

Report for annual networks

Submit the report to sns@slu.se by 24:00 CET, 1st of March the year after the network period.
The report should not exceed 2000 words.

Please adjust the size of the boxes to the length of your answer.

1. Title of the network:	CSDs-FOR: Critical spatial dimensions for climate-resilient Nordic forests
2. Network code:	N2023-03

3. Main applicant:	Francisco X Aguilar
Email:	Francisco.aguilar@slu.se
Institution:	Swedish University of Agricultural Sciences

Activities

4. Place of the activities:	Online, Helsinki
Duration of the activities (start date, end date):	January 2023- December 2023

5. Provide a short network summary, including: a) The purpose of the network/main problems/background Climate change poses one of the greatest challenges to Nordic forests. The climate in the region is warming at a faster pace than the world on average, and the change in temperatures is expected to dramatically disturb ecological patterns. However, climate change will also have wider effects beyond ecological considerations. Nordic forests are intertwined with local bioeconomies where damages caused by fire, insects, pests and flooding can generate considerable social and economic impacts. Forests and people across Nordic latitudes will be exposed to varying degrees of vulnerability to a changing climate. Spatially-explicit analyses will be fundamental to identifying climate socio-ecological hotspots where prevention and risk management should be prioritized. Given the inherent location of Nordic forests and communities depending on them, this network has an explicit focus on the rural bioeconomy. b) A description of the main activities of the network - Offered scientific presentations at the 2023 meeting of the International Boreal Forest Research Association in Helsinki. - Held a workshop on Spatial Statistical Analysis to understand the prioritization of climate socio-ecological hotspots in Nordic forests - in conjunction with the 2023 meeting of the International Boreal Forest Research Association in Helsinki. - Launched a working group of Ph.D. students and junior researchers, with senior researchers as advisors and role models, whose research will benefit from new expertise in spatial analyses. This group has worked on an Opinion paper to stress the strengths and weaknesses of spatial data and analyses to help identify socio-ecological climate hotspots. - Started the background work for a collaborative proposal for applied research to at least one relevant funding organization. We will likely seek a future SNS network grant proposal to help us complete this process. Inclusive of mentoring junior scholars on the writing of competitive proposals. FORMAS in Sweden, under its new funding cycle is a likely target for another future project application.
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c) Did the network develop and deliver as planned? If not, please explain why

Yes, the network delivered as planned.

Outcomes**6. Published outputs achieved as a consequence of the network (peer-reviewed articles, other publications)**

We have one paper in the pipeline for the peer-review process, with Ambio.

7. Other practical outputs of the network (workshops, conferences, scientific meetings, policy recommendations, conferences, large-scale project applications, websites or databases etc.)

During the IBFRA meeting we held the planned workshop with 10 researchers in attendance, including 8 junior researchers.

We generated an easy-to-use script using Python and Anaconda for the query of spatial forest inventory data.

We delivered 4 scientific presentations including talks and posters at IBRA and chaired two sessions.

8. How and within which areas was the network beneficial for the Nordic region (Denmark, Finland, Iceland, Norway, Sweden and the autonomous areas of the Faroe Islands, Greenland and Åland Islands)?

The scope of the network of spatial analyses cuts across areas of sustainability and climate relevant to all forests (land, owners, product consumers and along the value-chain) in the Nordic region. By virtue of its composition, the network had more direct benefit to Denmark, Finland, Norway and Sweden. The inclusion of partners from Argentina benefited the network on how other countries are dealing with similar issues (insect, disease, extreme weather).

Participation**9. Number of participants ***

Country	PhD students & Post-docs	Other researchers	Stakeholders	Communication officers	Gender			Total
					Women	Men	Other	
Denmark	3	1			2	2		4
Finland		1				1		1
Iceland								
Norway	2	1			2	1		3
Sweden	2	1				3		3
Argentina	2				2			2
USA			1					1
Germany		1				1		1
Total	9	5	1		6	9		15

*This list is limited to those who actively participated in our network activities including online and in person meetings, workshop and work on a scientific manuscript. We have not tallied participants who attended our scientific contributions at the 2023 IBFRA meeting.

Gender equality actions

In the beginning of the network period, you were introduced to the **gender equality guidelines** and asked to perform at least one action point from each step during your network period. Fill in the following evaluation scheme with the actions performed and the outcome. It is new for SNS to introduce these gender equality guidelines to our funded networks, so SNS would really appreciate your feedback on the guidelines and how they have worked for you.

11. Evaluation scheme	
a) Outcome of completed planning step:	Planning step was to engage a gender-balanced group to lead the main activities of the SNS network.
b) Outcome of completed action step (at least one action point):	Team built including a senior researcher (male), a postdoc (female) and two doctoral students (female/male) who have led group activities.
c) How did the actions/tools work for your network:	Excellent, we have built much scholarly camaraderie within this network.
d) How could SNS provide more support to your network in the work toward gender equality:	It was our understanding that possibly one webinar was going to be offered by SNS on gender equality practices. Perhaps we missed this, but it will be good to have one.
e) General feedback to the gender equality guidelines:	The guidelines are helpful, the table here under point 'g' is very intrusive. Are we expected to ask people for their gender and possibly single out 'others'? This type of information counters any effort to promote inclusiveness.

Economic report

12. Received grant from SNS (SEK):
200 000 SEK

13. Costs	SNS funding	Co-financing	Total
Travel and accommodation	148,935		148,935
Meeting costs	55,756	90,000	145,756
Communication	0	10,000	10,000
Other costs (specify): meeting space, software, time spent in coordination Senior investigators' time)		100,000	0
Total SUM (SEK)	204,691	200,000	404,691

14. Allocation of SNS funding

Country	Partner organization	% of total
Finland	Finnish Meteorological Institute	18
Sweden	Swedish University of Agricultural Sciences	27
Norway	Norway Inland University of Applied Sciences	16
Denmark	University of Copenhagen	21
Argentina	University of Misiones	17
Total SUM	204,691	100

15. Economic result (deficit or surplus)

There was a net deficit of 4,691 SEK which were covered through Aguilar's professor account at SLU.

16. Optional: Comments to the economic reporting

The original proposal included a partner at the colleague at the Thünen Institute of Forestry in Germany. Due to that colleague being on family leave he could not participate in the network and resources were re-allocated to colleagues in Denmark.

17. Provide a popular science piece for dissemination in SNS' various channels (maximum 700 words) with emphasis on application of results and benefits for the Nordic society.

Critical spatial dimensions in forest data

Network title: CSDs-FOR: Critical spatial dimensions for climate-resilient Nordic forests

Contact person: Francisco X Aguilar, +46 722479538, francisco.aguilar@slu.se.

Preamble: Creating knowledge synergies for better application and interpretation of spatial forest information.

Public availability of forest sector data with explicit spatial (latitude, longitude) attributes is growing substantially. These data can be studied to target and evaluate public policies affecting the conservation, management and restoration of forests and in the design of strategies to increase their resilience to a changing climate. How spatial data is used is critical because public interventions building off such analyses can have drastic consequences to Nordic forest sectors, inclusive to its industries and to its ability to cope with a changing climate. In our SNS network, we discussed and generated a list of good practices scientists should follow particularly in the application of spatial analyses in temperate and boreal forest contexts. One of the greatest values of spatial analytical methods is in the identification and prioritization of socio-ecological climate hotspots.

Report for annual networks

I hereby declare that the above statements are true to the best of my knowledge
(Please adjust the number of signature boxes to the number of applicants)

Signature of the main applicant



Swedish University of Agricultural Sciences 4 March 2024

Signature

Organization

Date

Francisco X Aguilar Cabezas

Printed name

Signature of the head at the department of the main applicant



Swedish University of Agricultural Sciences 4 March 2024

Signature

Organization

Date

Torbjörn Andersson, Deputy Head of Dep

Printed name

Second applicant's signature, place and date



Inland Norway University of Applied Sciences

4 March 2024

Signature

Organization

Date

Hanne K. Sjølie

Printed name

Report for annual networks

Third applicant's signature, place and date

Aapo Rautiainen

Finnish Meteorological Institute (FMI)*

4 March 2024

Signature*

Organization

Date

Aapo Rautiainen

Printed name

*Formerly, at time of application. Currently at LUKE

Fourth applicant's signature, place and date

Jette Bredahl Jacobsen

University of Copenhagen

31 August 2022

Signature *

Organization

Date

Jette Bredahl Jacobsen

Printed name

Fifth applicant's signature, place and date

Sebastian Glasenapp

Thünen Institute of Forestry

4 March 2024

Signature*

Organization

Date

Sebastian Glasenapp

Printed name

Sixth applicant's signature, place and date

Silvia Korth

University of Misiones, Argentina

4 March 2024

Signature*

Organization

Date

Silvia Korth

Printed name

* Signatures of approval sent via email