



CLIMB-FOREST

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CLIMB-FOREST project: Holistic account of forest climate effects from afforestation and modified management

Alberto Vilagrosa¹, Svein Solberg, Morgane Merlin, Luna Morcillo, Víctor Santana, Teresa Sauras, Jan Krejza, Benoît de Guerry, Barry Gardiner, Jaroslaw Socha, Luiza Tyminski (Participants WP5)

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¹ CEAM. Valencia

November 8-10, 2023, LIFE RED BOSQUES CLIMA



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101059888



CLIMB-FOREST busca alternativas de manejo para que el sector forestal mitigue el cambio climático en toda Europa, teniendo en cuenta la preservación de la biodiversidad, los servicios ecosistémicos, la bioeconomía, los factores socioeconómicos, el uso de productos madereros de larga vida y los limitantes para realizar cambios.



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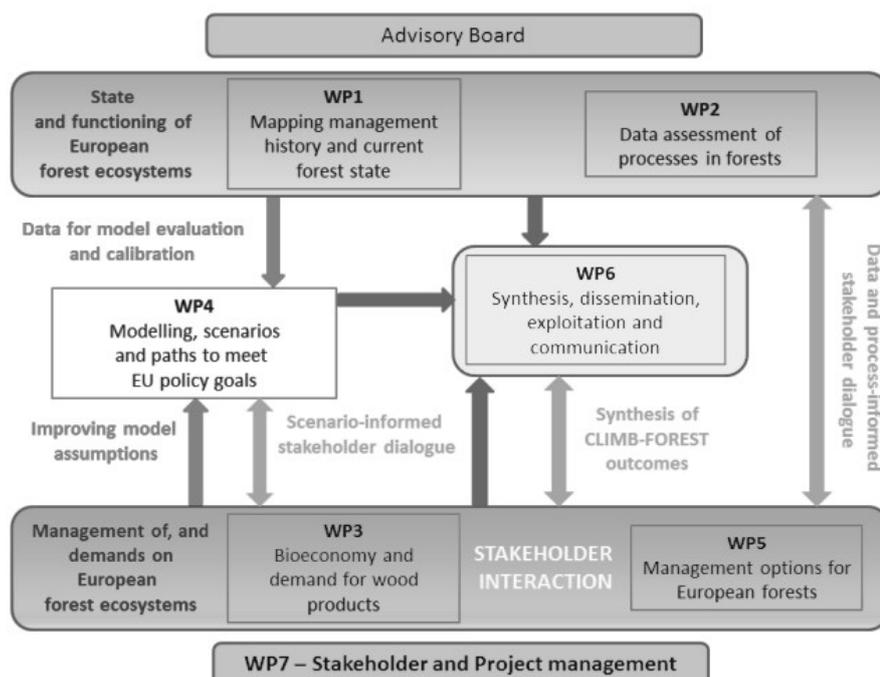


- EU H2020 Project
- Coordinator: Adam Kristensson (ULUND)
- Project period: 1.10.2022 – 31.3.2027
- Budget: 6 M€
- 18 partners from 10 countries



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General Project Structure

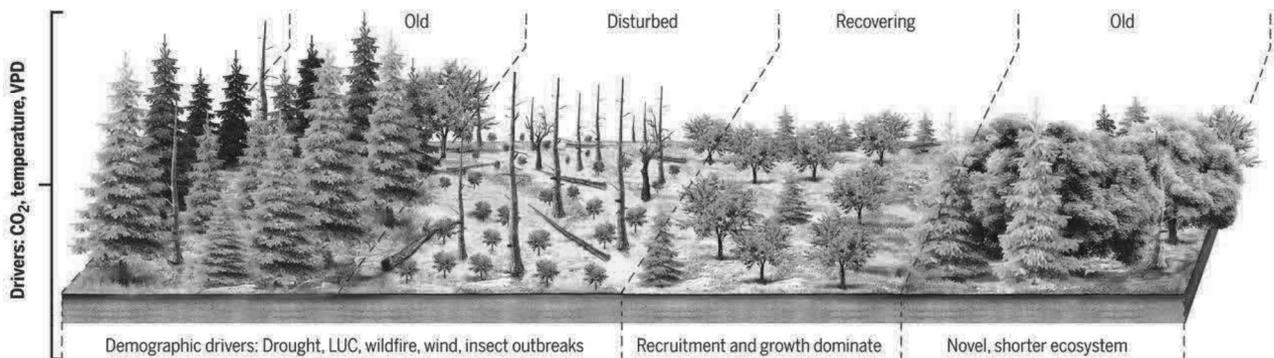


WP5. Field site visits, stakeholder involvement

Analizar sobre el terreno técnicas de manejo forestal y adecuarlas a los tiempos actuales y a las necesidades actuales.



“...global forests are tending toward younger stands with faster turnover as old-growth forest with stable dynamics are dwindling.”



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REVIEW f t in 📧 ✉

Pervasive shifts in forest dynamics in a changing world

NATE G. MCDOWELL, CRAIG D. ALLEN, KRISTINA ANDERSON-TEIXEIRA, BRIAN H. AIKEMA, BEN BOND-LAMBERTY, LOUISE CHINI, JAMES S. CLARK, MICHAEL DIETZE, CHARLOTTE GROSSIORD, I. J. CHONGGANG XU, +14 authors [Authors Info & Affiliations](#)

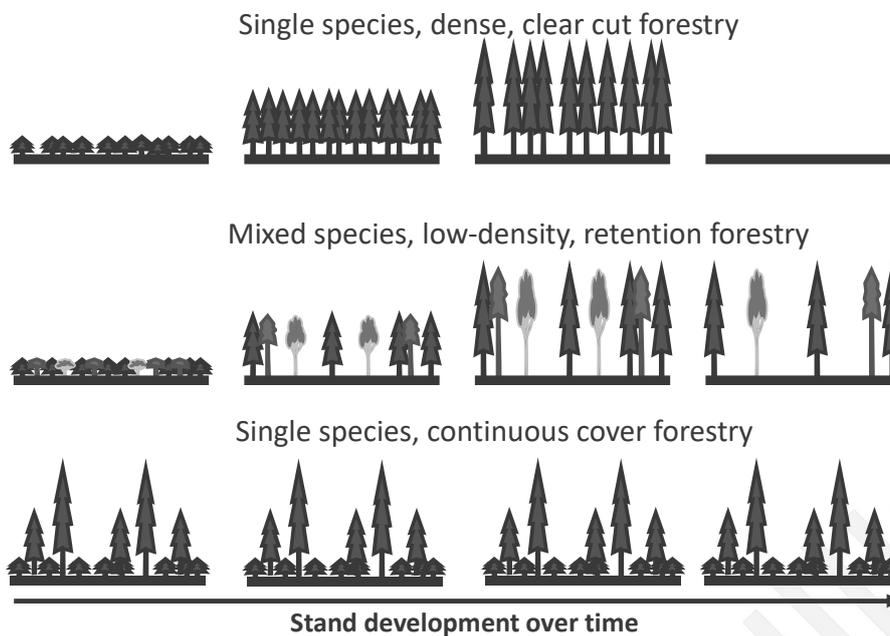
WP5. Field site visits, stakeholder involvement



Stakeholders

Category	Norway	Poland	Czechia	France	Spain
Forest owner	Fritzøe private forest	Neroj private forest	Biskupství královéhradecké private forest	CRPF private forestry association	Fundación Victoria Laporta
Forest industry	Bergene Holm Sawmill	Swiss Krono Group, wood panel industry	ALDP association of forestry and wood processing companies	FCBA forest/wood sector association	FEVAMA federation of wood and furniture enterprises in Valencia
Nature conservation	Naturvernforbundet nature conservation NGO	Natrix Herpetological Society, nature conservation NGO	Forestry and game management research institute	SEPANSO Environm. NGO	AGRÓ environmental NGO
Recreation	Oslo municipality forest	Association of Tatra guides	SLP Krtiny School Forestry Enterprise	Parc Naturel Regional	FEME-CVA hiking association
Forest officer	County forest office, Vestfold & Telemark	General directorate of state forests in Poland	Czech Ministry of Agriculture	ONF state forest service	Regional forest administration (GVA), Valencia

Objetivo: Analizar técnicas de manejo forestal y adecuarlas a los tiempos actuales y a las necesidades actuales.

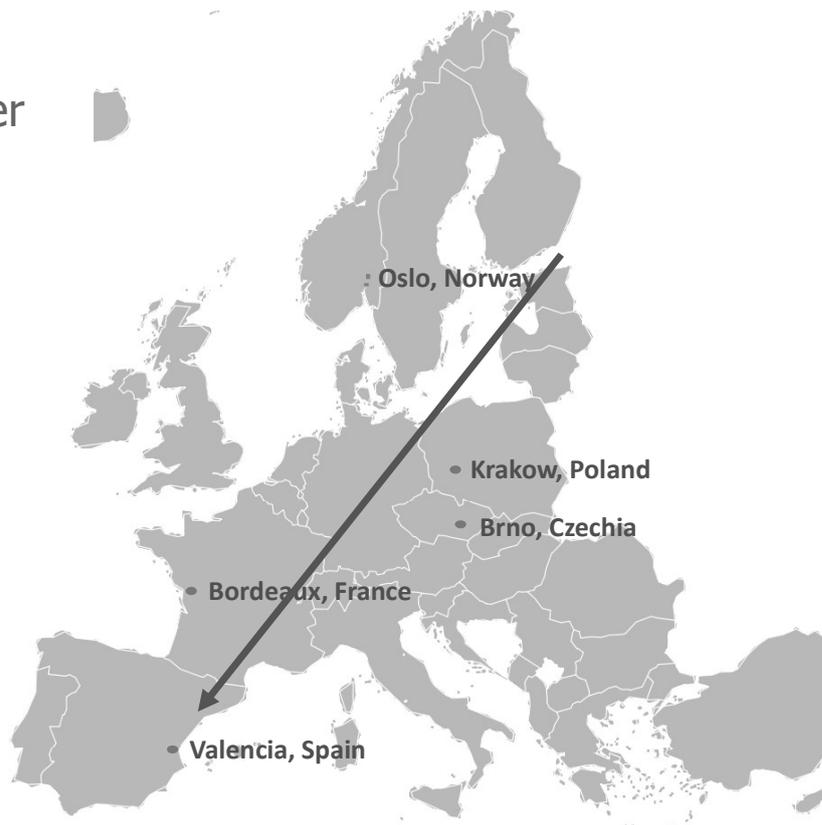


Step 1. Select forest management options for some sites



Select cells that represent your preference or understanding. Multiple options are OK.					
Close-to-nature options			Intensive options		
1. Objective. What should be the objective of this forest stand, including any landscape level purposes?					
Providing multiple ecosystem services (multiple use)	Providing one ecosystem service only, specify:	Prevent the spread of forest fire (barrier)	Maintain special biodiversity or recreational value	Other, specify:	
2. Harvesting (forestry) type					
Continuous cover forestry (CCF)	Retention forestry	Clearcut	Other, specify:		
3. Age MGM					
Uneven-aged	Even-aged	Other, specify:			
4. Tree species (select one or more species in combination)					
Species 1, %	Species 2, %	Species 3, %	Species 4, %	Species 5, %	
5. Within-species genetics of forest reproductive material (FRM)					
Natural / local FRM	Improved FRM (breeding)	Clonal FRM	Large genetic variability	Small genetic variability	Other, specify:
6. Establishment and regeneration					
Natural	Seeding	Planting	Coppice	Other, specify:	
7. Density MGM					
Keep dense and carry out thinning one or more times	Keep sparse and do not thin	Not applicable (CCF)	Other, specify:		
8. Site management MGM options					
Soil scarification	Fertilization	Irrigation	Chemical weed, pest and disease control	Remove fire fuel (snags, logs etc.)	Other, specify:
9. Edge options (towards neighbouring stands, bogs, lakes, farmland, etc)					
Never harvest	Mix species	Multilayered	Other, specify:		
10. Single-tree or tree-group options					
Keep large, old trees	Keep habitat trees (birds' nesting etc.)	Veteranization (intensional vandalism)		Other, specify:	
11. Climatic stress. What will be the main climatic stressors when trees get old?					
Drought	Storm	Snow	Fire	Bark beetles	Other, specify:
12. How can resilience at high age be increased towards those stressors?					
Harvesting (forestry) type and age distribution (see 2, 3)	Trees species selection (see 4)	Genetics improvement (see 5)	Density MGM (see 7)	Other, specify:	
13. Which other stands should get the same MGM type? Set some forest property variables that can be used to associate this stand to a category of stands)					
Variable 1:	Variable 2:	Predefined category:	Other, specify:		

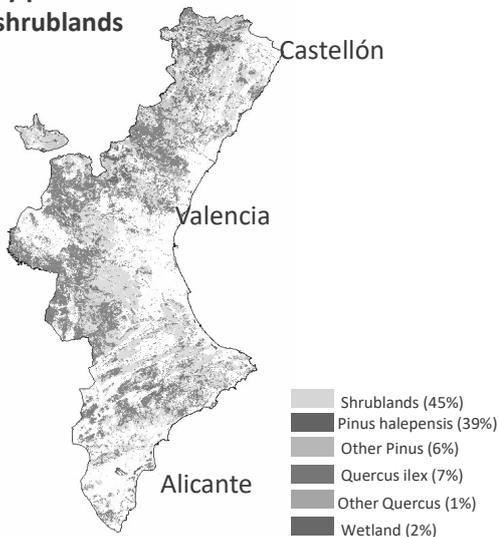
WP5. Field site visits, stakeholder involvement



Valencian Region (SPAIN)

5.090.839 inhabitants
 Total Surface: 2.326.200 ha Forest Surface: 1.277.177 ha

Forest surface dominated by pine forests and shrublands



High vulnerability to fire



FIRE SEVERITY IS VERY HETEROGENEOUS IN THE LANDSCAPE AT ALL SCALES, ESPECIALLY FOR HETEROGEOUS LANDSCAPES



Category	Organization	Objetives	Organization's representative in the project	Expertise
Forest officer	Regional forest administration (GVA)	Forest management after fire, decreasing fire risk, promoting mature forests.	<u>Jesús Sancho</u> <u>Sara Rosell</u> <u>Javier Hermoso</u>	Forest regional service is <u>the responsible for the forestry management of the public lands</u> . Also design and execution of the public budget for forests such as forestry maintenance tasks, fire prevention, pests, control and authorizations in private forests.
Forest owner	Fundación Victoria Laporta	Forest management, decreasing fire risk, wood productivity	<u>Vicent Ferri</u>	The Victoria Laporta Foundation is a <u>non-profit organization, owner of a private forested ownership of 700 hectares</u> . The main activities are related to knowledge of ecosystems, their flora and fauna preservation and improvement, also in the enhancement of cultural and ethnographic heritage.
Research center	CEAM-UB	Forest management: restoration of biodiversity, resilient communities, reducing fire risk	<u>Luna Morcillo</u> <u>Victor Santana</u> <u>Teresa Sauras</u> <u>J. Antonio Alloza</u> <u>Alberto Vilagrosa</u>	CEAM is a research center. Our group develop <u>research on restoration of burned ecosystems, including forest management</u> , and integrating pre- and post-fire management, restoration of degraded environments, ecosystem services.
Forest industry	FEVAMA federation of wood and furniture enterprises in Valencia	Use and consumption of wood products	<u>Florián Yubero</u>	FEVAMA: the <u>promotion, development and improvement of business activities in the wood products sector</u> . Florian has more than 34 years' experience in the commercial timber sector.
Nature conservation	AGRÓ (environmental NGO)	Nature conservation, forest biodiversity, ecosystem services	<u>Benjamí Pérez</u>	Agró is an <u>environmental association that has been working to preserve nature</u> . Benjamí Pérez Rocher is biologist and works as environmental consultant, specialized in flora management and restoration of forest and wetland ecosystems.
Recreation	FEME-CVA hiking association	Natural and aesthetic values, recreational use, forest biodiversity	<u>Toni Gómez</u>	The <u>Federation of Mountain Sports and Climbing</u> is at the forefront of the promotion of mountain activities in the Valencian region. Toni Gómez is Forest Firefighter, Mountain Guide and Ski Teaching



VALENCIA REGION (CV): Main conditioning factors of forests MGM techniques



Wildfires and fire recurrency (number of fires in the same area)



Tree decline/mortality: Extreme droughts, heat waves and pest attacks (bark beetles,...)

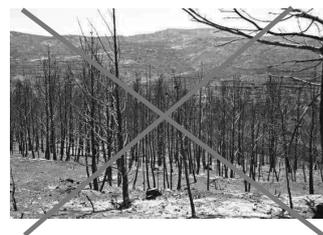
MANAGEMENT OPTIONS:

1) Clearing overstocked young Aleppo pine forests

The problem: young and overstocked Aleppo pine forest, regenerated after fire, with high fire risk



Up to 150,000 trees / ha

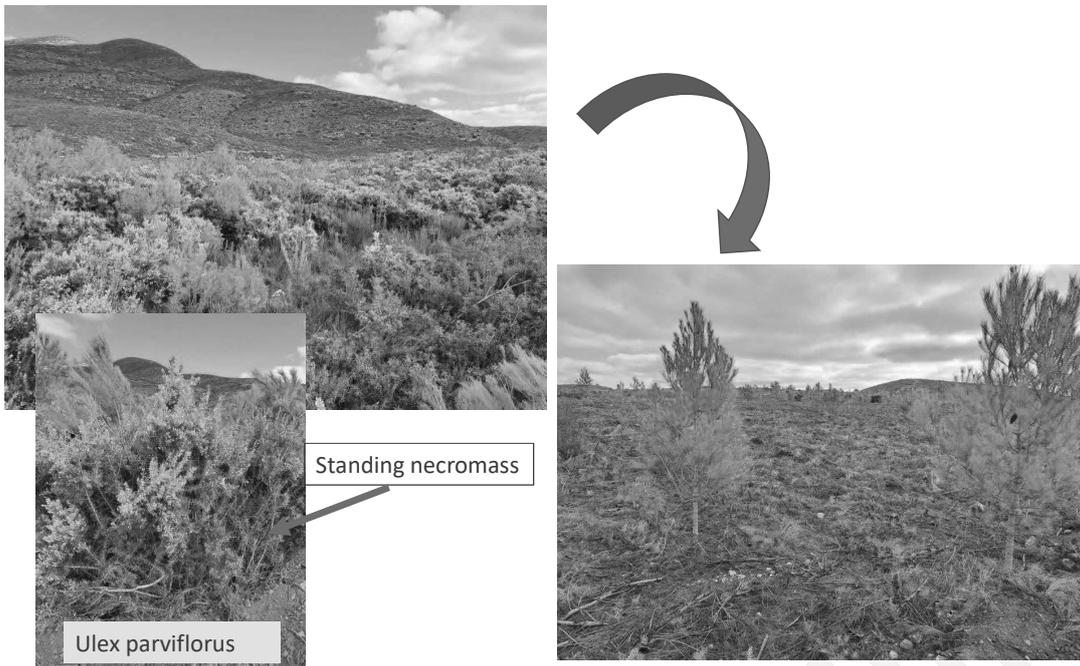


To less dense formations, promoting mature communities with lower fire risk associated

1000 trees / ha

MANAGEMENT OPTIONS:

2) Clearing/clipping fire prone shrublands with presence of highly flammable species



MANAGEMENT OPTIONS:

3) Thinning adult forest to reduce fuel load, promote forest growth and productivity, reforestations with resilient species



La Hunde Forest (Ayora)



MANAGEMENT OPTIONS:

4) Promote landscape mosaics to increase forest discontinuity, forest productivity (non timber) and other ecosystems services: aesthetic values, trekking, honey production, wildlife & bird watching,...



MANAGEMENT OPTIONS:

5) Development of late-successional forest stages (“mature forests”)



Gracias por vuestra atención



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ACTriS
Exploring the Atmosphere



ICOS

Integrated
Carbon
Observation
System

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