



# **PEPR FORESTT**

## **Projet REGE-ADAPT**

PC1

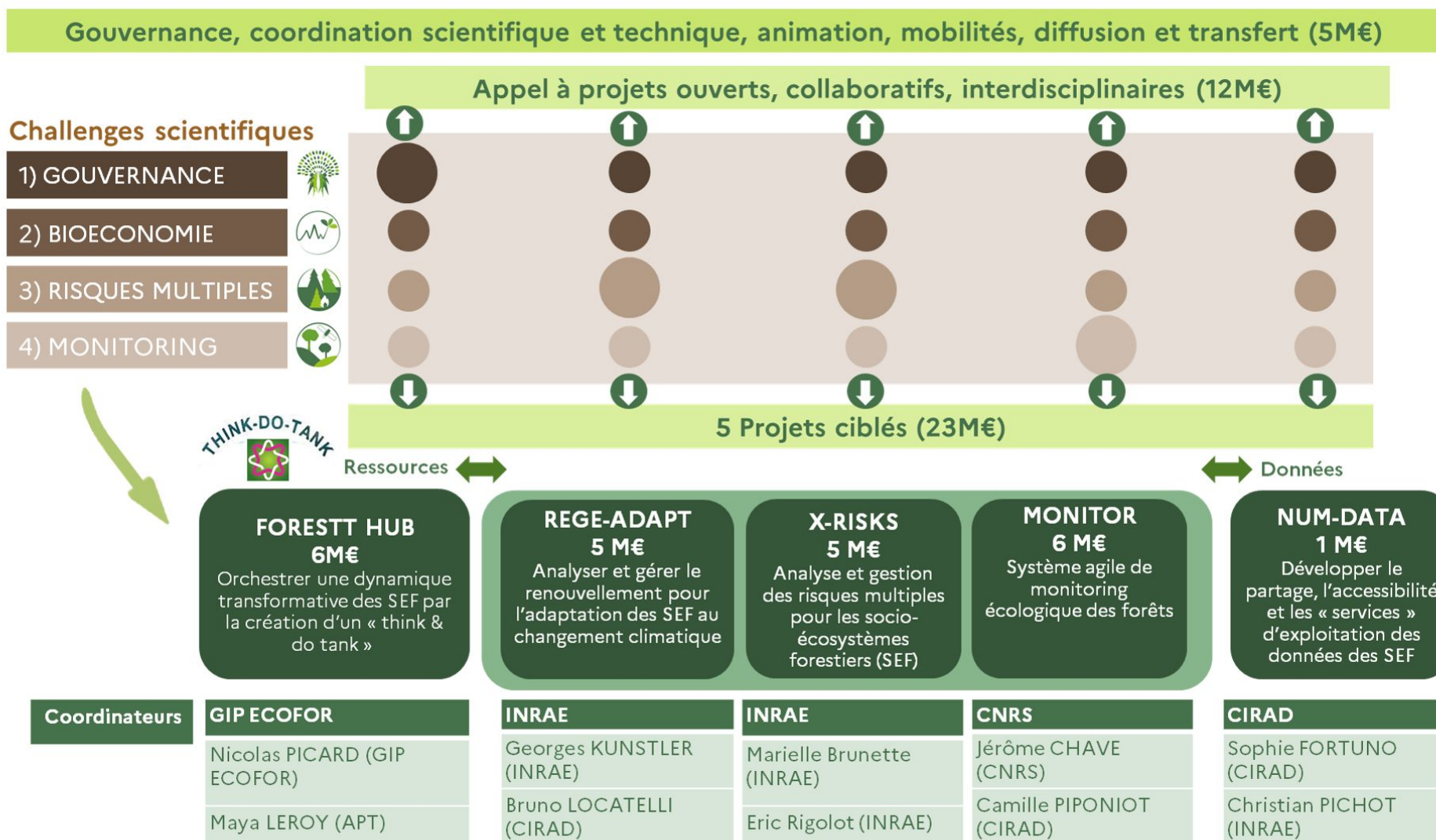
**Forest regeneration and the adaptation of forest socio-ecosystems to climate change**

Georges Kunstler & Bruno Locatelli

3 avril 2024

# PEPR FORESTT

## Forêts et changements globaux : systèmes socio-écologiques en transition



**Pilotage :** INRAE

Christophe Plomion & Arnaud Sergent

**Co-pilotage :** CIRAD et CNRS

**Partenaires éligibles:** ONR, ONF, CNPF, IGN, GIP ECOFOR

**Partenaires non-académiques**

**Durée :** 6 ans (2024-2030)

**Budget :** 40 M€

- 5 Projets Ciblés (23M€)
- 1 appels à projets ouverts (12M€)
- Pilotage et gouvernance (5M€)

# PEPR FORESTT

Forêts et changements globaux : systèmes socio-écologiques en transition

4



Logo of the French Republic (République Française) with the motto "Liberté, Égalité, Fraternité".

Logo of the France 2030 Programme de Recherche Résilience des Forêts.

Logo of INRAE.

Logo of ANR (Agence Nationale de la Recherche).

**À VOS AGENDAS !**  
**Lancement Scientifique**

Programme de Recherche  
**F O R E S T T**

**18 & 19 SEPTEMBRE 2024**

Ouverture des inscriptions en avril 2024 sur <https://www.pepr-forestt.org/>

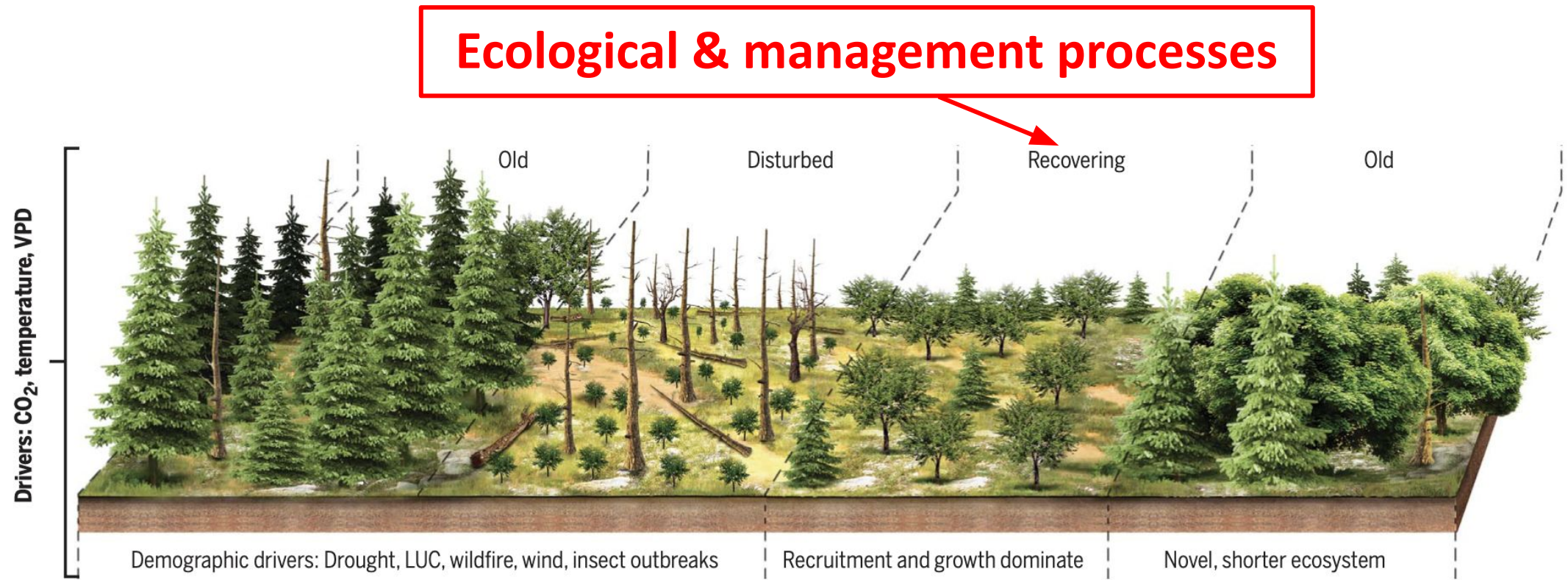
# PC1 REGE-ADAPT

**Forest regeneration and the adaptation of forest socio-ecosystems to climate change**



# Forest regeneration to adapt to the 21<sup>st</sup> century climate

- Forest regeneration after natural disturbances and harvesting



➔ **future forests**

# Forest regeneration & societal choices



Pascal Xicluna / agriculture.gouv.fr

03 décembre 2020 Communiqué de presse

## FranceRelance : le renouvellement forestier est lancé

plan de relance forêt changement climatique

Partager la page



Xavier Remongin/agriculture.gouv.fr

26 juillet 2023 Info +

## « Objectif Forêt » : le rapport du comité spécialisé « gestion durable des forêts » en vue de l'élaboration du plan national de renouvellement forestier

forêt changement climatique filière bois France Nation verte carbone

# Regeneration pathways to adapt to 21st climate

## Manage regeneration for

- Foster complexity
- Adapted species to CC
- Assisted gene flow
- Continuous-cover management
- Landscape connectivity

=> plantation & natural regeneration



# Regeneration pathways impacts



- Biodiversity & soil conservation
- Nature Contribution to People NCP (wood production, scenic beauty, watershed regulation ....)





# Regeneration pathways to adapt to 21st climate



- Governance of regeneration by public and private sectors
- Influence of policies on regeneration pathways

# Rappel : REGE-ADAPT

Qui sommes-nous?

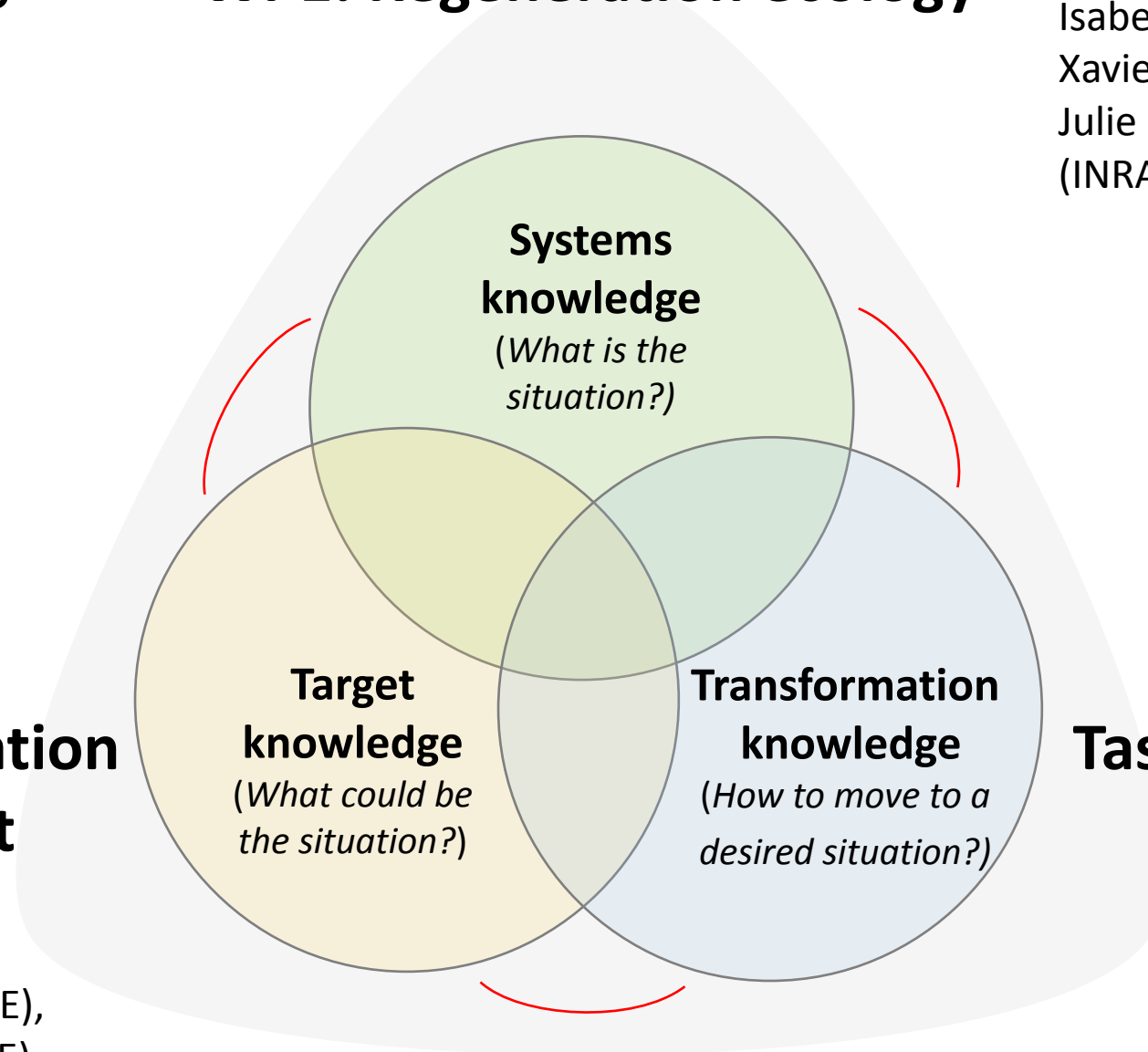
## WP1: Regeneration ecology

Georges Kunstler (INRAE)  
Bruno Locatelli (CIRAD)

Lisa Laurent (INRAE),  
Isabelle Marechaux (INRAE),  
Xavier Morin (CNRS),  
Julie Gauzere & Ivan Scotti  
(INRAE)

## Task 2: Regeneration management

Julie Gauzere (INRAE),  
Lisa Laurent (INRAE),  
Benjamin Brachi (INRAE),  
Catherine Collet (INRAE),  
Ophélie Ronce (CNRS)

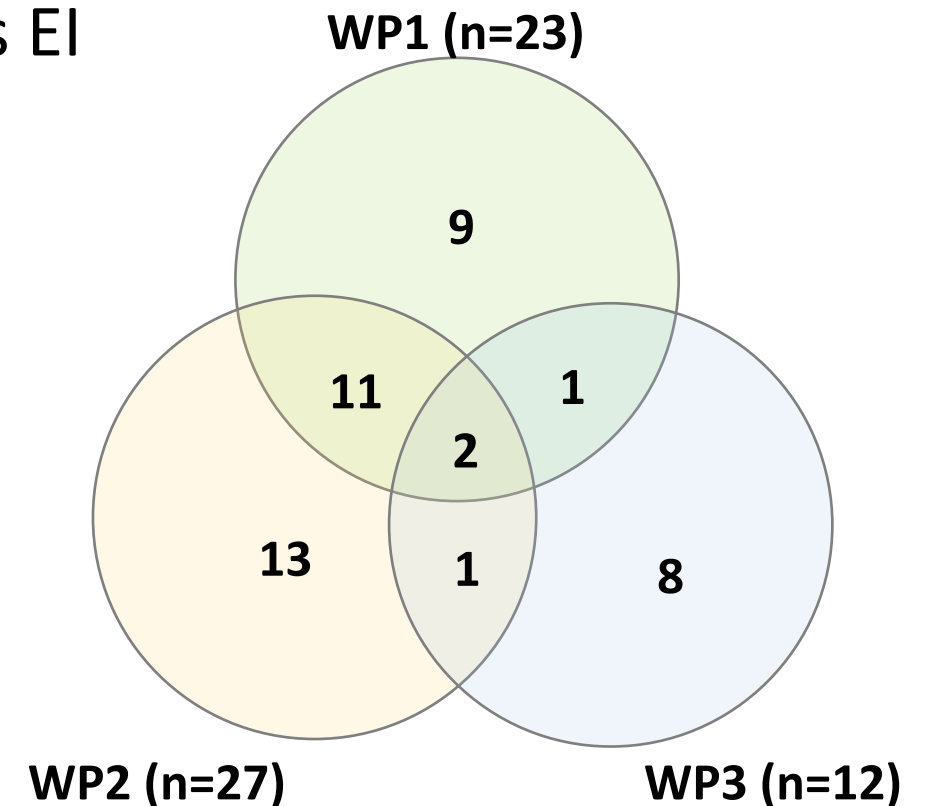


## Task 3: Regeneration governance

Laurent Berges (INRAE),  
Sandrine Allain (INRAE),  
Arthur Perrotton (CIRAD)

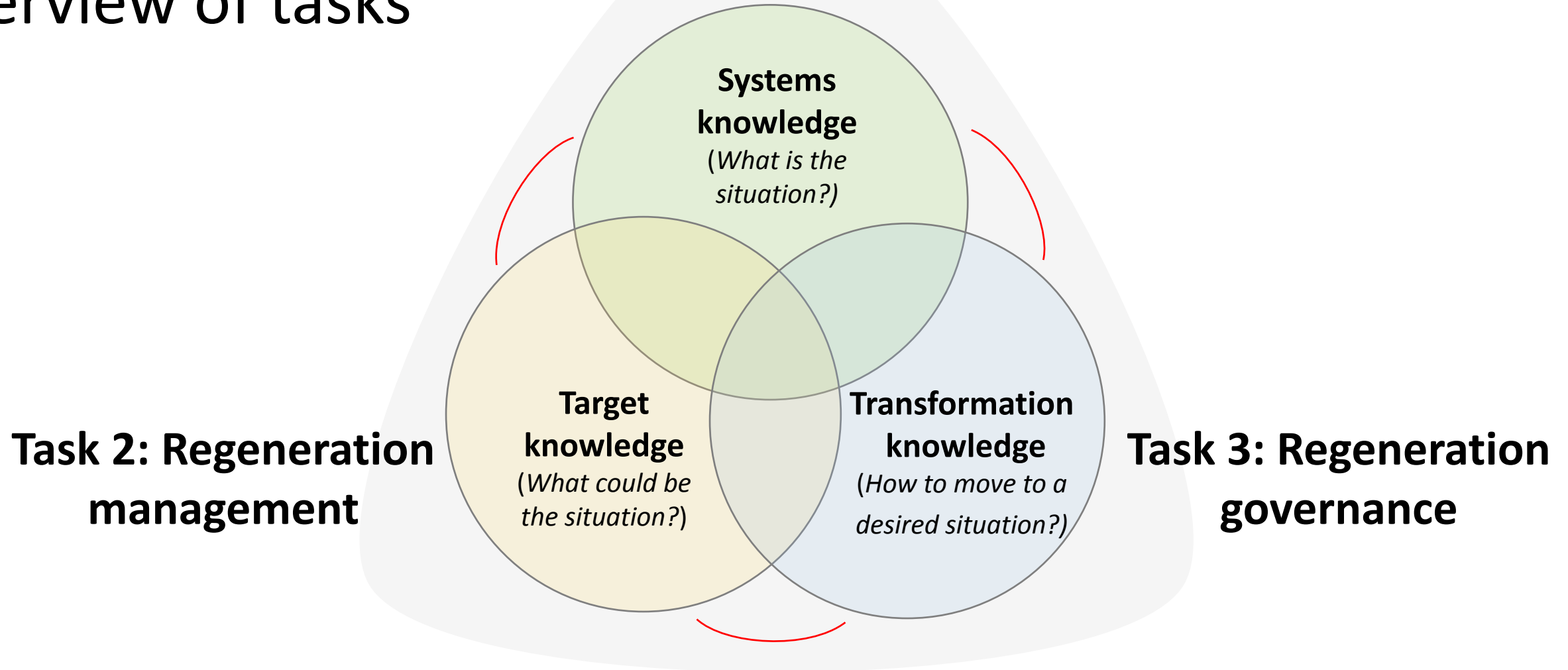
# Le développement de REGE-ADAPT

- Webinaires de présentation fin septembre et début octobre
  - 40 et 82 participants
- Appel à Expressions d'Intérêt clôturé le 31 octobre 2023
  - 45 réponses
- Travail entre co-animateurs pour organiser les EI
- Structurations en tâches dans 3 WPs  
=> co-animateurs & porteurs d'EI



REGE-ADAPT  
=> preliminary  
overview of tasks

**WP1: Regeneration ecology**



## WPO: Synergies

Task 0.1: Scientific  
animation and  
synergies

Task 0.2: Coordination,  
communication,  
reporting

## WP1: Ecology

Task 1.1: Seed  
production and early  
stages of seedling  
establishment: A  
monitoring network

Task 1.2: Monitoring  
of advanced natural  
regeneration

Task 1.3: Adaptive  
potential in natural  
regeneration

Task 1.4:  
Implementing robust  
regeneration modules  
in forest models

## WP2: Management

Task 2.1: Drivers of  
plantation  
performance

Task 2.2: Hybridisation  
between local and  
introduced  
provenances in  
assisted gene flow

Task 2.3: Species  
diversity in plantation  
and natural  
regeneration

Task 2.4: Network of  
experiments on  
factors impeding  
natural regeneration

## WP3: Governance

Task 3.1: Impacts of  
regeneration choices  
on biodiversity and  
NCPs

Task 3.2: The politics  
and economics of  
forest regeneration

Task 3.3: Forest  
regeneration in the  
making - diversity of  
decisions and  
collective actions

Task 3.4:  
Co-constructing forest  
regeneration pathway

## WPO: Synergies

Task 0.1: Scientific  
animation and  
synergies

Task 0.2: Coordination,  
communication,  
reporting

## WP1: Ecology

Task 1.1: Seed  
production and early  
stages of seedling  
establishment: A  
monitoring network

Task 1.2: Monitoring  
of advanced natural  
regeneration

Task 1.3: Adaptive  
potential in natural  
regeneration

Task 1.4:  
Implementing robust  
regeneration modules  
in forest models

## WP2: Management

Task 2.1: Drivers of  
plantation  
performance

Task 2.2: Hybridisation  
between local and  
introduced  
provenances in  
assisted gene flow

Task 2.3: Species  
diversity in plantation  
and natural  
regeneration

Task 2.4: Network of  
experiments on  
factors impeding  
natural regeneration

## WP3: Governance

Task 3.1: Impacts of  
regeneration choices  
on biodiversity and  
NCPs

Task 3.2: The politics  
and economics of  
forest regeneration

Task 3.3: Forest  
regeneration in the  
making - diversity of  
decisions and  
collective actions

Task 3.4:  
Co-constructing forest  
regeneration pathway

## WPO: Synergies

Task 0.1: Scientific  
animation and  
synergies

Task 0.2: Coordination,  
communication,  
reporting

## WP1: Ecology

Task 1.1: Seed  
production and early  
stages of seedling  
establishment: A  
monitoring network

Task 1.2: Monitoring  
of advanced natural  
regeneration

Task 1.3: Adaptive  
potential in natural  
regeneration

Task 1.4:  
Implementing robust  
regeneration modules  
in forest models

## WP2: Management

Task 2.1: Drivers of  
plantation  
performance

Task 2.2: Hybridisation  
between local and  
introduced  
provenances in  
assisted gene flow

Task 2.3: Species  
diversity in plantation  
and natural  
regeneration

Task 2.4: Network of  
experiments on  
factors impeding  
natural regeneration

## WP3: Governance

Task 3.1: Impacts of  
regeneration choices  
on biodiversity and  
NCPs

Task 3.2: The politics  
and economics of  
forest regeneration

Task 3.3: Forest  
regeneration in the  
making - diversity of  
decisions and  
collective actions

Task 3.4:  
Co-constructing forest  
regeneration pathway

# PC1 REGE-ADAPT

**Forest regeneration and the adaptation of forest socio-ecosystems to climate change**

