014>
- Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., ... Stringer, L. C. (2009). Who’s in and why? A typology of stakeholder analysis methods for natural resource management. *Journal of Environmental Management*, 90(5), 1933–1949. <https://doi.org/10.1016/j.jenvman.2009.01.001>
- Vinck, D. (2009). De l’objet intermédiaire à l’objet-frontière, Vers la prise en compte du travail d’équipement. *Revue D’anthropologie Des Connaissances*, 3(1), 51–72.
- Watson, R. T., Rosswall, T., Steiner, A., Töpfer, K., Arico, S., & Bridgewater, P. (2005). *Ecosystems and human well-being*. (R. T. Watson, T. Rosswall, A. Steiner, K. Töpfer, S. Arico, & P. Bridgewater, Eds.), *Ecosystems* (Vol. 5). World Resources Institute. <https://doi.org/10.1196/annals.1439.003>