JOURNÉES SCIENTIFIQUES

29
NOV
2022

# SOLUTIONS FONDÉES SUR LA NATURE

Journée SFN organisée en partenariat avec :

# Adaptations transformatives basées sur la nature – the Transformative Adaptation Research Alliance (TARA)

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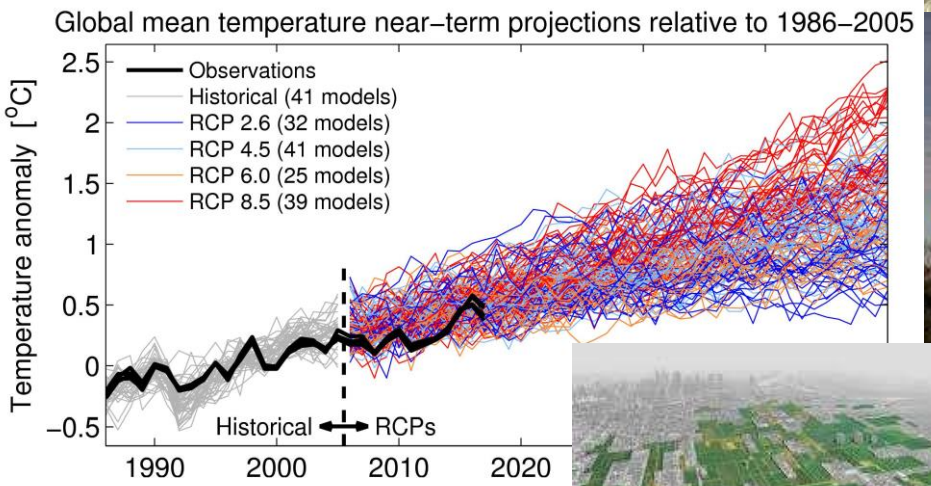
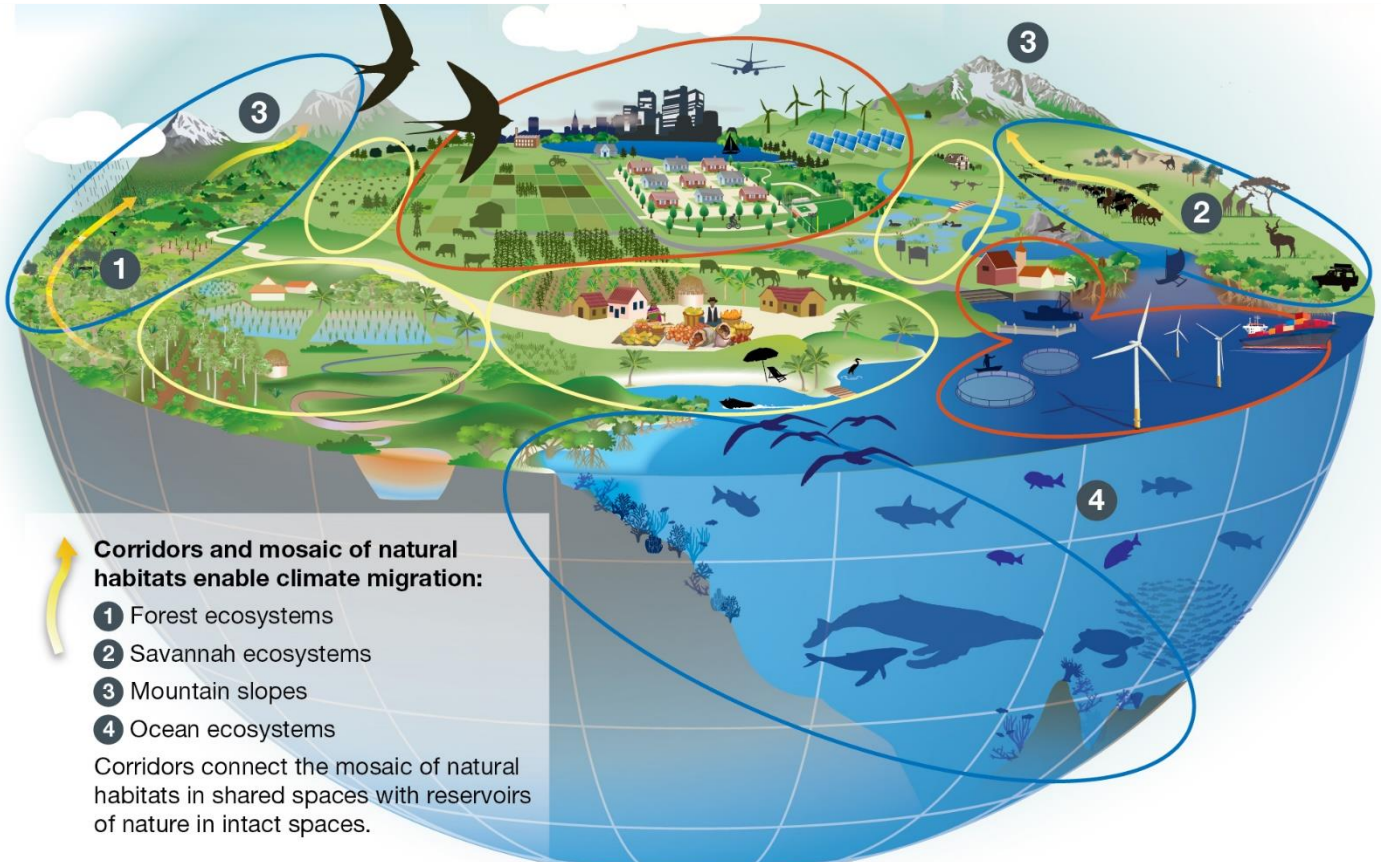
# Challenges of the joint climate and biodiversity crises



# Integrating conservation, climate and societal actions

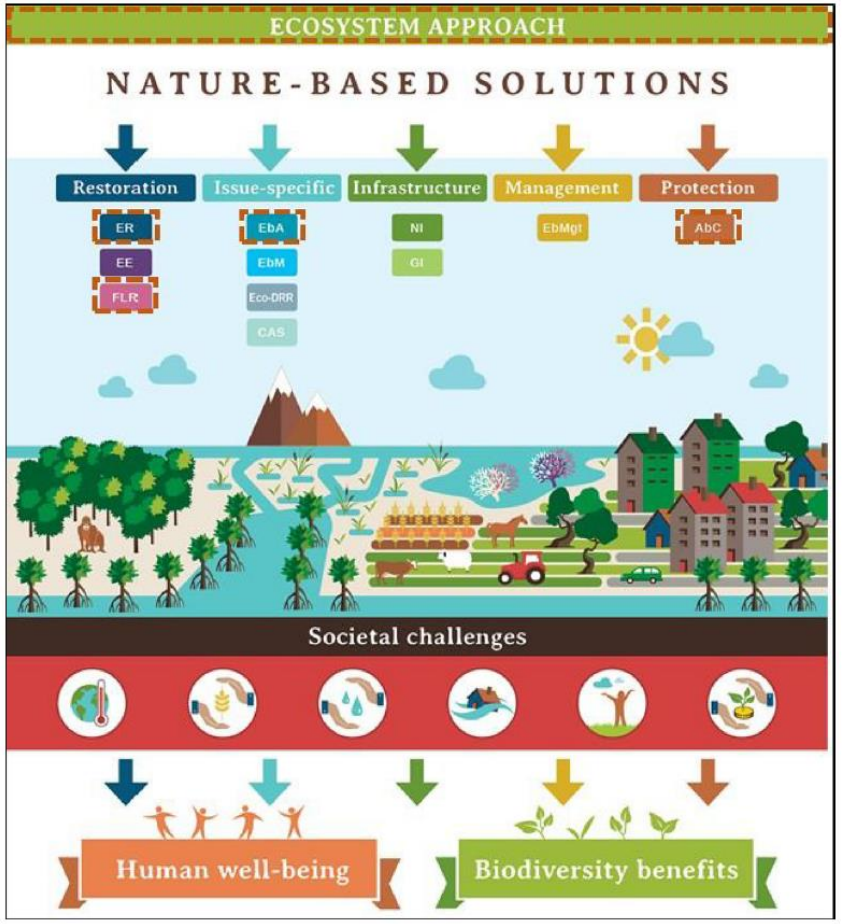
**Treating climate, biodiversity, and human society as coupled systems is key to successful outcomes. To be successful, conservation and climate actions would go hand in hand across landscapes, in cities as well as in rural areas.**

When climate and conservation actions also take people's needs into consideration, benefits and outcomes for climate and biodiversity protection as well as humans can be maximized.



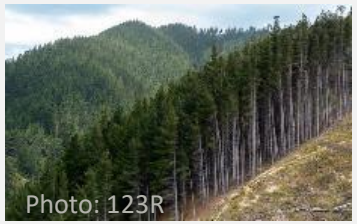

*Pörtner et al. 2021*

# Nature-based Solutions for climate change



# A broad array of Nature's Contributions to Adaptation

## Climate change mitigation



## Risk regulation

## Resilience and transformability

## New values and economic activities

*Lavorel et al. Phil. Transc. Roy. Soc. B 2020*
*Colloff et al. Ecosystems & People 2020*

# Example: NCA for agricultural transformation

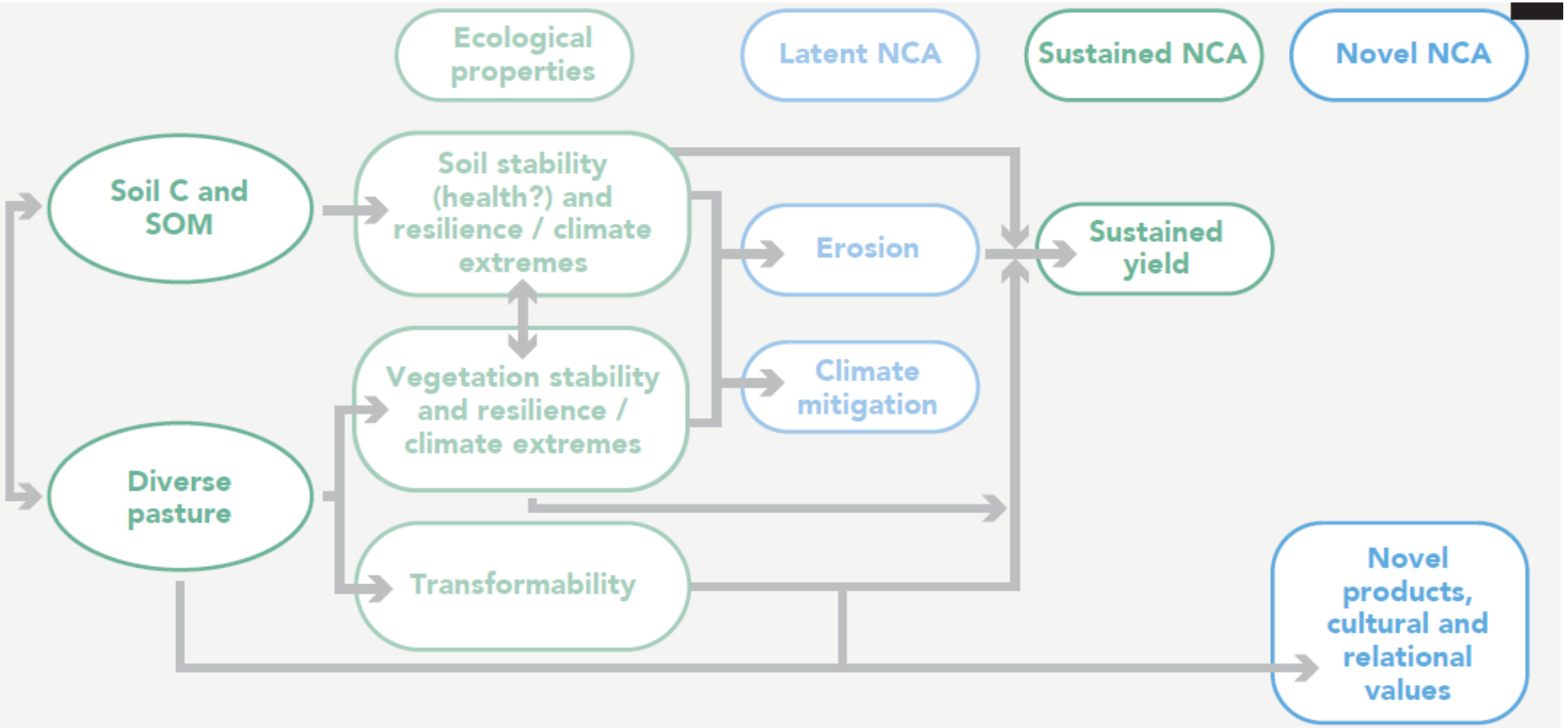
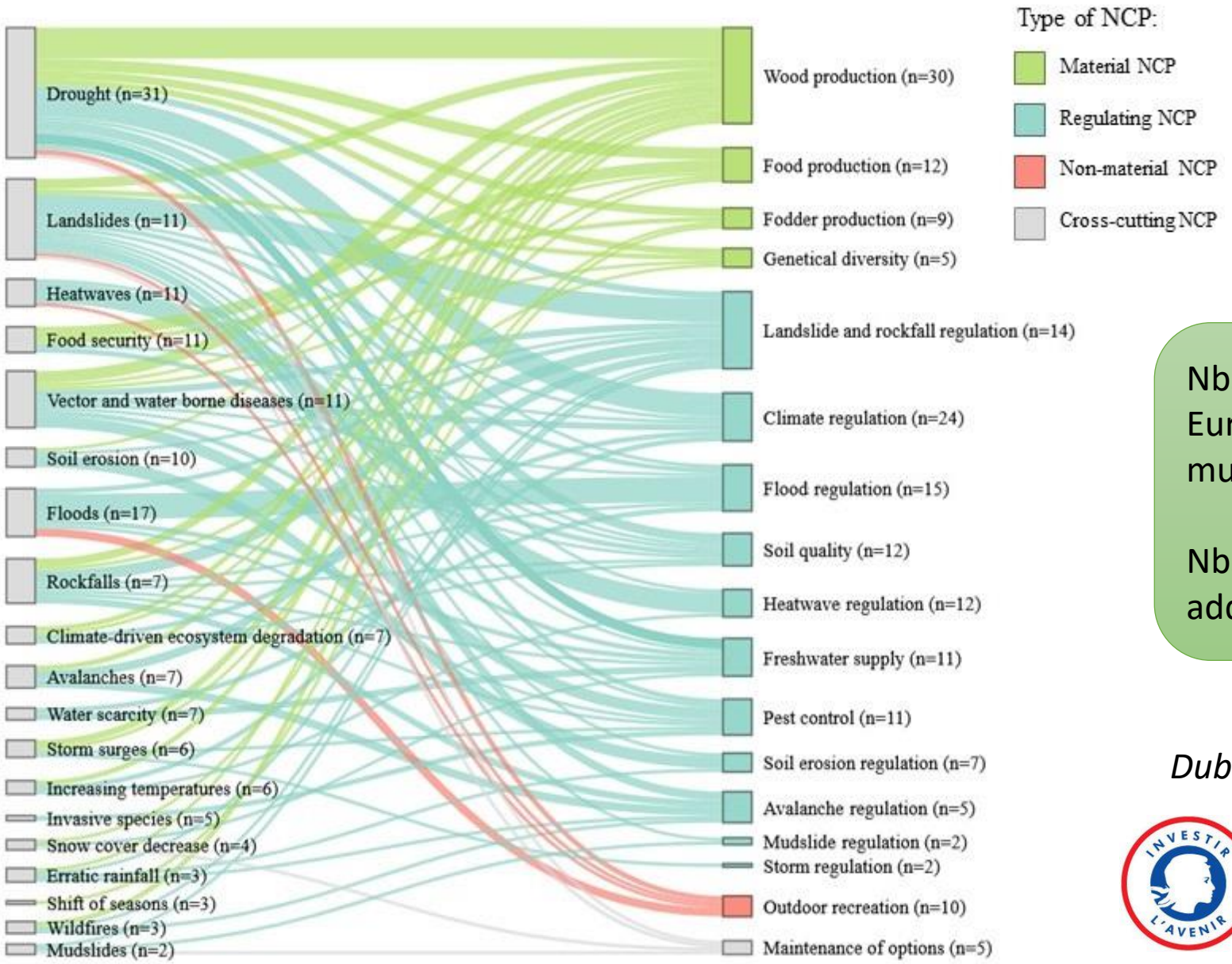



**FIGURE 2:** Examples of the multiple adaptation services supported by pasture diversification and soil management in regenerative agriculture

*Lavorel & Grelet 2021*

# Nature-based Solutions are multifunctional




PORTAL

NbS to climate hazards in the European Alps are highly multifunctional:

NbS targeting drought aim to address 19 different NCP

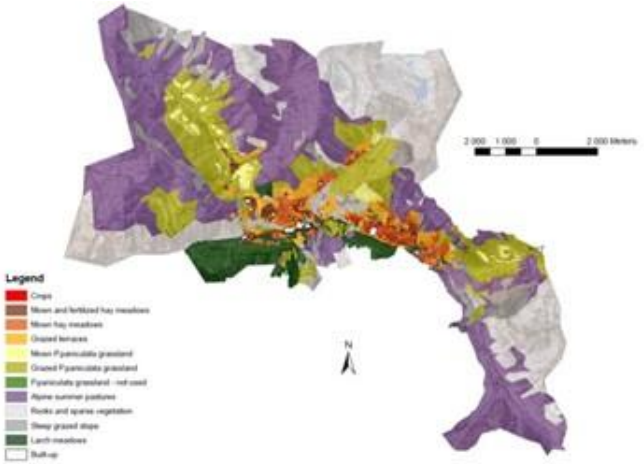
*Dubo et al. Reg. Env. Change 2022*

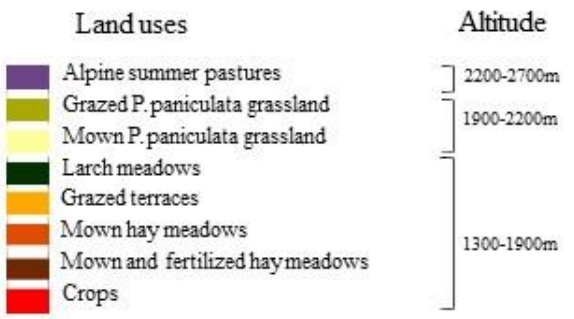
INVESTIR L'AVENIR

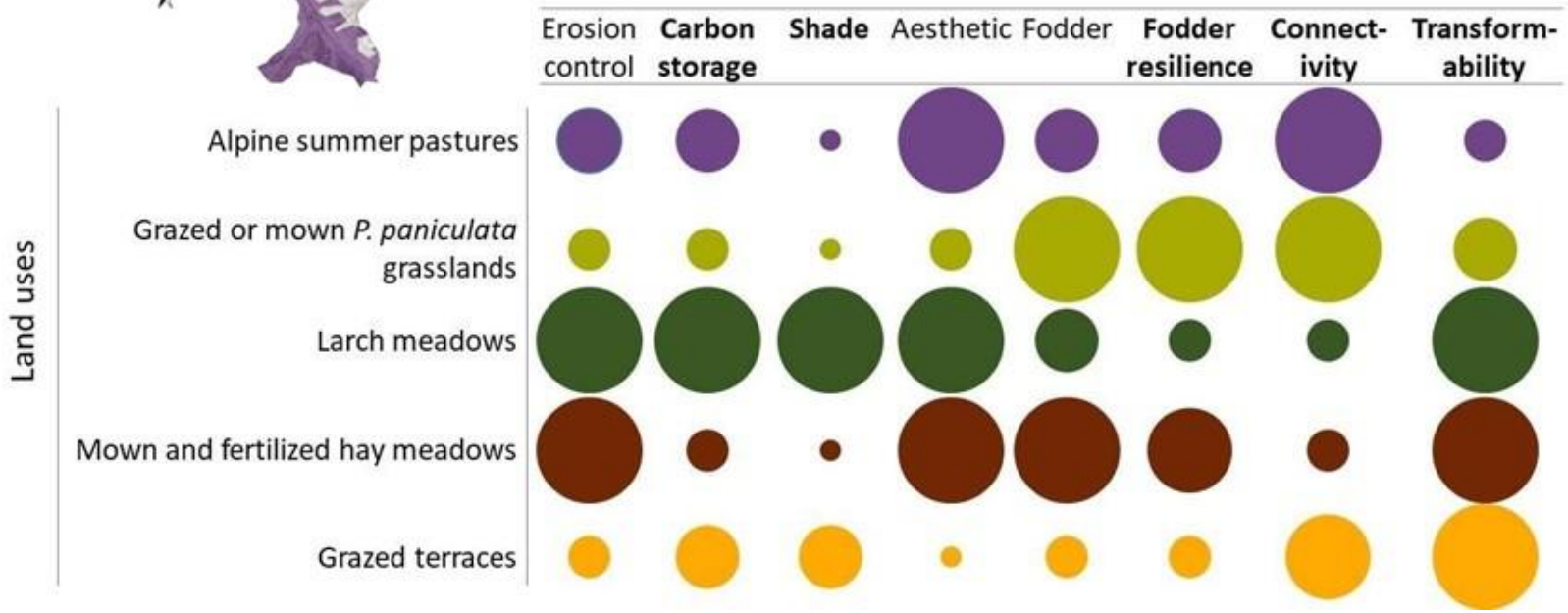
AGENCE NATIONALE DE LA RECHERCHE ANR

MAKE OUR PLANET GREAT AGAIN

# Nature-based adaptation takes place within landscapes and regions






*Lavorel et al. Environmental Science & Policy 2019*

# Co-producing nature-based transformation with local communities

## WHY ?

Research projects based on the expertise, knowledge, experience and desired futures of local and regional actors

## WHO ?

A broad diversity of actors living or working in the territory

## HOW ?

**Multiple methods**

- Workshops to create and share knowledge
- Interview for more in depth knowledge
- Working groups on specific topics
- Serious game to deconnect from reality and open a space for deliberation

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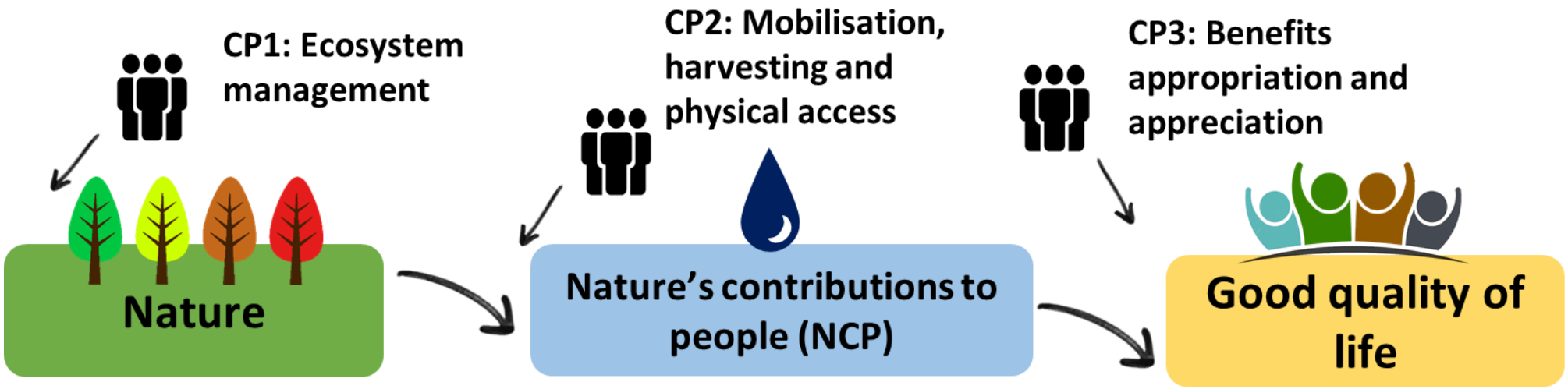
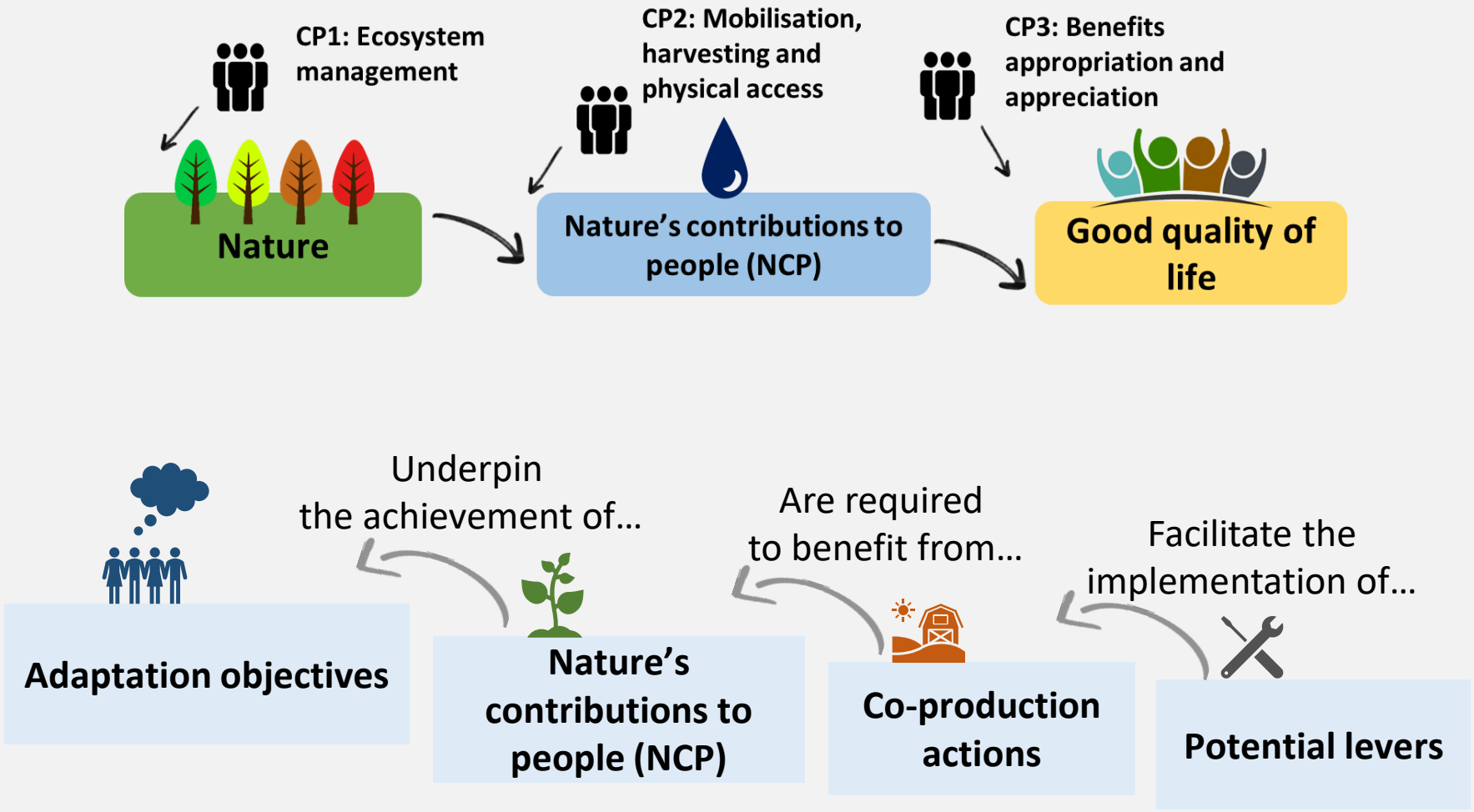
# Nature's Contributions to Adaptation require co-production by human interventions and capitals




*Bruley et al. Ecology & Society 2021*

# Pathways for nature-based adaptation

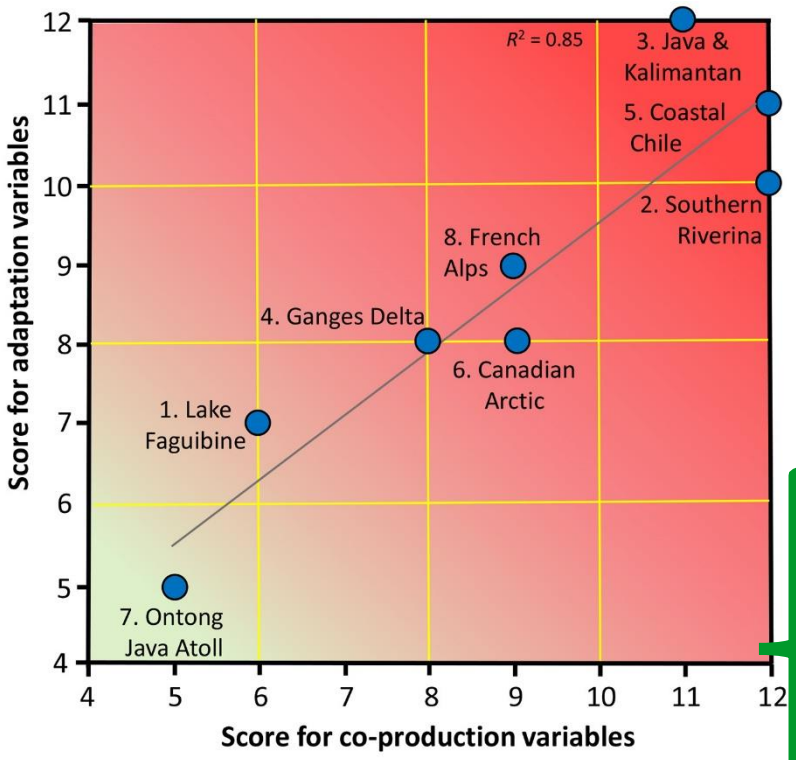


*Bruley et al. Environmental Science & Policy 2021*

# Co-production as a key lever for transformation

- Hypothesis: more transformative responses require more human input (Fedele et al. Env. Sci. Pol. 2019)

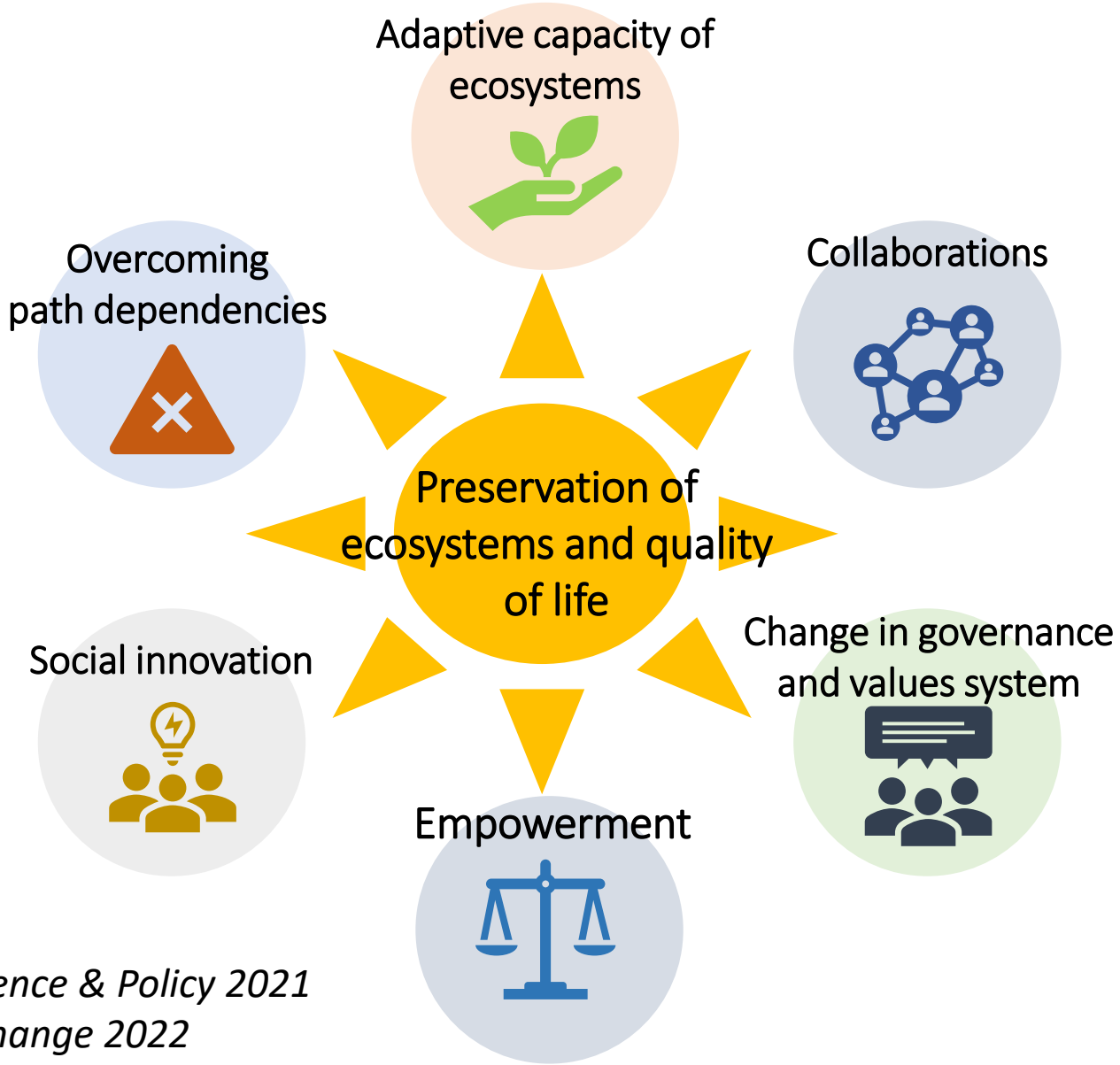
- **Degree of adaptation**
- **Diversity of NCA**
- **NCA and adaptation enabled by decision-context**
- **Adaptability to future climate change**




- **Participative learning & co-production**
- **Collective vision**
- **Power equality**
- **Coordinated governance**

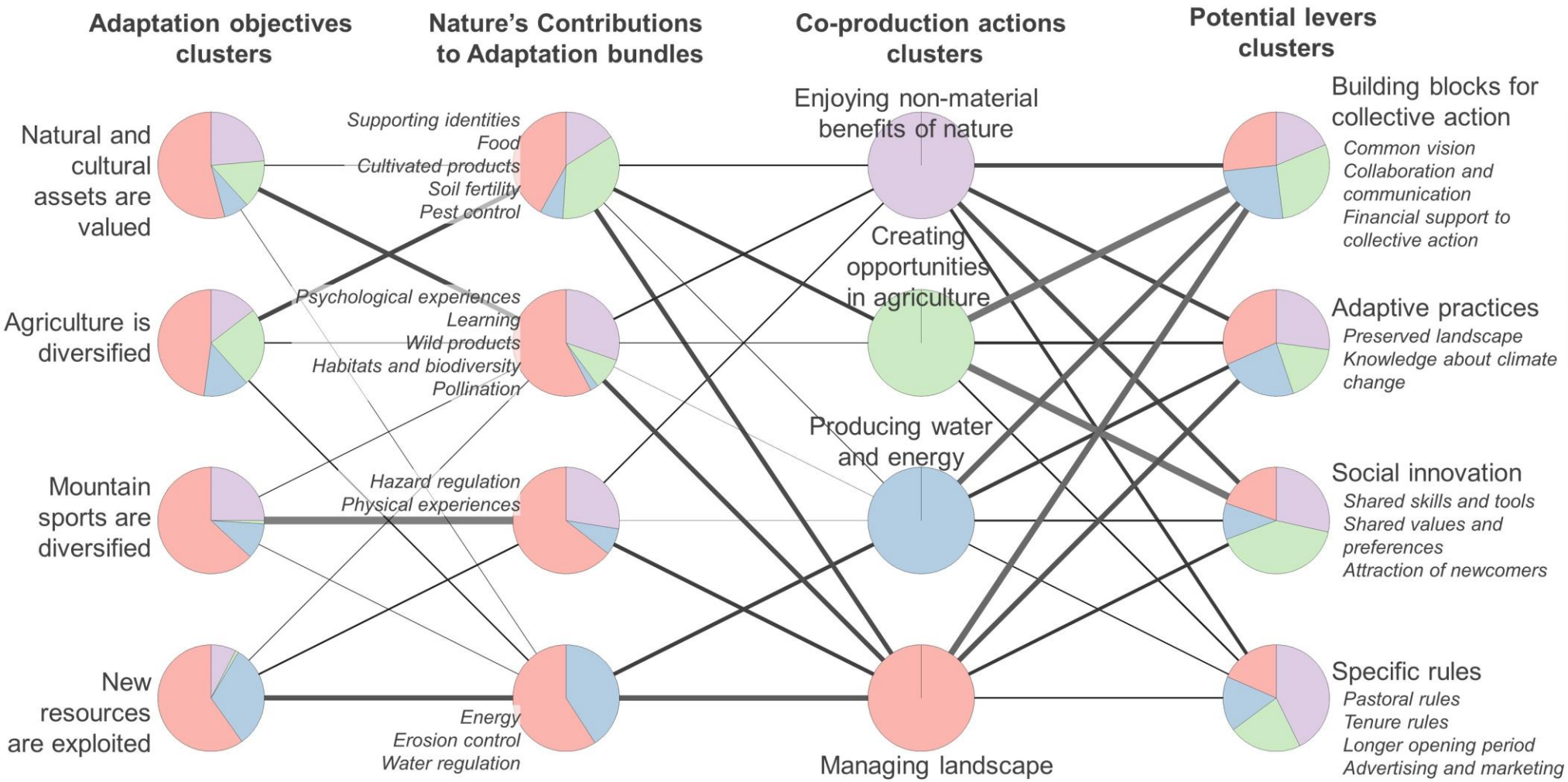
*Colloff et al. Ecosystems & People 2020*

# Levers for nature-based adaptation pathways



*Bruley et al. Environmental Science & Policy 2021*
*Bergeret & Lavorel Reg. Env. Change 2022*

# Nature-based pathways to adaptation



*Bruley et al. Environmental Science & Policy 2021*

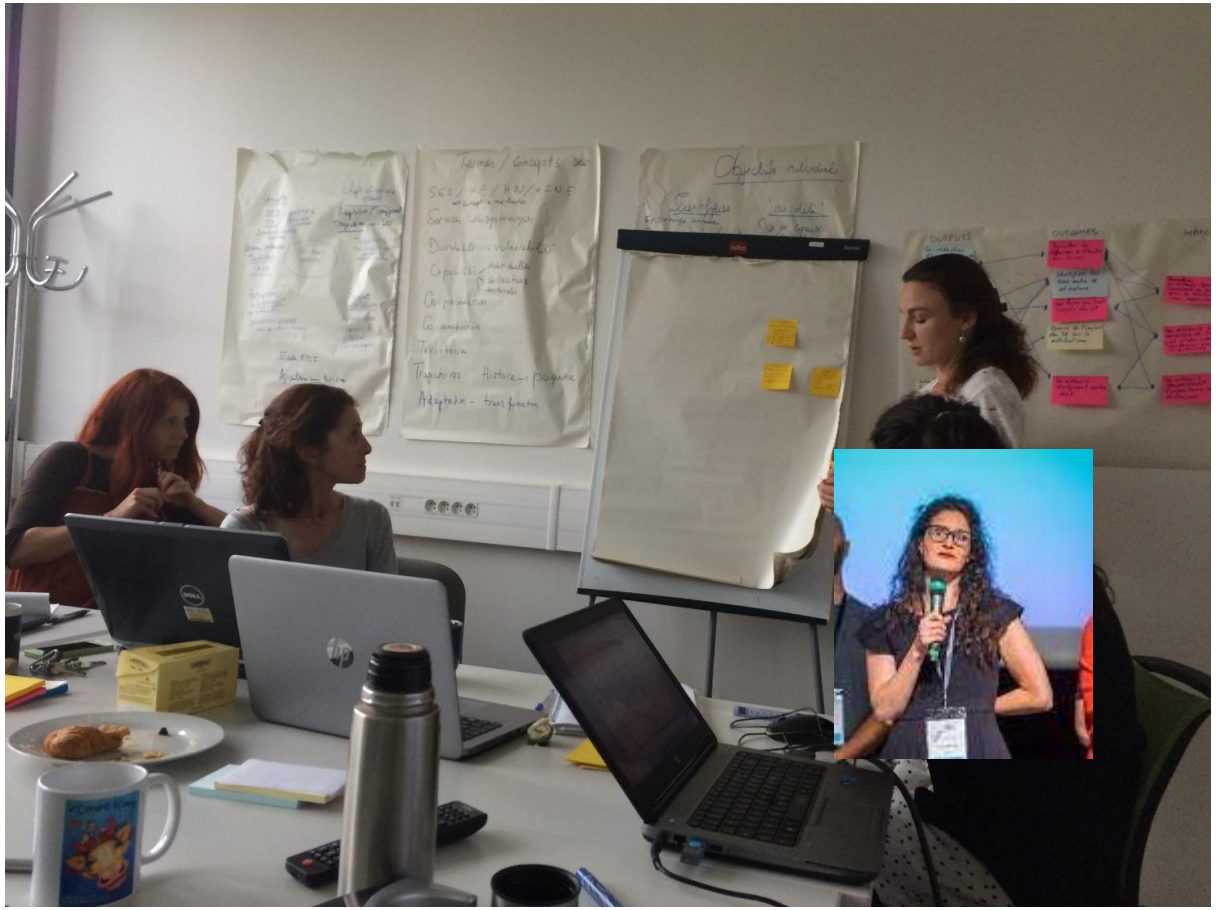
# Conclusion

- Biodiversity and climate share multiple challenges. Their common ultimate causes need to be resolved before all.
- Biodiversity offers multiple solutions for climate change mitigation and adaptation that can be reached by conserving, restoring and managing ecosystems.
- Nature-based mitigation and adaptation trajectories are about how people work with nature, using observations and knowledge.

# Conclusion

- La biodiversité et le climat partagent de nombreux défis. Il est essentiel de résoudre leurs causes profondes qui sont communes.
- La biodiversité offre de multiple solutions pour l’atténuation et l’adaptation au changement climatique qui peuvent être atteintes par la conservation de la nature, la restauration et la gestion des écosystèmes.
- Les trajectoires d’atténuation et d’adaptation basées sur la nature ce sont comment les humains travaillent avec les écosystèmes, sur la base des observations et des connaissances.

# Merci pour votre attention et pour vos questions!



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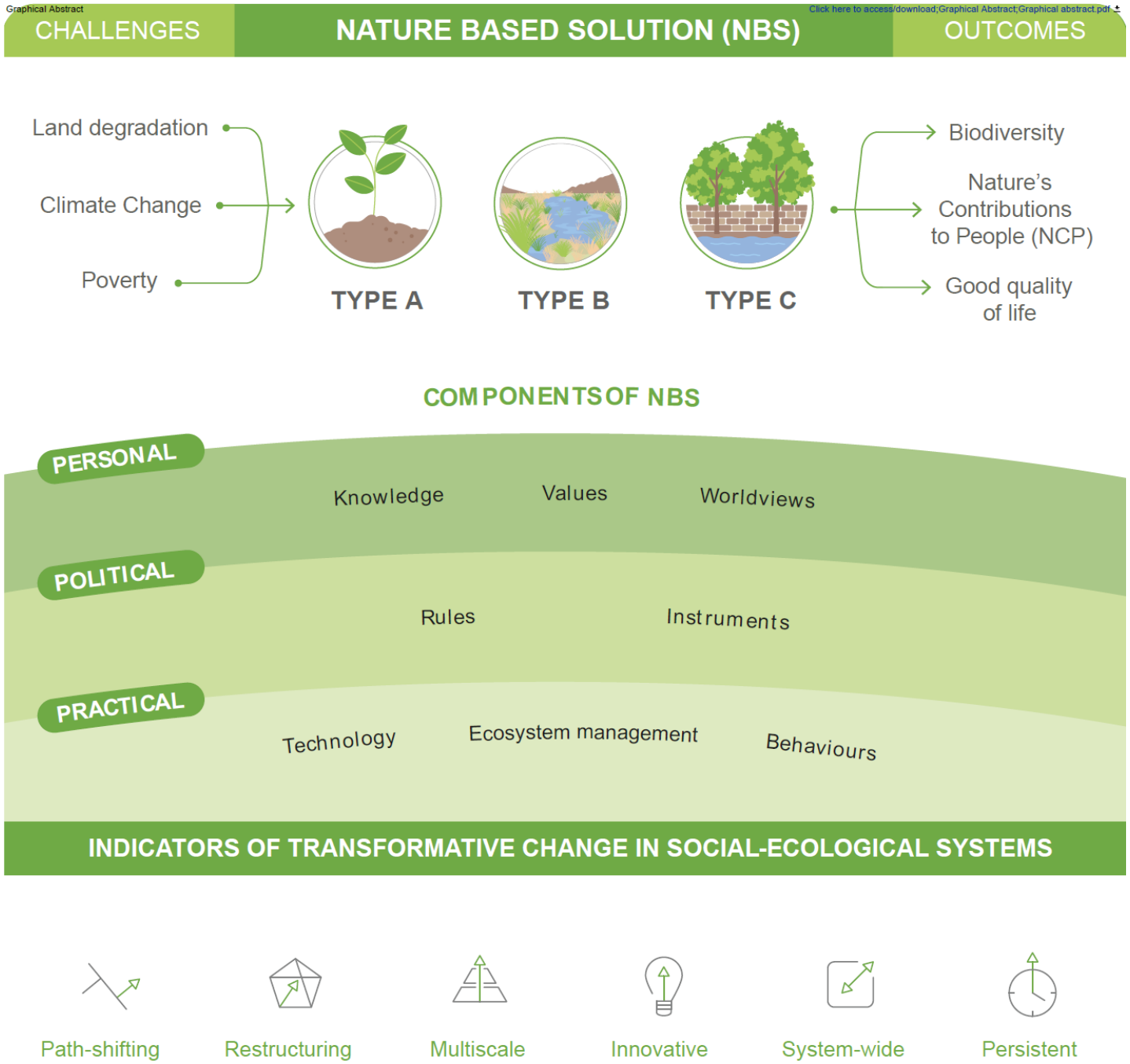
# Assessing the nature and effectiveness of local nature-based solutions




Palomo et al. One Earth 2021