ASSESSING AND COMPARING ECOSYSTEM SERVICES ACROSS FORESTS

16 - 18 NOVEMBER 2022

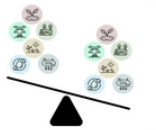
Can Balasc Biological Station
Camí Can Balasch, s/n.
08017 (Les Planes) Barcelona

https://vflo.github.io/FES_workshop_web/

CREAF

SEVERO OCHOA EXCELLENCE

GENERAL PROGRAM



DAY 1 — *Wednesday, November 16*

8:00–9:00	Meeting at the hotel and getting to Can Balasc (by train)	
9:00–10:30	**INTRODUCTION**	*Objectives and expectations* Organizing committee
10:30–11:00	Coffee break	
11:00–13:00	**SESSION 1**	*Ecosystem services accounting as a tool for forest management and decision-making* Alessandra la Notte & Jean Paul Metzger
13:00–14:30	Lunch break	
14:30–16:30	**SESSION 2**	*How do FES vary along environmental gradients and why is this an issue? The spatial context* Felix Eigenbrod & Rebecca Spake
16:30–17:00	Coffee break	
17:00–18:30	**DAY 1 SYNTHESIS**	Organizing committee
20:30	*Social dinner at Café Godot restaurant (Barcelona, Gracia District)*	

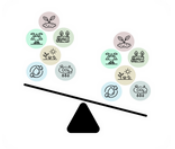
DAY 2 — *Thursday, November 17*

8:00–9:00	Meeting at the hotel and getting to Can Balasc (by train)	
9:00–10:30	**SESSION 3**	*How do FES vary along environmental gradients and why is this an issue? The temporal context* Tord Snäll & Francesco D'Adamo
10:30–11:00	Coffee break	
11:00–13:00	**SESSION 4**	*What information should we integrate for assessing FES in complex socio-ecological systems?* Klara Winkler & Ilse Geijzendorffer
13:00–14:30	Lunch break	
14:30–16:30	**COLLSEROLA HIKE**	
16:30–17:00	Coffee break	
17:00–18:30	**DAY 2 SYNTHESIS**	Organizing committee
20:30	*Social dinner at Jai Ca Bar (Barcelona, La Barceloneta District)*	

DAY 3 — *Friday, November 18*

8:00–9:00	Meeting at the hotel and getting to Can Balasc (by train)	
9:00–10:30	**SESSION 5**	*Integrative frameworks for assessing and comparing multiple FES* María Felipe-Lucia
10:30–11:00	Coffee break	
11:00–13:00	**WORKSHOP SYNTHESIS**	Organizing committee
13:00–14:30	Lunch break	
14:30–16:30	Time for additional meetings (optional)	

DAY 1 - WEDNESDAY, NOV. 16



In this workshop we will bring together 20 people with expertise in ecosystem services and nature contributions to people, sustainable management and conservation, landscape planning, and functioning and dynamics of forest systems. Our main objectives are to understand (i) why it is necessary to quantify forest ecosystem services (FES), (ii) why to compare these services between different types of forests, and (iii) how to develop these assessments and comparisons in an appropriate way.

INTRODUCTION

9:00-10:30

JOSÉ V. (PIPO) ROCES-DÍAZ & JUDIT LECINA-DIAZ

University of Oviedo (Spain)/ TUM (Germany)

Presentation of the workshop: why we are here, who we are, the main aims of the ws, organisation and programme.

LUCIANA JAIME & VICTOR FLO

CREAF (Spain)/Imperial College of London (UK)

Brief presentation of the participants using the individual slides provided by each participant.

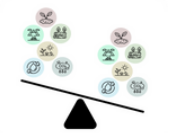
MARIA ÁNGELES PÉREZ-NAVARRO & ALBERT VILÀ

King's College London (UK)/CREAF (Spain)

Short discussion: What do we expect from the workshop?

---------- *Coffe break (10:30-11:30)* ----------

DAY 1 - WEDNESDAY, NOV. 16



SESSION 1

Ecosystem services accounting as a tool for forest management and decision-making - 11:30-13:00

11:30-11:45 **ALESSANDRA LA NOTTE**

former Joint Research Centre of the European Commission, Italy

Talk 1. Ecosystem Services accounting as a tool for integrating forest management into territorial policy: a European perspective (references 1-3)

11:45-12:00 Time for discussion

- *Are there key forest ecosystem services missing from the most popular services listed in accounting?*
- *What are the quality features of "woodland and forests" that can guarantee multiple services?*
- *How to best connect Earth Observation data to FES to assure a global coverage?*

12:00-12:15 **JEAN PAUL METZGER**

University of São Paulo, Brazil

Talk 2. Why is it important to assess FES for society's wellbeing and for forest conservation? (references 4-7)

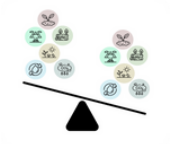
12:15-12:30 Time for discussion

- *Challenge of valuation - decisions must consider values beyond monetary value - how to incorporate the diversity and variety of values in decision making?*
- *Challenge of plurality - many service valuations are restricted to one or two services, and often with a strong influence of carbon services. How to value multiple ecosystem services, in a spatially explicit way, considering the temporal aspect, and of course considering possible services tradeoffs and synergies for decision-making?*
- *Context challenge - How to evaluate and understand services in different contexts (urban vs. rural), considering different types of services (e.g. services depending on the proximity of demand vs services with more global flows) and issues linked to different scales (e.g. telecoupling effects, cross-scale interaction)?*
- *Balancing challenge - complex models are more accurate, but very difficult to operationalize; simpler models can be simplistic, and thus lead to poorly informed decisions. What is the best balance between complexity and practicality?*

---------- General discussion (12:30-13:00) ----------

---------- Lunch break (13:00-14:30) ----------

DAY 1 - WEDNESDAY, NOV. 16



SESSION 2

How do FES vary along environmental gradients and why is this an issue? The spatial context - 14:30-16:30

14:30-14:45 (online) **FELIX EIGENBROD**

University of Southampton, UK

Talk 3. How does scale affect FES and why is this an issue? The spatial context (references 8-9)

Time for discussion. 14:45-15:00

- *Are there easily accessible proxies for predicting when scale dependency will affect FES trade-offs and synergies?*

15:00-15:15 **REBECCA (BECKS) SPAKE**

University of Reading, UK

Talk 4. Spatially targeted management of natural capital for enhancing ecosystem services (references 10-13)

Time for discussion. 15:15-15:30

- *How can we predict the effects of forest management on ES under environmental change?*
- *How can we integrate remote sensing with national forest inventories to improve predictions of restoration/management effects on ES?*

---------- General discussion (15:30-16:30) ----------

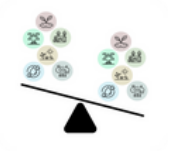
---------- Coffee break (16:30-17:00) ----------

17:00-18:30 **ORGANIZING COMMITTEE**

Day 1 synthesis

---------- Social dinner at café Godot (20:30) ----------

DAY 2 - THURSDAY, NOV. 17



SESSION 3

How do FES vary along environmental gradients and why is this an issue? The temporal context - 9:00-10:30

9:00-9:15 **TORD SNÄLL**

SLU Swedish Species Information Centre, Swedish University of Agricultural Sciences, Sweden

Talk 5. Geographical gradients and temporal dynamics among FES (references 14-16)

Time for discussion. 9:15-9:30

- *For which habitats and spatiotemporal scales should we account for the short-term dynamics or long-term changes of ecosystem services when assessing their future levels?*
- *Which approaches are available and suitable for planning the management of ecosystem services on different spatiotemporal scales?*

9:30-9:45 **FRANCESCO D'ADAMO**

CREAF, Spain

Talk 6. Exploring the temporal resilience of FES (references 17-19)

Time for discussion. 9:45-10:00

- *How can we effectively measure/quantify forest ecosystem services resilience?*
- *How reliable are process-based models at simulating forest ecosystem services and their resilience?*
- *How can we effectively compare simulations from models working at different (e.g., global, stand, landscape) resolutions?*

---------- General discussion (10:00-10:30) ----------

---------- Coffee break (10:30-11:00) ----------

DAY 2 - THURSDAY, NOV. 17

SESSION 4

What information should we integrate for assessing FES in complex socio-ecological systems? - 11:00-13:00

11:00-11:15 **KLARA WINKLER**

McGill University, Canada

Talk 7. Which properties of social-ecological systems are important for the evaluation of FES? (references 20-22)

Time for discussion. 11:15-11:45

- *How do you research and manage supply and demand of ecosystem services that are produced in a different speed than demanded (temporal mismatch)?*
- *How to scale social perceptions without reproducing existing social injustices?*

11:45-12:00 **ILSE GEIJZENDORFFER**

Louis Bolk Institute, Netherlands

Talk 8. Towards defining relevant indicators of essential forest ecosystem services (references 23-24)

Time for discussion. 12:00-12:30

- *Is it possible to develop a meaningful set of essential FES indicators?*
- *Which properties should essential FES indicators have?*
- *Which variables including spatio-temporal information or descriptors of socio-ecological systems should we include on these indicators?*

---------- General discussion (12:30-13:00) ----------

---------- Lunch break (13:00-14:30) ----------

14:30-16:30 **Collserola hike**

For a couple of hours, we will walk through the natural park that surrounds the meeting venue, discussing the multiple benefits that forests provide to society, as well as the ecological processes that drive them.

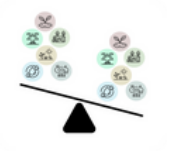
---------- Coffee break (16:30-17:00) ----------

17:00-18:30 **ORGANIZING COMMITTEE**

Day 2 synthesis

---------- Social dinner at Jai Ca Bar (20:30) ----------

DAY 3 - FRIDAY, NOV. 18



SESSION 5

Integrative frameworks for assessing and comparing multiple FES - 9:00-10:30

9:00-9:15 (online) **MARÍA FELIPE-LUCIA**

Helmholtz Centre for Environmental Research - UFZ/ German Center for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Germany

Talk 9. Relations among multiple services and the multifunctionality as an integrative approach for assessing different landscapes and forests (references 25-29)

Time for discussion. 9:15-9:45

- *Is multifunctionality a useful concept? What we learn and what we miss with it?*
- *How can we assess trade-offs within a multifunctionality approach?*

---------- *General discussion (9:45-10:30)* ----------

---------- *Coffee break (10:30-11:00)* ----------

11:00-13:00 **ORGANIZING COMMITTEE**

Workshop synthesis

---------- *Lunch break (13:00-14:30)* ----------

14:30-17:30 **Time for additional meetings**

CREAF ATTENDEES

FRANCISCO LLORET

JOSEP MARIA ESPELTA (TETE)

JORDI MARTINEZ-VILALTA

MAURIZIO MENCUCCINI

JAVIER RETANA

CREAF VOLUNTEERS

LUCA DA SOIS

BRENDA VERÓNICA FATECHA

SUSANA SILVESTRE

PABLO SÁNCHEZ

ADDITIONAL INFORMATION

Also available in the workshop website: https://vflo.github.io/FES_workshop_web/

TRAVEL INFORMATION

Taxi transfer from the airport to Barcelona city centre

Taking a taxi to the centre of Barcelona from the airport is the easiest and quickest solution. It is not excessively expensive as long as you are at least two people. The taxi rank is very well signposted at the exit of both terminals T1 and T2. Taxis are numerous and the queue is very well organised as almost always in Barcelona.

Taxis are easily recognisable because they are two-coloured (black and yellow). There is no fixed price to go from the airport to the centre of Barcelona as there is in some countries. The minimum fare for a taxi service from the airport is €20 (including all additional costs such as airport entry and exit taxes, which are €3.10). This means that your journey will cost you at least €20 even if you are going to an address close to the airport, but around €50 to the city center. The night fare starts at 20:00 and ends at 8:00.

Please ask for the receipt to be reimbursed.

Getting to Can Balasc (the workshop venue) from Barcelona

To get to Can Balasc, you might use Ferrocarrils de la Generalitat de Catalunya (FGC, Barcelona - Vallés Line) and get off at LES PLANES station (attention!!, not all trains stop at LES PLANES). To make things easier, one of the members of the organising committe will meet you outside the hotel at 8:00. You will all go together. We will be waiting for you at LES PLANES station from 8:25 to 8:45, and we will take you by car to Can Balasc.

ACCOMMODATION

Hotel Catalonia Gracia, C. de Córcega, 368, 08037 Barcelona

This hotel is located next to Avinguda Diagonal and Passeig de Gràcia, ideal for shopping. Guests can easily access Plaza Cataluña and the city's historic gothic quarter. Free Wi-Fi is available.

Located along the modernist route, Hotel Catalonia Gracia is surrounded by much of the interesting architecture that Barcelona is famous for, such as Gaudí and Domenech i Muntaner's key buildings, including La Pedrera.

A set menu is available at the on-site restaurant; room service is also available.

Guests can easily enjoy this cosmopolitan city as Hotel Catalonia Gracia is within walking distance of Barcelona's many attractions. As well as the excellent public transport links providing swift access to the entire city and the surrounding area, the hotel offers great value for money. The hotel also includes meeting amenities and conference rooms available for business events and banquets.

HIKE INFORMATION

On Wednesday afternoon, we will hike in the Collserola Park, which extends over 8,000 hectares of protected land spanning a chain of small mountains (Serra de Collserola) between the Besòs and Llobregat rivers. Collserola is the largest metropolitan park in the world, 8 times larger than the Bois de Boulogne in Paris and 22 times larger than Central Park in New York. The park's forests of aleppo pine and evergreen oaks are home to a wide variety of bird species, as well as mammals such as wild boar and genets.

Please bring comfortable shoes (hiking boots or similar) for the hike.

COVID19-SAFETY

There are no current restrictions for entering Spain, apart from wearing masks on public transport. During the workshop, face masks are encouraged to be worn indoors. We will have masks and alcohol-based hand sanitizer at the workshop venue.

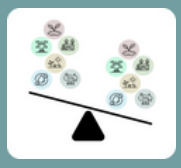
CONTACT INFORMATION

In case you need assistance you can always reach us:

+49 157 536 936 20 (Judit Lecina-Diaz)
+34 605 83 65 19 (Victor Flo)

REFERENCES

1. United Nations et al. (2021). System of Environmental-Economic Accounting-Ecosystem Accounting. White cover (pre-edited) version (with a special reference to Chapters 6 and 7).
2. Vysna, V., et al. (2021). Accounting for ecosystems and their services in the European Union (INCA). Final report from phase II of the INCA project aiming to develop a pilot for an integrated system of ecosystem accounts for the EU. Statistical report. Publications office of the European Union, Luxembourg (with a special reference to chapter 4).
3. La Notte, A., et al. (2022). Linking accounts for ecosystem Services and Benefits to the Economy THrough bridging (LISBETH) Part II, EUR 31185 EN, Publications Office of the European Union, Luxembourg (with a special reference to chapter 4).
4. Fisher, B., et al. (2009). Defining and classifying ecosystem services for decision making. Ecological economics, 68(3), 643-653.
5. Costanza, R. (2020). Valuing natural capital and ecosystem services toward the goals of efficiency, fairness, and sustainability. Ecosystem Services, 43, 101096.
6. Daily, G. C., et al. (2009). Ecosystem services in decision making: time to deliver. Frontiers in Ecology and the Environment, 7(1), 21-28.
7. Villarreal-Rosas, J., et al. (2020). Advancing systematic conservation planning for ecosystem services. Trends in Ecology & Evolution, 35(12), 1129-1139.
8. Eigenbrod, F. (2016) Redefining Landscape Structure for Ecosystem Services. Curr Landscape Ecol Rep 1, 80-86.
9. Spake, R., et al. (2017). Unpacking ecosystem service bundles: Towards predictive mapping of synergies and trade-offs between ecosystem services. Global Environmental Change, 47, pp.37-50.
10. Spake, R., et al. (2019). An analytical framework for spatially targeted management of natural capital. Nature Sustainability, 2, 90-97.
11. Spake, R., et al. (2022) Detecting Thresholds of Ecological Change in the Anthropocene. Annual Review of Environment and Resources.
12. Spake, R., et al. (2021) Applying the stress gradient hypothesis to curb the spread of invasive bamboo. Journal of Applied Ecology.
13. Metzger, J.P., et al. (2021). Considering landscape-level processes in ecosystem service assessments, Science of The Total Environment.
14. Jonsson, M., et al. (2020). Stand age and climate influence forest ecosystem service delivery and multifunctionality. Environmental Research Letters 15: 0940a8.
15. Mazziotta, A., et al. (2022). More future synergies and less trade-offs between forest ecosystem services with natural climate solutions instead of bioeconomy solutions. Global Change Biology.
16. Snäll, T., et al. (2021). High rates of short-term dynamics of forest ecosystem services. Nature Sustainability 4: 951-957.
17. Albrich, K., et al. (2020). Simulating forest resilience: A review. Global Ecology and Biogeography, 29(12), 2082-2096.
18. Forzieri, G., et al. (2022). Emerging signals of declining forest resilience under climate change. Nature, 608(7923), 534-539.
19. Bugmann, H., et al. (2022). The evolution, complexity and diversity of models of long-term forest dynamics. Journal of Ecology, 110(10), 2288-2307.
20. Fischer A.P. (2018). Forest landscapes as social-ecological systems and implications for management, Landscape and Urban Planning.
21. Rodríguez-Morales, B., et al. (2020). Perceptions of ecosystem services and disservices on a peri-urban communal forest: Are landowners' and visitors' perspectives dissimilar? Ecosystem Services
22. Quintas-Soriano, C., et al. (2018). Social-ecological systems influence ecosystem service perception: a Programme of Ecosystem Change and Society (PECS) analysis, Ecology and Society.
23. Geijzendorffer, I. R., et al. (2015). Improving the identification of mismatches in ecosystem services assessments. Ecological Indicators, 52, 320-331.
24. Balvanera, P., et al. (2022). Essential ecosystem service variables for monitoring progress towards sustainability. Current Opinion in Environmental Sustainability, 54, 101152
25. Simons, N.K., et al. (2021). National Forest Inventories capture the multifunctionality of managed forests in Germany. Forest Ecosystems, 8:5.
26. Hölting, L., et al. (2019). Measuring ecosystem multifunctionality across scales. Environmental Research Letters. Volume 14, Number 12.
27. Felipe-Lucia, M.R., et al. (2018). Multiple forest attributes underpin the supply of multiple ecosystem services. Nature communications, 9:4839.
28. Manning, P., et al. (2018). Redefining ecosystem multifunctionality. Nat Ecol Evol 2, 427-436.
29. Soliveres, S., et al. (2016). Biodiversity at multiple trophic levels is needed for ecosystem multifunctionality. Nature 536, 456-459.



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