

## SG0245 Sustainable management of boreal forests. 2024-04-20 - 2024-06-02

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Day	Time & Location	Activity	Content	Teacher
Wed 20/3	9.00-10.30 (Björken)	Introduction	Course introduction Subject matter outline, Objectives & learning outcome course design, student responsibilities, activities, study group organization, schedule, literature, learning tools and grading, field trips.	<b>Lenka Kuglerová &amp; Järvi Järveoja (course leaders)</b>
	10.30-12.00 (Björken)	Survey + Lecture	<b>M1: What is sustainable management?</b> Sustainable management from multiple perspectives	Kuglerová Göran Hallsby
	PM	Canvas	Introduction to A1 (group and topic arrangements)	
Thu 21/3	All day	Assignment	A1: literature searches, reading, group work	
Fri 22/3	9.00-11.00 (Björken)	Lecture	Emerging policy and governance shifts in boreal forestry	Camilla Widmark
	PM	Assignment	A1: literature searches, reading, group work	
Sat 23/3				
Sun 24/3				
Mon 25/3	AM	Assignment	A1: literature searches, reading, group work (topics for presentations announced at 8 am)	
	13.00-15.00 (Björken)	Lecture	Recent report on boreal forestry	Lina Ceder
Tue 26/3	9.00-12.00 (Bokskogen)	Seminar	<b>A1: The boreal forestry context, group presentations</b>	Kuglerová + Järveoja
	PM	Assignment	A1b: individual written reflection on A1– (deadline by midnight)	
Wed 27/3	9.00-12.00 (Canvas)		<b>M2: Module intro and assignment instructions – canvas + introductory reading and</b>	

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			preparation for quiz on climate change drivers (A2a)	
	13.00-17.00 (Canvas)	Quiz (Canvas) option 1 (or Thursday morning)	Reading + Quiz: Climate change drivers and the importance of forests. Quiz opens at 13:00 and closes at midnight next day	
Thu 28/3	8.00-12.00 (Canvas)	Quiz (Canvas) option 2 (or Wednesday afternoon)	Reading + Quiz: Climate change drivers and the importance of forests.	
	PM	Reading/lecture (video)	Introducing circumboreal forestry and climate change	Dan Binkley
Fri 29/3	Easter			
Sat 30/3	Easter			
Sun 31/3	Easter			
Mon 1/4	Easter			
Tue 2/4	9.00-11.00 (Björken)	Lecture	Carbon balances across the managed forest landscape	Matthias Peichl
	PM	Assignments	Work on A1 (group work)	
Wed 3/4	9.00-11.00 (Björken)	Lecture	Soil carbon in boreal forest – Impact of forest management	Michael Gundale
	PM	Assignments	Work on A1 (group work)	
Thu 4/4	9.00-11.00 (Björken)	Lecture	The role of wood-based products and bioenergy	Gustaf Egnell
	PM	Assignments	Work on A1 (group work)	
Fri 5/4	9.00-12.00 (Björken)	Group discussion	Group debates A1, questions and discussion	Egnell, Peichl, Gundale
	PM	Assignment	A1b – voluntary assignment on debate summary (Sunday deadline)	
Sat 6/4				
Sun 7/4				
Mon 8/4	9.00-11.00 (Björken)	Lecture	<b>M3: Wood science</b>	Carmen Critescu/Erik Anerud
	PM	Assignment	A3 – work in pairs	

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		Optional lectures (Canvas)	Online lectures from Tommy Mörling (for further background on M3)	
Tue 9/4	9.00-11.00 (Björken) PM	Lecture  Assignment	Wood science  A3	Carmen Critescu/Erik Anerud
Wed 10/4	9.00-11.00 (Björken) PM	Lecture  Assignment	Future development of sawmill production  A3	Johan Oja, Norra Skog
Thu 11/4	AM  12.00 PM	Assignment  Assignment  Assignment	Preparation for presentations  Deadline: Share report with reviewers  Working on peer review	
Fri 12/4	9.00-12.00 (Björken) PM	Presentations  Assignment	Group presentations and discussions  A3: submit pair summary by midnight Submit peer review feedback by midnight (individual)	Carmen and Erik
Sat 13/4				
Sun 14/4				
Mon 15/4	9.00-11.00 (Björken) PM	Lecture  Reading	<b>M4:</b> More varied forestry  Reading for M4	Helena Dehlin, Swedish Forest Agency
Tue 16/4	9.00-11.00 (Björken) PM	Lecture  Assignment	Management and biodiversity  A4: Read and work on survey questions for discussion on Friday	Albin Larsson Ekström
Wed 17/4	9.00-12.00 (Björken) PM	Lecture + discussion  Survey	Ecological restoration of forests for biodiversity  Finish Canvas survey by midnight	Albin Larsson Ekström

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Thu	18/4	9.00-12.00 (Björken)  PM	Lecture + discussion  Assignment	Microclimate Case study on bark beetle and microclimate  Preparation for open book exam	Caroline Greiser
Fri	19/4	09.00-11.00 (Björken)  11.00-16.00 (Canvas)	Discussion  Assignment	A4: Better than nature silviculture (follow up on survey)  Open book exam (A4a voluntary): Forest management applications and biodiversity (submit by 16.00)	Kuglerová
Sat	20/4				
Sun	21/4				
Mon	22/4	9.00-9.30 (Björken)  9.30-12.00  13.00-15.00 (Björken)  PM	Lecture  Lectures  Assignment  Recorded lectures +reading	M5: Introductions to forest health module and SLU Forest Damage Center  TBD  A5: Open consultation on assignments with Jonas possible	Jonas Rönnerberg  TBD
Tue	23/4	9.00-11.00  PM	Lectures  Assignment	TBD  A5 + reading for Wednesday	TBD
Wed	24/4	9.00-11.00  PM	Lectures  Assignment	TBD  A5	TBD
Thu	25/4	9.00-11.00  13.00-14.00 (zoom)	Lectures  Assignment	TBD  A5: Group assignment peer-assessment exercise	TBD  Jonas Rönnerberg
Fri	26/4	9.00-11.30  12.20-15.00 (Björken)  PM	Lectures  Group presentations  Assignment	Cronartium on pine  Presentations of group work A5  Submit A5 by midnight	TBD  Jonas Rönnerberg
Sat	27/4				
Sun	28/4				

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Mon 29/4	9.00-11.00 (Björken)  PM	Lecture	<b>M6</b> Forest and Human health  - Reading and watching pre-recorded lectures - A6: Forest for Recovery- Individual forest excursion	<i>Elisabet Bohlin</i>
Tue 30/4	All day		A6: Individual forest excursion or reading	
Wed 1/5	Public holidays			
Thu 2/5	8.15-10.00 (Björken)  10.30-11.30 (FEM fika room)  12.30-14.00 (Björken)  14.30-16.30 (Björken)	Discussion  Seminar (optional)  Lecture  Lecture	Discussion and follow up on A7 with teacher  Restoration of peatlands  <b>M7</b> : Intro to module Water in forested landscapes  Ditching practices in forests, Effects of ditching on water quality, quantity and ecology	<i>Elisabet Bohlin</i>  <i>Martin Evans</i>  <i>Kuglerová</i>  <i>Eliza Hasselquist</i>
Fri 3/5	9.00-11.00 (Björken)  13.00-16.00 (Björken)	Lecture  Lecture and discussions	Water governance  Effects of forestry operations on water quality, quantity and ecology Forest management around water	<i>Irina Mancheva</i>  <i>Kuglerová + Hasselquist</i>
Sat 4/5				
Sun 5/5				
Mon 6/5	9.00-10.30 (Björken)  PM	Lecture  Assignment	Climate change, water and forestry  A7: Working on debate statements	<i>Hjalmar Laudon</i>
Tue 7/5	All day	Assignments	A7: Working on debate statements	

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Wed 8/5	9.00-12.00 (Björken)  PM	Debate  Assignment	Stakeholder debate A6, group 1 (LK), group 2 (EMH) + concluding discussion  A7b individual voluntary assignment (deadline Friday midnight)	Kuglerová, Hasselquist
Thu 9/5	Public holiday			
Fri 10/5	AM  PM	Online lecture  Assignment	Online lectures by BG Jonsson  M8: Intro of A8a – reading Canvas instructions and starting work on assignment	
Sat 11/5				
Sun 12/5				
Mon 13/5	9.00-11.00 (Björken)  PM	Lecture and discussion  Assignment	Dialogues and other stakeholder interactions - experiences of a professional  A8a: Working on a map and metrics for group assignment	Oskar Forsberg, Swedish Forest Agency
Tue 14/5	AM  13.00-16.00 (Zoom)	Assignment  Lecture and discussion	A8a: Working on a map and metrics for group assignment  Decision support for sustainable forest management – tools and examples	Jeannette Eggers
Wed 15/5	9.00-11.00 (Björken)  PM	Lecture and exercise  Assignment	Multi-criteria decision analysis (MCDA) as a tool for participatory forest planning  A8a: Working on a map and metrics for group assignment	Eva-Maria Nordström
Thu 16/5	9.00-11.00 (Björken)  PM  PM	Lecture and discussion  Assignment  Assignment	Forestry and conservation in the coniferous forests of NW Sweden  A8a: Working on a map and metrics for group assignment  A8a: FINAL group report (deadline for submission <u>on Canvas</u> by midnight)	Johan Svensson

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Fri	17/5	9.00-11.00 (online)  PM	Lecture  Assignment  Assignment	Opportunities for enhanced returns in timberland investments through carbon- and biodiversity credits  Voluntary A8b: Stakeholder consideration  Voluntary assignment A8b (deadline for submission by midnight)	Aleksandra Holmlund
Sat	18/5				
Sun	19/5				
Mon	20/5	8.00 – departure from Umeå  14.00-17.00	Field trip	<b>M9:</b>  Green infrastructure and landscape planning	Emelie Westin (SCA), Eva Romell (Jämtland County Board), Järvi Järveoja
Tue	21/5	8.00-17.00 (Fjällbäcken)	Field trip	Riparian buffer management	Peter Lundgren, Jessica Johansson, Bosse Magnusson Lenka Kuglerová Henrik Wikström
Wed	22/5	8.00-17.00 (Hallåsen)	Field trip	Clear-cut free forestry	Henrik Wikström, Göran Hallsby
Thu	23/5	8.00-17.00 (Fagerdal)	Field trip	Nature values, biodiversity, regeneration, fire,	Göran Hallsby, Lenka Kuglerová
Fri	24/5	8.00-13.00 (Fagerdal) 14.00 – departure to Umeå	Field trip	Individual stand visits SWOT analyses	Kuglerová Hallsby
Sat	25/5				
Sun	26/5				
Mon	27/5	9.00-11.00 (zoom)  PM	Lecture  Assignment	Forest certification  A10 – forest management plan	Henrik von Stedingk
Tue	28/5	9.00-11.00 (zoom)  PM	Lecture  Assignment	Governmental incentives  A10 – forest management plan	Stefan Karlsson (Skogsstyrelsen)
Wed	29/5	All day	Assignment	A10 – forest management plan	

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Thu	30/5	AM  13.00-16.00 (Björken)	Preparing presentations in groups based on topics  Presentation of management plans in pairs	A10  A10: Presentations	Kuglerová
Fri	31/5	9.00-10.00 (Bokskogen) 10.00-12.00	Evaluation	Course conclusion and evaluation  Fill out course evaluation in Evald	Kuglerová
Sat	1/6				
Sun	2/6				