



**KTH Arkitektur
och samhällsbyggnad**

Planning for Resilience

7.5 credits

AG2811

28 August – 11 October 2017

If you have questions regarding the course, please use e-mail primarily. Canvas will be used for information during the course so have a look there regularly. All course documents will be posted on Canvas. The course schedule can be found on KTH Social.

Responsible teacher

Rebecka Milestad, e-mail rebecka.milestad@abe.kth.se

Examiner

Sara Borgström, e-mail sara.borgstrom@abe.kth.se

Course assistant

Jacob von Oelreich, phone 08-790 8532, e-mail jacob.von.oelreich@abe.kth.se

Scope and learning objectives

The course introduces the participants to different perspectives on complex adaptive systems and their resilience, adaptability and transformability. Theories and perspectives are analysed in lectures, seminars and readings, and policy implications discussed. Special reference to the concepts in a planning context will be made.

In order to pass the course you should have achieved the following learning objectives:

1. Be able to describe different meanings of the major concepts (including resilience, adaptability, transformability, social-ecological systems and complex adaptive systems) and describe how these concepts are related within different theoretical frameworks

2. Be able to describe and assess policy and planning implications of these concepts
3. Be able to apply the central concepts of the course in a planning context

Learning activities

The course equals 200 hours of work for the students. This means that most of the learning will take place outside the classroom (reading, reflecting, writing the home exam and project group work). The scheduled activities are structured as lectures, three literature seminars, a study visit and project work presentations and evaluations. Important learning activities include the preparation for the seminars – which involves reading the course literature and writing down your questions on the literature before the seminar – the home exam and the group project work.

Seminars (SEM)

The objective of the three seminars is to gain understanding of the key concepts in resilience thinking. The objective is also to develop skills in group discussions, peer learning and performing tasks together. The literature seminars will help you prepare for the home exam and are an opportunity to learn together. The seminars consist of a literature discussion, which the students organise parts of themselves. A detailed instruction for these discussions and more information about the seminars can be found in the document about seminars on Canvas (the seminar instruction).

Home exam (TEN)

After the first half of the course you will write an individual home exam covering the central concepts of the course. Your task is to show that you have achieved learning objectives 1 and 2. A detailed instruction for the home exam including grading will be posted on Canvas.

Group project/project work (PRO)

The project group work is organized as follows:

- In the beginning of the course (6 September) you will be divided into groups.
- The groups will perform a resilience assessment (project work) and write a report.
- You should decide on and submit a topic for your assessment at the latest at 12:00 on Monday 18 September. Send an e-mail to the course assistant with your suggestion. The course leaders will give you an OK (or another suggestion) before 18:00 the same day.
- Please note that each group should make a unique assessment.
- A detailed instruction will be posted on Canvas and discussed on 18 September.
- On one occasion (27 September) the groups have the possibility to meet the course leaders and discuss the progress of their work. On the same occasion (27 September, afternoon) the project groups will discuss their progress with other groups in a workshop.
- The first versions of the resilience assessments/project work should be sent by e-mail to the course leaders on Tuesday 10 October before noon (12:00).
- The course leaders will bring printed copies to the rest of the class on Wednesday 11 October. On this day, you will also present your assessments to the rest of the group and the course leaders. The other students will evaluate the reports and the presentations.
- With the feedback you receive on 11 October, you can revise your reports.
- You should upload a final version on Canvas before 16:00 on Wednesday 18 October.

Study visit

On Wednesday 13 September we will make a study visit to Sundbyberg municipality. Information given during this visit will give you important inspiration for the resilience assessment/project work. More information about the study visit will be given during the course introduction.

Use scientific referencing

When you write (literature assignments, home exam, project work), you are expected to make proper scientific references to the literature and other sources. For more information on writing, study the course documents “Tips for Acknowledging Sources” and “Harvard referencing” on Canvas. You can also ask the course assistant for help.

Examination

Seminars (SEM)

The seminars equal 2 credits. The grading for the seminars is pass or fail. In order to pass you have to prepare for and participate in all three seminars. In order to pass seminars 1, 2 and 3 you have to read the specified literature and (for each seminar) write a page about your questions and reflections on the literature. This assignment must be handed in on paper to the course assistant before each seminar begins (see schedule). Bring **two printed copies** of your literature assignment to each of the seminars 1, 2 and 3. A detailed instruction will be posted on Canvas.

You need to participate in all three seminars in order to pass the course. If you for some reason would miss parts of a seminar or a full seminar you should inform the course assistant beforehand. In that case you should send your literature assignment before or just after the seminar to the course assistant by e-mail. It is possible to make up for missing part of one seminar, or one full seminar, by preparing for and attending the extra seminar. This is scheduled for Monday 2 October. Instructions for this occasion will be handed out to those concerned a couple of days before the extra seminar. The assignment for the extra seminar will stand in relation to the amount of time the student has missed in the regular seminars. The workload for the extra seminar will be somewhat more demanding than preparing for and taking part in the regular seminars.

Home exam (TEN)

The home exam equals 3 credits. The grading for the home exam is A, B, C, D, E, Fx, F. The grading scale for the home exam will be provided in the home exam instruction. The students are expected to use the course literature and possibly other scientific sources to answer the questions in the home exam. It is allowed to work in pairs or in groups, but each exam should be handed in individually and they will be checked for plagiarism, i.e. it is not allowed to write the same text as any other student. The home exam will be posted on Canvas 13:00 on Monday 18 September and should be submitted on Canvas by 09:00 on Monday 25 September. If you receive the grade Fx, you get a chance to raise your grade to an E by submitting a revised version of the home exam + one additional question given to you by the course leaders after the course. If this is not done successfully, the grade will be F.

Group project/project work (PRO)

The group project, or project work, is a group exam and equals 2.5 credits. The grading for the group exam is A, B, C, D, E, Fx, F. The grading criteria for the group exam will be provided in the group exam instruction. The project is to make a resilience assessment of (parts of) a municipality (or another geographical area of suitable size). The group project includes researching your topic area, going through the steps in the resilience assessment, writing your report, preparing a presentation, giving the presentation, evaluating another group's report and presentation, and revising your own report for the final upload on Canvas. The course leaders will also evaluate the reports and oral presentations. Between the first evaluation of your report (on 11 October) and the final evaluation by the course leaders (after 18 October) it is possible to raise the grade. The general approach is that students in a given group will be given the same grade.

The final course grade is calculated as a rounded, weighted average of TEN and PRO. We use the following matrix to guide the grade-setting:

	Home exam				
Project work	A	B	C	D	E
A	A	B	B	C	D
B	A	B	C	C	D
C	B	B	C	D	D
D	B	C	C	D	E
E	C	C	D	D	E

A is the highest grade and Fx means that the student did not pass the assignment/course. Fx means that it is possible to pass if an extra task is completed successfully. In that case the grade will be E. The supplementing task must be completed within six weeks from when the student received her/his result. After that, the grade corresponds to an F. It is not possible to improve given grades.

The home exam and project work report will be checked for plagiarism. Plagiarism will be reported to KTH's Disciplinary Committee, which might decide to suspend a student from KTH for a period of 3 weeks to 6 months. To avoid plagiarism it is very important to use scientific referencing properly. If you have questions about referencing, please ask the course assistant.

Students with disabilities

Support via Funka

If you have a disability, you may receive support from Funka. Read more at:

<https://www.kth.se/en/student/studentliv/funktionsnedsattning>

Inform the teacher

We also recommend that you inform the teacher and course assistant regarding any need you may have in relation to a disability. Funka does not automatically inform the teacher.

Information about registration and deregistration

Please register online. Please do not register on the course unless you are fully certain that you want to take it. If you change your mind and want to deregister from the course later, it is very important that you let us know by e-mail and that you deregister online.

Administrative questions

If you have any problems or questions regarding registration on the course, or questions relating to registration of grades after the course, please contact administrator Paulina von Rahmel directly by e-mail: pauvr@kth.se

Course literature

The course literature is available on Canvas or as e-books. Note that additional reading may be added during the course. For each seminar there is a list of assigned reading. You are expected to read all the texts and bring your questions on the texts to the seminars. The complete list of course literature is your resource for the home exam and the project work.

Seminar 1. Introduction to resilience thinking and key concepts

Folke, C. (2006). Resilience: The emergence of a perspective for social-ecological systems analyses. *Global Environmental Change* 16: 253–267.

Folke, C., S. R. Carpenter, B. Walker, M. Scheffer, T. Chapin, and J. Rockström (2010). Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society* 15(4): 20. [online] URL: [http:// www.ecologyandsociety.org/vol15/iss4/art20/](http://www.ecologyandsociety.org/vol15/iss4/art20/)

Stockholm resilience centre folder: What is resilience? An introduction to social-ecological research. [online] URL: http://applyingresilience.org/wp-content/uploads/sites/2/2016/04/What_is_resilience_ENG_aktiv.pdf

Walker, B. and D. Salt (2006). *Resilience thinking. Sustaining ecosystems and people in a changing world*. Island Press. [**can be read as an e-book at the KTH library**]

Seminar 2. Practical applications and urban resilience

Campanella, T. (2006). Urban resilience and the recovery of New Orleans. *Journal of the American Planning Association*, 72:2, 141–146.

Lu, P. and D. Stead (2013). Understanding the notion of resilience in spatial planning: A case study of Rotterdam, The Netherlands. *Cities*, 25:200–212.

Resilience Alliance. (2010). Assessing resilience in social-ecological systems: Workbook for practitioners. Version 2.0. Online: <http://www.resalliance.org/3871.php>

Sellberg, M., C. Wilkinson & G. D. Peterson. (2015). Resilience assessment: a useful approach to navigate urban sustainability challenges. *Ecology and Society* 20(1): 43. <http://dx.doi.org/10.5751/ES-07258-200143>

Stockholm resilience centre folder: Applying resilience thinking. Seven principles for building resilience in social-ecological systems. [online] URL: http://applyingresilience.org/wp-content/uploads/sites/2/2016/04/Applying_resilience_thinking.pdf

Wilkinson, C., L. Porter & J. Colding. (2010). Metropolitan planning and resilience thinking: a practitioner's perspective. *Critical Planning* 17: 25–44.

Seminar 3. Critical reflections on resilience thinking

Brand, F. S., and K. Jax (2007). Focusing the meaning(s) of resilience: resilience as a descriptive concept and a boundary object. *Ecology and Society* 12(1): 23. [online] URL: <http://www.ecologyandsociety.org/vol12/iss1/art23/>

Fabinyi, M., L. Evans, and S. J. Foale (2014). Social-ecological systems, social diversity, and power: insights from anthropology and political ecology. *Ecology and Society* 19(4): 28. <http://dx.doi.org/10.5751/ES-07029-190428>

Olsson, P., V. Galaz, and W. J. Boonstra (2014). Sustainability transformations: a resilience perspective. *Ecology and Society* 19(4): 1. <http://dx.doi.org/10.5751/ES-06799-190401>

White, I and P. O'Hare (2014). From rhetoric to reality: which resilience, why resilience and whose resilience in spatial planning? *Environment and Planning C*, 32:934–950.

The resilience assessment project group work

Albers, M and S. Deppisch (2013). Resilience in the light of climate change: useful approach or empty phrase for spatial planning? *European Planning Studies*, 21:10, 1598–1610.

Resilience Alliance. (2010). Assessing resilience in social-ecological systems: Workbook for practitioners. Version 2.0. Online: <http://www.resalliance.org/3871.php>

Stockholm resilience centre folder: Applying resilience thinking. Seven principles for building resilience in social-ecological systems. [online] URL: http://applyingresilience.org/wp-content/uploads/sites/2/2016/04/Applying_resilience_thinking.pdf

Optional literature resources

Applying resilience website: <http://applyingresilience.org/en/start-en/>

Baggio, J. A., K. Brown, and D. Hellebrandt (2015). Boundary object or bridging concept? A citation network analysis of resilience. *Ecology and Society* 20(2): 2. <http://dx.doi.org/10.5751/ES-07484-200202>

Barthel, S. et al. 2013. Q-book Albano. Sustainability [Principles of social-ecological urbanism]. Stockholm.

Bures, R., and W. Kanapaux (2011). Historical regimes and social indicators of resilience in an

urban system: the case of Charleston, South Carolina. *Ecology and Society* **16**(4): 16.

Carpenter, S et al. (2001). From metaphor to measurement: resilience of what to what? *Ecosystems* 4: 765–781.

Fath, B. D., C. A. Dean, and H. Katzmaier (2015). Navigating the adaptive cycle: an approach to managing the resilience of social systems. *Ecology and Society* 20(2): 24.
<http://dx.doi.org/10.5751/ES-07467-200224>

Hornborg, A. 2009. Zero-zum world: challenges in conceptualizing environmental load displacement and ecologically unequal exchange in the world-system. *International Journal of Comparative Sociology* 50: 237-262.

Marcus, L., and J. Colding. 2014. Toward an integrated theory of spatial morphology and resilient urban systems. *Ecology and Society* 19(4): 55. <http://dx.doi.org/10.5751/ES-06939-190455>

Meerow, S., Newell, J.P. and M. Stults (2016). Defining urban resilience: A review. *Landscape and Urban Planning*, 147:38–49.

Resilience dictionary: <http://www.stockholmresilience.org/research/resilience-dictionary.html>

Rockström, J. et al., (2009). A safe operating space for humanity. *Nature* 461(24): 472–475.

Walker, B. and J. A. Meyers. 2004. Thresholds in ecological and social–ecological systems: a developing database. *Ecology and Society* **9**(2): 3. [online] URL:
<http://www.ecologyandsociety.org/vol9/iss2/art3>

Wilkinson, C. (2012a). Social-ecological resilience: insights and issues for planning theory. *Planning theory* 11(2): 148–169.

Wilkinson, C. (2012b). Urban Resilience: What Does it Mean in Planning Practice. *Planning Theory & Practice*. 13 (2): 319–324. **Note that the whole journal issue (Davoudi, 2012) is on Canvas, but you are only encouraged to read the pages in question.**

Wilkinson, C., L. Porter & J. Colding. 2010. Metropolitan planning and resilience thinking: a practitioner’s perspective. *Critical Planning* 17: 25–44.

Welcome to the course!

Rebecka Milestad, Sara Borgström and Jacob von Oelreich