Master’s Programme: Social-Ecological Resilience for Sustainable Development

Course 4: Resilience: Reflections and Applications (7.5hp)

Course leader: Jamila Haider, Ingo Fetzer

Course teachers: Jamila Haider (JH), Ingo Fetzer (IF), Tim Daw (TD), Katja Malmborg (KM), Blanca González García-Mon (BGM), Maria Mancilla Garcia (MMG), Wijnand Boonstra (WB), Daniel Ospina (DO), Kirill Orach (KO), Andrew Merrie (AM), Emma Björkvik (EB), Simon West (SW) and Abigayil Blandon (AB)

Dates: March 25 – May 1

Brief Description
This course reflects on how resilience thinking-related theories and methods can be applied to social-ecological systems. The course is project based, and students formulate individual research proposals. The proposed projects must fall under one of the SRC’s research themes, and should be for a 1-year study that would suit the SERSD Master’s thesis.

Students will work in groups to assess and discuss each other’s work. This component will provide a set of alternative approaches to addressing related questions, and will allow students to analyse the strengths and weaknesses of these approaches, to develop skills in critical analysis and providing scholarly feedback.

Course Learning Outcomes
It is expected that the student, after taking the course, will be able to:

1. Successfully formulate a research project that analyses social-ecological systems using multiple conceptual approaches;
2. Identify what approaches are useful or not for particular situations and questions;
3. Explain strengths and weaknesses of resilience thinking-related approaches.

Module content

<table>
<thead>
<tr>
<th>Formulating a research question</th>
</tr>
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<tbody>
<tr>
<td>Providing critical review</td>
</tr>
<tr>
<td>Planning for a Literature review</td>
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<tr>
<td>Qualitative and quantitative data collection and analysis</td>
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<tr>
<td>Introduction to statistics</td>
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<tr>
<td>Designing research</td>
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<tr>
<td>Ethics</td>
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<tr>
<td>Reviewing proposals</td>
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<tr>
<td>Presenting proposal</td>
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<tr>
<td>Writing proposals</td>
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</tbody>
</table>
# Class Schedule

- **All lectures are in room 251 unless otherwise noted**

## Week 1: Philosophy of science, What is a research project, Literature review

### MARCH

**Mon 25**

<table>
<thead>
<tr>
<th>Time</th>
<th>AM: Course</th>
<th>PM: What SRC projects can look like (KM, BGM + others, 2hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-12:00</td>
<td>Intro &amp; How to write a proposal.</td>
<td></td>
</tr>
<tr>
<td>13:30-15:30</td>
<td>Setting groups (JH, IF 1 hr)</td>
<td></td>
</tr>
</tbody>
</table>

**Before class:**

- Read Thesis Guidelines
  - [https://stockholmuniversity.box.com/v/SRCmastersthesisguidelines](https://stockholmuniversity.box.com/v/SRCmastersthesisguidelines)

### MARCH

**Tues 26**

<table>
<thead>
<tr>
<th>Time</th>
<th>AM: Approaching SES research (JH, 1 hr)</th>
<th>PM: How to get going on a project and writing (AM 1hr)</th>
<th>PM: Ideas mapping of research project (1 hours) + own working time on 1 pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30-12:00</td>
<td></td>
<td></td>
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<tr>
<td>13:00-15:00</td>
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</tbody>
</table>

**Before class:**

- Reading Moon & Blackman 2014
  - 1 page research proposal (1 pager) (Due March 27 12:00)

### Wed 27

<table>
<thead>
<tr>
<th>Time</th>
<th>PM: How to do a literature review (DO 1.5 hours)</th>
<th>AM: work on 1 page research proposal.</th>
<th>PM: Peer review Receive, read and comment on group’s 1 page research proposal, hand-in feedback at 14:30.</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00-16:30</td>
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</tbody>
</table>

**Literature Review study** (Due April 1 9:00) *NB: this hand-in time is to give students attending the conference a bit more time.*

### Thurs 28

**Fri 29**

- Consider feedback of 1-pager and work on lit review

## Week 2: Qualitative research

### APRIL

**Mon 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>AM 10:45-12:00: Ethics frameworks, the law, and SRC approach (MMG)</th>
<th>AM 9-10:30: Ethics in practice (KM, 1.5 hrs)</th>
<th>To prepare for the research ethics day please do this preparation beforehand. This should take max 1 hour in total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-12:00</td>
<td>Ethics frameworks, the law, and SRC approach (MMG)</td>
<td>13:30-14:30: Group discussions on specific ethical questions</td>
<td>- Please watch this video. It’s a bit dry but gives a good coverage and background on research ethics. You don’t need to watch beyond 15:17 when she focusses on S. Africa regulations.</td>
</tr>
<tr>
<td>13:30-16:00</td>
<td>Introduction to qualitative methods (WB, 1 hr)</td>
<td></td>
<td>- Please look at the SRC research ethics principles and procedures here: <a href="https://stockholmuniversity.box.com/v/SRCethics">https://stockholmuniversity.box.com/v/SRCethics</a></td>
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<td></td>
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<td></td>
<td>- Think of issues in your planned project that are relevant to discussions of research ethics. Or, you can think of relevant experiences from your career up until now. Great if this relates to an ethical dilemma, or a surprising ethical issue that emerged that had not been foreseen.</td>
</tr>
</tbody>
</table>

**ethics review form submit to TD and peers by Monday April 22nd**

*Note: TD available to discuss ethics issues week of April 8*

### Tues 2

<p>| Time          | AM: Examples of qual methods in SES research (MMG; KO; JH; EB; AM 2 hours) | PM: World café on method types: circulate between presenters to get a feel for all methods presented + analysis AB (2 hours) |
|---------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 10:00-12:00   |                                                                           |                                                                                                                |
| 13:00-15:00   |                                                                           |                                                                                                                | Think in advance of ‘Deep Dive Workshop’ what method you would like to learn more about (see April 3) |</p>
<table>
<thead>
<tr>
<th>Day</th>
<th>AM Activity</th>
<th>PM Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 3</td>
<td>AM: Deep dive workshops on data collection &amp; analysis (Eg. *):</td>
<td>PM: Work on individual qualitative exercise. Submit April 4 by 17:00</td>
<td>*subject to minor changes</td>
</tr>
<tr>
<td>9:00-12:00</td>
<td>Interview method (EB)</td>
<td></td>
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<td></td>
<td>Process tracing &amp;/or text analysis (KO)</td>
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<td></td>
<td>Futures studies &amp; Narratives (AM)</td>
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<td></td>
<td>Participatory observation (JH)</td>
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<td></td>
<td>Focus groups (MMG)</td>
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<tr>
<td>Thurs 4</td>
<td>Work on qualitative exercise</td>
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<tr>
<td>Fri 5</td>
<td>AM: work on qualitative exercise</td>
<td>PM: Peer review of qualitative exercise</td>
<td>Email Qualitative exercise to JH by 11:00</td>
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<tr>
<td>13:00-15:00</td>
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</table>

### Week 3: Quantitative methods & research project

<table>
<thead>
<tr>
<th>APRIL</th>
<th>AM: Intro to statistical theory</th>
<th>PM: Exercise and Discussions on statistical theory</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Mon 8</td>
<td>9:00-12:00</td>
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<td></td>
<td>I (IF)</td>
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<td>13:30-16:30</td>
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<tr>
<td>Tues 9</td>
<td>AM: Intro to statistical theory</td>
<td>PM: Intro and application to stats software (e.g. R-commander)</td>
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<tr>
<td></td>
<td>9:00-12:00</td>
<td>(IF 3hr)</td>
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<tr>
<td></td>
<td>13:00-16:00</td>
<td></td>
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<tr>
<td></td>
<td>II (IF 3hr)</td>
<td></td>
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<tr>
<td>Wed 10</td>
<td>AM: Introduction to statistical tests</td>
<td>PM: Exercises in data aggregation, visualization and application of tests</td>
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<tr>
<td></td>
<td>9:00-12:00</td>
<td>(IF 3hr)</td>
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<td>13:00-16:00</td>
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<tr>
<td>Thurs 11</td>
<td>AM: Individual Quantitative exercise: design, carry out</td>
<td></td>
<td>Email Quantitative exercise (3 pages) to IF until 17:00</td>
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<td></td>
<td>9:00-12:00</td>
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<td>13:00-16:00</td>
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<td></td>
<td>PM: Write 3-pager on IQRS</td>
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<tr>
<td>Fri 12</td>
<td>AM: Peer review and presentation of Quantitative exercise by students and revision (IF 3hr)</td>
<td></td>
<td>Provide written feedback on 'Quantitative exercise' by IF</td>
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<tr>
<td></td>
<td>9:00-12:00</td>
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<td></td>
<td>13:00-16:00</td>
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<td></td>
<td>PM: Discussion and Questions (IF 2hr)</td>
<td></td>
<td>Draft Research Proposal Due April 23 by 17:00</td>
</tr>
</tbody>
</table>

### EASTER BREAK Mon 15 - Fri 21

### Week 4: Independent work on the assignments & presentations

<p>| Mon 22  | Students’ day off                                                           |                                                                            |                                                                       |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues 23</td>
<td>9:00-12:00</td>
<td>AM: review each other’s ethics forms (1.5 hrs)</td>
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<tr>
<td></td>
<td></td>
<td>Peer discussion of ethics with TD and others</td>
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<tr>
<td></td>
<td></td>
<td>consulting different groups</td>
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<td></td>
<td></td>
<td>Submit draft research proposal to group + JH/IF by 17:00</td>
</tr>
<tr>
<td>Wed 24</td>
<td></td>
<td>Get feedback on draft.</td>
</tr>
<tr>
<td>Thurs 25</td>
<td></td>
<td>Work on presentation of research proposal</td>
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<td></td>
<td></td>
<td>*Note: you will need to touch base with co-discussants to plan your discussion session ca. 1-2hr, this can be done remotely</td>
</tr>
<tr>
<td>Fri 26</td>
<td>9:00-12:00</td>
<td>AM: Presentation of individual thesis outlines and discussions</td>
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<td></td>
<td>13:00-15:00</td>
<td>PM: Class-lead Course Evaluation (2hr)</td>
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<td><strong>Week 5: Next steps for thesis preparation</strong></td>
</tr>
<tr>
<td>Mon 29</td>
<td>10:00-16:00</td>
<td>PM: Getting ready for your thesis (TD 1hr)</td>
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<td></td>
<td>PM: Fieldwork Risk Assessment (TD 1hr)</td>
</tr>
<tr>
<td>Tues 30</td>
<td>13:00-15:00</td>
<td>Submit Final Research Proposal to group and JH and IF by 12:00</td>
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<td></td>
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<td>Swedish Holiday</td>
</tr>
<tr>
<td>MAY</td>
<td>Wed 1</td>
<td>Swedish Holiday</td>
</tr>
</tbody>
</table>
Assessment and Grading
Examination will be based on the written submissions and an oral presentation of the proposal as well as being discussant of two proposals. All components in the table below are compulsory and must be passed in order to complete the course.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weighting (%)</th>
<th>Learning Outcomes</th>
<th>Due</th>
<th>Receive feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-page research proposal (pass/ fail)</td>
<td>Compulsory</td>
<td>1-2</td>
<td>March 29</td>
<td>Peer Review April 27</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>JH/IF: April 8</td>
</tr>
<tr>
<td>Literature Search (pass/ fail)</td>
<td>Compulsory</td>
<td>1-2</td>
<td>March 29</td>
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<tr>
<td>Qualitative and Quantitative Class Exercises</td>
<td>Compulsory</td>
<td>1-3</td>
<td>Qualitative: April 5; Quantitative: April 11</td>
<td>Qual: Peer review April 5; Quant: Peer review April 12</td>
</tr>
<tr>
<td>(pass/fail)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ethics review (A-F) Tim</td>
<td>20%</td>
<td>2</td>
<td>April 22</td>
<td>Peer Review April 23</td>
</tr>
<tr>
<td>Draft research proposal (3 pages) (A-F)</td>
<td>5%</td>
<td>1-3</td>
<td>April 23</td>
<td>April 24</td>
</tr>
<tr>
<td>Presentation and Discussion (A-F)</td>
<td>10%</td>
<td>1-3</td>
<td>April 26</td>
<td>April 26</td>
</tr>
<tr>
<td>Final Research proposal (A-F)</td>
<td>65%</td>
<td>1-3</td>
<td>April 30</td>
<td>May 9</td>
</tr>
<tr>
<td>Course evaluation</td>
<td>Compulsory</td>
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</table>

Attendance of all scheduled events is compulsory, apart from the optional discussion sessions. Participation does not only mean attendance, the participant must have prepared for and take an active role in class.

Criteria for assessment.
The participant must achieve passing grades for all parts of the course in order to pass the course as a whole. Failure to submit on time will result in a maximum grade C. The maximum grade for re-examination is a C.
The following grades are issued, the lower limits for each grade is expressed as a percentage of the maximum points available:

A 95% Excellent
B 85% Very good
C 75% Good
D 65% Satisfactory
E 60% Sufficient (pass)
Fx 50% Insufficient (fail)
F Below 50% Poor or insufficient conduct (fail)

A requires setting of a novel and realistic research question; showing excellent insight and deep understanding of how previous modules’ concepts and methodologies are relevant to and relate to the research question, as well as identify other relevant concepts and methods where needed. Excellence in analysis, assessment and synthesis in written and oral discussions. No formalia issues.

B requires setting of a novel and realistic research question; showing very good insight and understanding of how the previous module’s concepts and methodologies are relevant to and relate to the research question. Shows high level in analysis, assessment and synthesis in written and oral discussions. Limited formalia issues.
C requires setting of an interesting and/or realistic research question; showing good insight and understanding of how the previous module’s concepts and methodologies are relevant to and/or relate to the research question; as well as independent sound judgements and analytical skills in discussing them.

D requires setting of an interesting or realistic research question; showing insight and understanding of how the previous module’s concepts and methodologies are relevant to or relate to the research question.

E is issued to participants who can set a research question relevant to the content of previous modules, can identify and define the basic concepts relating to the question and can identify relevant methodology.

**Reading List**

- SRC Thesis Guidelines (on Mondo)
- Readings will be provided by your supervisor if you have one, and you will complete these with a literature search.

**Recommended Reading:**

(Reference copies in the student library in Cornelia Ludwig’s office)

Eigenbrode SD, Rourke MO, Wulforst JD, et al Employing Philosophical Dialogue in Collaborative Science. 57:55–64*

*This includes an interesting reflective test to do on your own to assess and address your philosophical commonalities and disparities.