

# Syllabus for the Module “Environmental Urban Planning”

Summer semester 2024  
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Please check Moodle for eventual updates.

## Table of contents

Syllabus for the Module “Environmental Urban Planning” .....	1
1 Course characteristics .....	2
2 Learning objective .....	2
3 Course contents .....	3
4 Course organization .....	3
5 Course fulfillment requirements and evaluation criteria .....	3
6 Agenda .....	5
6.1 Session 1: Introduction, Overview, Skarpnäck case study .....	5
6.2 Session 2: Environmental urban planning in a nutshell .....	6
6.3 Session 3: Ecosystem services definitions, concepts, categories, and methods .....	7
6.4 Session 4*: Urban concept, definitions and links to urban planning and decision-making .....	8
6.5 Session 5: Planning for urban ecosystem services/NBS + Problem analysis (hands on) – (Online) .....	10
6.6 Session 6**: Presenting joint problem analysis in Skarpnäck .....	10
6.7 Session 7*: Developing visions and scenario storylines (hands on) .....	10
6.8 Session 8: Developing visions and scenario storylines – continued (hands on) .....	11
6.9 Session 9**: Presenting proposed visions for Skarpnäck .....	12
6.10 Session 10: Prioritizing NBS in Skarpnäck: REPLAN projects + Designing solutions (hands-on) .....	13
6.11 Session 11***: Geodesign in Skarpnäck – Suitability Analysis (hands-on) .....	13
6.12 Session 12***: Geodesign in Skarpnäck – Land use change and Impact assessment (hands-on) .....	13
6.13 Session 13**: Presenting proposed solutions and their impacts for Skarpnäck .....	14
6.14 Session 14: Final wrap up and evaluation .....	15
7 Submission of final reports .....	15
8 Contact .....	15

## 1 Course characteristics

Name of module	Environmental Urban Planning (English)
Course No.	170173-SS 24
Participants	Compulsory RePIC, elective module M.Sc
Language	English
Faculty	Blal Adem Esmail
Time	Monday, 14:00 to 16:00
First meeting	April 8, 2024
Last meeting	July 15, 2024
Break, no meetings	May 21-25, 2024, Whitsun holidays (both days included)
Report submission	August 22, 2024
Place	RUB, Room IA 02/111 Zoom Meeting <a href="https://ruhr-uni-bochum.zoom.us/j/68223652916?pwd=QjVEVWVdhSQxNcjJ1YXNKSEFOa1Z1Zz09">https://ruhr-uni-bochum.zoom.us/j/68223652916?pwd=QjVEVWVdhSQxNcjJ1YXNKSEFOa1Z1Zz09</a> Meeting ID: 682 2365 2916 - Passcode: Ecosystem
Studienleistung/Prüfungsform	Studienleistung: Active participation in the course, documented through attendance of sessions, submission of assigned tasks and intermediate/final group presentations.  (7 CP; Workload 189 h: Contact hours 30; Self-Study 159 h)  Prüfungsleistung: <b>Final report (100%)</b>

## 2 Learning objective

The learning objective of the course is to gain an understanding of interdisciplinary perspectives on concepts, approaches and methods, and implications of **environmental planning in urban contexts**. The course will expose students to the state of knowledge of research and practice around environmental planning, with a specific focus on urban ecosystem services, and actively engage them in discussions of current literature and emerging ideas. In addition, through a case study application, students will gain hands-on experience on scenario-based planning for ecosystem services to address specific societal challenges. Furthermore, students will gain experience in reading and understanding scientific journal articles.

Having successfully passed the module, the students:

- ❖ have gained a critical understanding of key concepts of environmental urban planning,
- ❖ have a knowledge of the tasks and structure of landscape and spatial planning in European context, with some perspectives from outside Europe,
- ❖ comprehend how environmental urban planning can contribute to the conservation and sustainable use of biodiversity and ecosystem services,
- ❖ are familiar with important instruments of landscape and environmental planning,
- ❖ have gained some hands-on experience in a small collaborative spatial planning exercise.

### 3 Course contents

The course will cover a range of issues in the field of environmental urban planning, including

- Definitions of landscape and environment
- Systems, theory, and methods of spatial and environmental planning
- Instruments for proactive and reactive environmental planning
- Options of environmental urban planning for biodiversity and ecosystem services
- Practical applications of collaborative urban planning through geodesign

### 4 Course organization

The seminar will take place in the summer semester of 2024 and includes both asynchronous learning, which is carried out individually and in groups at a selected time to prepare the sessions, as well as joint synchronous learning in the lecture or via video conference. Below you will find the tasks for each appointment, please address these tasks before each meeting. Completing the reading tasks and other tasks in preparation for the respective sessions are considered part of your 'Studienleistung'.

We use [Moodle](#) (Environmental Urban Planning 170173-SS 24) for exchanging information. The password is "Ecosystem".

The regular meetings (**Mondays, 14:00 to 16:00**) are used for face-to-face at the **RUB, Room IA 02/11**. We also use **Zoom** for hybrid or online meetings. Further information about Zoom can be found here: <https://zoom.us/> Please familiarize yourself with Zoom well before your first meeting and please test whether your connection, microphone and speakers are working well before each individual video conference meeting.

You can find the meeting room via the following link:

#### Join Zoom Meeting

<https://ruhr-uni-bochum.zoom.us/j/68223652916?pwd=QjVEWVdhS0xNcj1YXNKSEFOa1Z1Zz09>

**Meeting ID:** 682 2365 2916

**Passcode:** Ecosystem

#### One tap mobile:

+496950502596, 68223652916#, \*630832555#, +496971049922, 68223652916# Germany

#### Dial by your location

+49 695 050 2596, +49 69 7104 9922, +49 69 3807 9883, +49 69 3807 9884, +49 69 5050 0951 Germany

### 5 Course fulfillment requirements and evaluation criteria

#### Studienleistung:

Each student is required to complete the tasks listed below in preparation for each meeting and to actively participate in the face-to-face and online meetings via Zoom. The completion of preparatory tasks, the contribution to the meetings and the active participation in two special meetings are considered as 'Studienleistung'. In these sessions you will present your preliminary and final results to external reviewers.

**Prüfungsleistung:**

The Prüfungsleistung consists of a **final group report (100%)**. Students must work in smaller **teams of 3-4 students**; and at the same time must coordinate the group work of the entire class. They will be assigned an environmental urban planning case study area, and each team will be asked to select a topic/perspective of their choice after consultation with the course instructors. The group's final report should focus on the hands-on environmental urban planning developed during the course.

The report should be written in English and have a length of **8000 words** (+/-10%, i.e. between 8800 and 7200 words). The reports should be written in the style of a scientific paper. It should follow a general structure and cover each of the following sections:

- Title, Authors, Abstract (250 words), 3-5 Keywords, 3-5 Highlights (50 characters each),
- Introduction,
- Methods,
- Results,
- Discussion,
- Conclusion,
- References.

Please see the '**Materials - Scientific writing**' folder in Moodle, which contains useful tips and tricks for writing academic papers, including an academic phrasebook for formulating research objectives and a template with the required format for submitting your work. The folder also contains a description of the evaluation criteria used in grading the reports.

Example of reports from the previous years can be provided on request.

Please do not hesitate to contact us during the semester to discuss the structure and process of writing your seminar paper.

## 6 Agenda

### Overview

No	Date*	Time	Topic	Lecturer
1	April 8, 2024	14:00-16:00	Introduction, Overview, Skarpnäck (environmental planning) case study	BAE (Online)
2	April 15, 2024	14:00-16:00	Environmental Urban Planning in a Nutshell (Key concepts of environmental urban planning)	BAE
3	April 22, 2024	14:00-16:00	ES definitions, concepts, categories, and methods	BAE
4*	April 29, 2024	14:00-16:00	Urban ES concept, definitions and links to urban planning and decision-making + Co-design of the Skarpnäck (environmental planning) case study	BAE
5	May 6, 2024	14:00-16:00	Planning for urban ecosystem services/NBS + Problem analysis (hands on)	BAE (Online)
<b>6**</b>	<b>May 13, 2024</b>	<b>14:00-16:00</b>	<b>Presenting joint problem analysis in Skarpnäck</b>	<b>Teams</b>
<b>Whitsun holidays May 21-25, 2024</b>				
7*	May 27, 2024	14:00-16:00	Co-design of hand-on session + Developing visions and scenario storylines (hands on)	BAE
8	June 3, 2024	14:00-16:00	Developing visions and scenario storylines <i>continued</i> (hands on)	BAE
<b>9**</b>	<b>June 10, 2024</b>	<b>14:00-16:00</b>	<b>Presenting proposed visions for Skarpnäck</b>	<b>Teams</b>
10	June 17, 2024	14:00-16:00	Prioritizing NBS in Skarpnäck: REPLAN projects + Designing solutions (hands-on)	JZ
11***	June 24, 2024	14:00-16:00	Geodesign in Skarpnäck – Suitability Analysis (hands-on)	Teams
12***	July 1, 2024	14:00-16:00	Geodesign in Skarpnäck – Land Use Change and Impact Assessment (hands-on)	Teams
<b>13**</b>	<b>July 8, 2024</b>	<b>14:00-16:00</b>	<b>Presenting proposed solutions for Skarpnäck and their impacts</b>	<b>Teams</b>
14	July 15, 2024	14:00-16:00	Final wrap up and evaluation	BAE

**Deadline for submitting final reports: August 22, 2024, at 14.00.**

Initials:

BAE – Blal Adem Esmail, JZ – Jiayu Zheng.

Co-design sessions \*; presentation sessions \*\*; geodesign sessions \*\*\*

### 6.1 Session 1: Introduction, Overview, Skarpnäck case study

#### 6.1.1 Topics

1. Welcome, collection of interests and expectations.
2. Introduction to aims and requirements, short introduction to topic and procedures.
3. Short introduction to case study

#### 6.1.2 Case Study Material

For the hands-on environmental planning exercise, we will work on a case study in Stockholm, Sweden. Please note that geospatial data for the case study is included in the [Moodle Folder – Materials](#).

Below you will also find two links where you can download some relevant socio-demographic data according to the Demographic Statistical Areas (DeSO). (Perhaps it is better to use the website's automatic translation).

- <https://www.scb.se/vara-tjanster/oppna-data/oppna-geodata/deso--demografiska-statistikomraden/> (the shapefile of the Deso for entire Sweden)
- <https://www.scb.se/hitta-statistik/regional-statistik-och-kartor/regionala-indelningar/deso---demografiska-statistikomraden/deso-tabellerna-i-ssd--information-och-instruktioner/> (data that you can associate with the shapefile above).

Swedish Land Surveying website, you can find the data that is open for properties in Stockholm and Skarpnäck:

- <https://www.lantmateriet.se/en/maps/our-map-services/my-map/>

## 6.2 Session 2: Environmental urban planning in a nutshell

### 6.2.1 Guiding questions for the meeting

1. How can landscape planning be defined?
2. What are the tasks and outputs of landscape planning?
3. What is the relationship between environmental planning, landscape planning, spatial planning, and other sectoral planning approaches?
4. At which spatial levels is landscape planning conducted, and what are the respective outputs?
5. How does landscape planning take into consideration the functions or services provided by landscapes with relevance for people?

### 6.2.2 Assignment for preparation

Please read (or skim through) the following two publications. Please develop a one-page summary, in words and/or pictures, to address the above-named questions. The papers shall be submitted as PDF-files (scans of handwritten notes are ok as well) in Moodle Folder 'Meeting 2' until noon (12am) the day before the meeting.

- Council of Europe (2000): European Landscape Convention.  
<http://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176>
- von Haaren et al. (2008): Landscape planning – The basis for sustainable landscape development. Report from BfN. [especially pages 6-17]  
[https://www.bfn.de/fileadmin/MDB/documents/themen/landschaftsplanung/landscape\\_planning\\_basis.pdf](https://www.bfn.de/fileadmin/MDB/documents/themen/landschaftsplanung/landscape_planning_basis.pdf)

Additional (facultative, not required for the task above) on urban environmental planning:

- von Haaren et al. (2019): Landscape planning with ecosystem services. (Springer)  
[https://eds.s.ebscohost.com/eds/detail/detail?vid=1&sid=edc75861-ee92-49ce-afd1-94adeb0c9f8d%40redis&bdata=JkF1dGhUeXBIPWlwLHVpZCZsYW5nPWRIJnNpdGU9ZWRzLWxpdmUm\\_c2NvcGU9c2l0ZQ%3d%3d#AN=2540109&db=edsebk](https://eds.s.ebscohost.com/eds/detail/detail?vid=1&sid=edc75861-ee92-49ce-afd1-94adeb0c9f8d%40redis&bdata=JkF1dGhUeXBIPWlwLHVpZCZsYW5nPWRIJnNpdGU9ZWRzLWxpdmUm_c2NvcGU9c2l0ZQ%3d%3d#AN=2540109&db=edsebk)
- Geneletti et al (2020): Planning for Ecosystem Services in Cities. (Springer Cham)  
<https://link.springer.com/book/10.1007/978-3-030-20024-4>

## 6.3 Session 3: Ecosystem services definitions, concepts, categories, and methods

### 6.3.1 Guiding questions for the meeting

1. How has the ecosystem services concept evolved?
2. How can ecosystem services be defined?
3. How can ecosystem services be conceptualized?
4. What does the diversity of ecosystem services definitions and concepts mean for decision-making?

### 6.3.2 Assignment for preparation (in advance of the meeting!)

**Task 1:** Please select and read one of the three papers below. Please produce an A4 page with key insights from the paper you read – either individually or as a joint paper with a partner (max group size is two). The papers shall be submitted as PDF-files in Moodle until 14.00 the day before the meeting. **Please name your submission files with your last name and the topic (e.g. Mueller\_EUP Session 3\_task1.pdf).** In your papers, please answer the questions:

- Q1. What is the purpose of the use of the ecosystem services concept?  
Q2. Which definition of ecosystem services has been used?  
Q3. Which conceptual framework has been applied?

**Task 2:** Please prepare a collage representing a picture of an urban landscape and the ecosystem services you can identify in this area. **Please consider and area in the metropolitan region of Stockholm, Sweden.** You can use the icons at the end of the TEEB publication or whatever symbols you might find appropriate to represent the ecosystem services. Please be prepared to explain your collage and the identified ecosystem services during the meeting. The collage shall be submitted as PDF-files in Moodle until 14.00 the day before the meeting.

**Please name your submission files with your last name and the topic (e.g. Mueller\_EUP Session 3\_task2.pdf).**

#### **The three papers to read:**

Concerning the Millennium Ecosystem Assessment:

- Millennium Ecosystem Assessment (2005) Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC. (*Only the preface is needed*, publication available here: <https://www.millenniumassessment.org/documents/document.356.aspx.pdf>)

Concerning the TEEB studies:

- Haines-Young, R. & M. Potschin 2010. The links between biodiversity ecosystem services and human well-being. In: Raffaelli, D. & C. Frid (Eds.). Ecosystem Ecology: A New Synthesis. Cambridge University Press, Cambridge, 110–139. (publication available here: [https://www.nottingham.ac.uk/cem/pdf/Haines-Young&Potschin\\_2010.pdf](https://www.nottingham.ac.uk/cem/pdf/Haines-Young&Potschin_2010.pdf))

Concerning IPBES:

- Diaz, S. et al. (2016): The IPBES Conceptual Framework — connecting nature and people. *Current Opinion in Environmental Sustainability* 14, 1-15. (whole article is relevant, available here with VPN enabled: <https://doi.org/10.1016/j.cosust.2014.11.002>).

**Additional (facultative, not required) readings on ecosystem services categorization systems:**

Concerning the Millennium Ecosystem Assessment:

- MA (Chapter 2 of the MA 2003 – A framework for assessment book (<https://www.millenniumassessment.org/en/Framework.html>). You find the chapter here: <https://www.millenniumassessment.org/documents/document.300.aspx.pdf>

Concerning the TEEB Classification system:

- De Groot et al. (2009) Integrating the ecological and economic dimensions in biodiversity and ecosystem service valuation. In: TEEB, The Economics of Ecosystems and Biodiversity Ecological and Economic Foundations. Edited by Pushpam Kumar. Earthscan, London and Washington. Please check especially page 21 and appendix 2 (<http://www.teebweb.org/wp-content/uploads/2013/04/D0Chapter-1-Integrating-the-ecological-and-economic-dimensions-in-biodiversity-and-ecosystemservice-valuation.pdf>)
- Haines-Young, R. & M. Potschin 2010. **The links between biodiversity ecosystem services and human well-being**. In: Raffaelli, D. & C. Frid (Eds.). Ecosystem Ecology: A New Synthesis. Cambridge University Press, Cambridge, 110–139. (publication available here: [https://www.nottingham.ac.uk/cem/pdf/Haines-Young&Potschin\\_2010.pdf](https://www.nottingham.ac.uk/cem/pdf/Haines-Young&Potschin_2010.pdf))

Concerning the Common International Classification of Ecosystem Services – CICES (all information here: <https://cices.eu/>)

Concerning IPBES (<https://www.ipbes.net/sites/default/files/downloads/pdf/ipbes-5-inf-24.pdf>)

- Burkhard B, Maes J (eds) (2017) Mapping Ecosystem Services. Pensoft Publishers, Sofia, 374 pp. <https://ab.pensoft.net/articles.php?id=12837> (Chapter 2)
- 

## **6.4 Session 4\*: Urban concept, definitions and links to urban planning and decision-making**

### **6.4.1 Guiding questions for the meeting**

1. How does the ecosystem services concept apply to urban contexts? (e.g. urban ecosystem services in *sensu lato* vs *sensu stricto* in Tan et al 2020)
2. How can urban ecosystem services be defined?
3. what are similarities and differences between urban and natural ecosystems?
4. What are the spatial relationships in provision of ES and the scale of ES benefiting areas?
5. What early examples of real-world application into urban planning are there??

### **6.4.2 Assignment for preparation (in advance of the meeting!)**

Prepare a list of pros and cons of creating urban parks and wetlands as a nature-based solution for integrative development of metropolitan areas from the perspectives of different stakeholder groups (e.g. conservationist, developers, vulnerable groups, water management, and recreation).

#### **Required reading:**

*Note: Please inform us in case you do not have access.*



- Geneletti et al (2020): Planning for Ecosystem Services in Cities. (Springer Cham)  
<https://link.springer.com/book/10.1007/978-3-030-20024-4>
- Almenar et al. 2021. Nexus between nature-based solutions, ecosystem services and urban challenges.  
[https://www.researchgate.net/publication/343036463\\_Nexus\\_between\\_naturebased\\_solutions\\_ecosystem\\_services\\_and\\_urban\\_challenges](https://www.researchgate.net/publication/343036463_Nexus_between_naturebased_solutions_ecosystem_services_and_urban_challenges)
- Tan, P. Y. et al. A conceptual framework to untangle the concept of urban ecosystem services. *Landsc. Urban Plan.* 200, 103837 (2020).  
[https://www.researchgate.net/publication/340941775\\_A\\_Conceptual\\_Framework\\_to\\_Untangle\\_the\\_Concept\\_of\\_Urban\\_Ecosystem\\_Services](https://www.researchgate.net/publication/340941775_A_Conceptual_Framework_to_Untangle_the_Concept_of_Urban_Ecosystem_Services)

**Additional reading (read at least two of the following):**

- Vihervaara et al. (2016) Chapter 4.1, Biophysical quantification, in: Burkhard, Maes: Mapping Ecosystem Services. Pages: 93-101. PDF Download available here:  
<https://ab.pensoft.net/articles.php?id=12837>
- Brown, C., Reyers, B., Ingwall-King, L., Mapendembe, A., Nel, J., O'Farrell, P., Dixon, M. & Bowles-Newark, N. J. (2014). Measuring ecosystem services: Guidance on developing ecosystem service indicators. UNEPWCMC, Cambridge,UK. [https://www.unep-wcmc.org/system/dataset\\_file\\_fields/files/000/000/303/original/1850\\_ESI\\_Guidance\\_A4\\_WEB.pdf?14\\_24707843](https://www.unep-wcmc.org/system/dataset_file_fields/files/000/000/303/original/1850_ESI_Guidance_A4_WEB.pdf?14_24707843)
- Bolund, P. & Hunhammar, S. Ecosystem services in urban areas. *Ecological Economics* vol. 29 (1999).  
[https://www.researchgate.net/publication/222479141\\_Ecosystem\\_Services\\_in\\_Urban\\_Areas](https://www.researchgate.net/publication/222479141_Ecosystem_Services_in_Urban_Areas)
- Gómez-Baggethun, E. & Barton, D. N. Classifying and valuing ecosystem services for urban planning. *Ecol. Econ.* 86, 235–245 (2013).  
[https://www.researchgate.net/publication/257342478\\_Classifying\\_and\\_valuing\\_ecosystem\\_services\\_for\\_urban\\_planning](https://www.researchgate.net/publication/257342478_Classifying_and_valuing_ecosystem_services_for_urban_planning)
- von Haaren C, Lovett AA, Albert C (eds) (2019) *Landscape Planning with Ecosystem Services*. Springer Netherlands, Dordrecht (Chapter 1 and Chapter 3)  
[https://www.researchgate.net/publication/334008692\\_Landscape\\_Planning\\_and\\_Ecosystem\\_Services\\_The\\_Sum\\_is\\_More\\_than\\_the\\_Parts](https://www.researchgate.net/publication/334008692_Landscape_Planning_and_Ecosystem_Services_The_Sum_is_More_than_the_Parts)  
[https://www.researchgate.net/publication/334015665\\_Theories\\_and\\_Methods\\_for\\_Ecosystem\\_Services\\_Assessment\\_in\\_Landscape\\_Planning](https://www.researchgate.net/publication/334015665_Theories_and_Methods_for_Ecosystem_Services_Assessment_in_Landscape_Planning)
- McPhearson, T., Hamstead, Z. A. & Kremer, P. Urban Ecosystem Services for Resilience Planning and Management in New York City. *Ambio* 43, 502–515 (2014).  
[https://www.researchgate.net/publication/261718487\\_Urban\\_Ecosystem\\_Services\\_for\\_Resilience\\_Planning\\_and\\_Management\\_in\\_New\\_York\\_City](https://www.researchgate.net/publication/261718487_Urban_Ecosystem_Services_for_Resilience_Planning_and_Management_in_New_York_City)
- Haase, D. et al. A quantitative review of urban ecosystem service assessments: Concepts, models, and implementation. *Ambio* 43, 413–433 (2014).  
[https://www.researchgate.net/publication/261751725\\_A\\_Quantitative\\_Review\\_of\\_Urban\\_Ecosystem\\_Service\\_Assessments\\_Concepts\\_Models\\_and\\_Implementation](https://www.researchgate.net/publication/261751725_A_Quantitative_Review_of_Urban_Ecosystem_Service_Assessments_Concepts_Models_and_Implementation)

## **6.5 Session 5: Planning for urban ecosystem services/NBS + Problem analysis (hands on) – (Online)**

### **6.5.1 Guiding questions for the meeting**

1. What are the main societal challenges in the study area?
2. What urban development opportunities does the plan set for the study area?

### **6.5.2 Assignment for preparation (in advance of the meeting!)**

#### **Session Agenda**

**Planning for urban ecosystem services/NBS  
Problem analysis (hands on)**

## **6.6 Session 6\*\*\*: Presenting joint problem analysis in Skarpnäck**

### **6.6.1 Guiding questions for the meeting**

3. What are the main societal challenges in the study area?
4. What urban development opportunities does the plan set for the study area?

### **6.6.2 Assignment for preparation (in advance of the meeting!)**

#### **Session Agenda**

- Team A
- Team B
- Team C
- Overall discussion

## **6.7 Session 7\*: Developing visions and scenario storylines (hands on)**

### **6.7.1 Content**

1. Reflection on the presentation session
2. Introducing of the Framework for Alternative Future by Steinz
3. Co-design of the hands-on process: Teams formation, discussing next tasks
4. Visions and scenario storylines

### **6.7.2 Update after the co-design process**

- Team A – Jonas Lensker et al. NATURE FOR NATURE
- Team B – Zerin Demir et al. NATURE FOR SOCIETY
- Team C – Gabriel Olegario et al. NATURE AS CULTURE

**Recommended readings:**

- Ahern, Jack. 2005. “Theories, Methods & Strategies for Sustainable Landscape Planning.” In *From Landscape Research to Landscape Planning: Aspects of Integration, Education and Application*, edited by B. Tress, G. Tres, G. Fry, and P. Opdam, 434. Frontis - Wageningen International Nucleus for Strategic Expertise.
- Albert, Christian, Mario Brillinger, Paulina Guerrero, Sarah Gottwald, Jennifer Henze, Stefan Schmidt, Edward Ott, and Barbara Schröter. 2021. “Planning Nature-Based Solutions: Principles, Steps, and Insights.” *Ambio* 50 (8): 1446–61. <https://doi.org/10.1007/s13280-020-01365-1>.
- IPBES. 2022. Summary for Policymakers of the Methodological Assessment Report on the Diverse Values and Valuations of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Bonn, Germany: IPBES secretariat.
- Mansur, Andressa V., Robert I. McDonald, Burak Güneralp, Hye Jin Kim, Jose A. Puppim de Oliveira, Corey T. Callaghan, Perrine Hamel, et al. 2022. “Nature Futures for the Urban Century: Integrating Multiple Values into Urban Management.” *Environmental Science and Policy* 131: 46–56. <https://doi.org/10.1016/j.envsci.2022.01.013>.
- Pascual, Unai, Patricia Balvanera, Christopher B. Anderson, Rebecca Chaplin-Kramer, Michael Christie, David González-Jiménez, Adrian Martin, et al. 2023. “Diverse Values of Nature for Sustainability.” *Nature* 620 (7975): 813–23. <https://doi.org/10.1038/s41586-023-06406-9>.
- Shipley, R., and R. Newkirk. 1999. “Vision and Visioning in Planning: What Do These Terms Really Mean?” *Environment and Planning B: Planning and Design* 26 (4): 573–91. <https://doi.org/10.1068/b260573>.
- Shipley, Robert. 2002. “Visioning in Planning: Is the Practice Based on Sound Theory?” *Environment and Planning A* 34 (1): 7–22. <https://doi.org/10.1068/a3461>.
- Shipley, Robert, and John L. Michela. 2006. “Can Vision Motivate Planning Action?” *Planning Practice and Research* 21 (2): 223–44. <https://doi.org/10.1080/02697450600944715>.
- Steiner, Frederick. 2000. *The Living Landscape: An Ecological Approach to Landscape Planning*. Second. New York: McGraw-Hill.
- Steiner, Frederick R., and Allan W. Shearer. 2016. “Geodesign—Changing the World, Changing Design.” *Landscape and Urban Planning* 156: 1–4. <https://doi.org/10.1016/j.landurbplan.2016.11.006>.
- Steinitz, Carl. 2012. *A Framework for Geodesign: Changing Geography by Design*. ESRI.

## 6.8 Session 8: Developing visions and scenario storylines – continued (hands on)

### 6.8.1 Guiding questions for the meeting

1. How do you envision the case study district in 2040?
2. What is a representative scenario storyline for the proposed vision?
3. What synergies and trade-offs arise from the different visions?

### 6.8.2 Assignment for preparation (in advance of the meeting!)

Each scenario team should prepare a “guiding statement/objective” and a short paragraph describing their specific scenario. For this purpose, please build on your previous understanding of the study area based on the problem analysis. It is important that you familiarize yourself with the respective perspectives of the nature-human relationships for which you are responsible, i.e. nature for nature, nature for society, and nature as society. Below you will find some recommended reading, but we encourage you to do further research.

#### Recommended readings:

- Ahern, Jack. 2005. “Theories, Methods & Strategies for Sustainable Landscape Planning.” In *From Landscape Research to Landscape Planning: Aspects of Integration, Education and Application*, edited by B. Tress, G. Tres, G. Fry, and P. Opdam, 434. Frontis - Wageningen International Nucleus for Strategic Expertise.
- Albert, C., C. von Haaren, J. C. Vargas-Moreno, and C. Steinitz. 2015. Teaching scenario-based planning for sustainable landscape development: An Evaluation of learning effects in the Cagliari studio workshop. *Sustainability (Switzerland)* 7: 6872–6892. doi:10.3390/su7066872.

- Albert, Christian, Mario Brillinger, Paulina Guerrero, Sarah Gottwald, Jennifer Henze, Stefan Schmidt, Edward Ott, and Barbara Schröter. 2021. “Planning Nature-Based Solutions: Principles, Steps, and Insights.” *Ambio* 50 (8): 1446–61. <https://doi.org/10.1007/s13280-020-01365-1>.
- Cohen-Shacham Walters, G., C. Janzen, and S. Maginnis. 2016. Nature-based solutions to address global societal challenges. Edited by E. Cohen-Shacham, G. Walters, C. Janzen, and S. Maginnis. Nature-based solutions to address global societal challenges. IUCN International Union for Conservation of Nature. doi:10.2305/IUCN.CH.2016.13.en.
- IPBES. 2022. Summary for Policymakers of the Methodological Assessment Report on the Diverse Values and Valuations of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Bonn, Germany: IPBES secretariat.
- Mansur, Andressa V., Robert I. McDonald, Burak Güneralp, Hye Jin Kim, Jose A. Puppim de Oliveira, Corey T. Callaghan, Perrine Hamel, et al. 2022. “Nature Futures for the Urban Century: Integrating Multiple Values into Urban Management.” *Environmental Science and Policy* 131: 46–56. <https://doi.org/10.1016/j.envsci.2022.01.013>.
- Pascual, Unai, Patricia Balvanera, Christopher B. Anderson, Rebecca Chaplin-Kramer, Michael Christie, David González-Jiménez, Adrian Martin, et al. 2023. “Diverse Values of Nature for Sustainability.” *Nature* 620 (7975): 813–23. <https://doi.org/10.1038/s41586-023-06406-9>.
- Shipley, R., and R. Newkirk. 1999. “Vision and Visioning in Planning: What Do These Terms Really Mean?” *Environment and Planning B: Planning and Design* 26 (4): 573–91. <https://doi.org/10.1068/b260573>.
- Shipley, Robert. 2002. “Visioning in Planning: Is the Practice Based on Sound Theory?” *Environment and Planning A* 34 (1): 7–22. <https://doi.org/10.1068/a3461>.
- Shipley, Robert, and John L. Michela. 2006. “Can Vision Motivate Planning Action?” *Planning Practice and Research* 21 (2): 223–44. <https://doi.org/10.1080/02697450600944715>.
- Steiner, Frederick. 2000. *The Living Landscape: An Ecological Approach to Landscape Planning*. Second. New York: McGraw-Hill.
- Steiner, Frederick R., and Allan W. Shearer. 2016. “Geodesign—Changing the World, Changing Design.” *Landscape and Urban Planning* 156: 1–4. <https://doi.org/10.1016/j.landurbplan.2016.11.006>.
- Steinitz, Carl. 2012. *A Framework for Geodesign: Changing Geography by Design*. ESRI.
- World Bank. 2021. *A Catalogue of Nature-Based Solutions for Urban Resilience*. A Catalogue of Nature-Based Solutions for Urban Resilience. Washington, D.C.: World Bank. doi:10.1596/36507.

## 6.9 Session 9\*\***: Presenting proposed visions for Skarpnäck**

### 6.9.1 Guiding questions for the meeting

1. What are the alternative visions and scenario storylines for the study area?
2. What are the spatial implications of the proposed visions?

### 6.9.2 Assignment for preparation (in advance of the meeting!)

Make sure you coordinate among you. For example, you could start with a brief introduction to the case study, a recap of the challenges from the four ES perspectives, and an overview of the hands-on environmental planning process. Following, each Scenario Team presents its results. The last Team makes general conclusions.

#### **Special Session Agenda**

- Team B
- Team C
- Team A
- Overall discussion (10 min)

## 6.10 Session 10: Prioritizing NBS in Skarpnäck: REPLAN projects + Designing solutions (hands-on)

Guest lecturer: Mr. Jiayu Zheng (TUD)

### 6.10.1 Guiding questions for the meeting

1. What are nature-based solutions?
2. What are principles of planning nature-based solutions?
3. What are opportunity spaces and why they are important for decision support?
4. What are fundamental requirements to break silos between different domains of science, administration and practice towards more collaboration and integrative development?

### 6.10.2 Assignment for preparation (in advance of the meeting!)

Prepare a list of pros and cons of creating riparian/buffer strips as a nature-based solution for integrative development of rivers in metropolitan areas from the perspectives of different stakeholder groups (e.g. conservationist, water management, farmer and forester, recreation).

**Required reading (skim all and read in greater detail at least one publication and explore the website):**

*Note: Please inform us in case you do not have access.*

- Schröter et al. 2021 Planung naturbasierter Lösungen in Flusslandschaften. Ein Handbuch für die Praxis. oekom Verlag. <https://doi.org/10.14512/9783962388485>
- Schmidt et al. 2021 Advancing Sustainable Development Goals with localised nature-based solutions: Opportunity spaces in the Lahn river landscape, Germany
- PlanSmart Website <https://www.plansmart.ruhr-uni-bochum.de/projekt-plansmart/index.html.en>

## 6.11 Session 11\*\*\*: Geodesign in Skarpnäck – Suitability Analysis (hands-on)

### 6.11.1 Guiding questions for the meeting

1. xx
2. xx

### 6.11.2 Assignment for preparation (in advance of the meeting!)

Select one or

**Required reading:**

- xxx

**Extra Reading:**

- xxx

## 6.12 Session 12\*\*\*: Geodesign in Skarpnäck – Land use change and Impact assessment (hands-on)

### 6.12.1 Guiding questions for the meeting

3. xx
4. xx

### 6.12.2 Assignment for preparation (in advance of the meeting!)

Select one or

#### **Required reading:**

- xxx

#### **Extra Reading:**

- xxx

## **6.13 Session1 3\*\*:** Presenting proposed solutions and their impacts for Skarpnäck

### 6.13.1 Guiding questions for the meeting

3. What are the alternative visions and scenario storylines for the study area?
4. What are the spatial implications of the proposed visions?

### 6.13.2 Assignment for preparation (in advance of the meeting!)

Make sure you coordinate among you. For example, you could start with a brief introduction to the case study, a recap of the challenges from the four ES perspectives, and an overview of the hands-on environmental planning process. Following, each Scenario Team presents its results. The last Team makes general conclusions.

#### **Special Session Agenda**

- Team C
- Team A
- Team B
- Overall discussion (10 min)

## 6.14 Session 14: Final wrap up and evaluation

### 6.14.1 Guiding questions for the meeting

1. Time for final questions
2. Your feedback on the course.

### 6.14.2 Assignment for preparation (in advance of the meeting!)

- Fill the course evaluation in Evasys

## 7 Submission of final reports

**Deadline for submission of the papers: August 22, 2024 at 14.00.**

Please submit your report as a **PDF file**. Hardcopy submissions are not necessary.

Please name your files appropriately: "LastName\_Report\_short title.pdf" and submit them in Moodle in the section "Submission of seminar paper".

Please follow the guidelines and template provided in Moodle when structuring and formatting your seminar paper.

## 8 Contact

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