

**Chalmers University of Technology
School of Architecture**

Sustainable Development and the Design Professions

Master's programme course 7,5 credits

Master's programme Architecture and Urban Design/MPARC

Master's programme Architecture and Planning Beyond Sustainability/MPDSD

Study Period I & 2 academic year 2019/2020

Code ARK650

“At the beginning of the 21st century, mankind is brought up against a series of extensive and hard challenges. We live in a world where people and societies are united more and more closely and the mutual dependencies increase. The technical, economic, ecological and demographic changes that have taken place during the 20th century are unique in the history of mankind, both when it comes to scope and pace. Earth has become a “smaller place” and therefore also more vulnerable. The extension and complexity of the global environmental and development problems – climatic changes, the depletion of fish in the seas, the impoverishment of lands, devastation of forests, the shortage of the non-renewable sources of energy among other things – are well known. Economic poverty is in many parts of the world still profound. Differences in levels of income and development are big both between and within countries. Thanks to their way of life the rich people of the world – in countries with all levels of income – occupy an unreasonably big environmental space. The consequences of the production and consumption patterns are neither environmentally nor socially sustainable. In parallel to this, the development of the latest decades in above all rich and technically advanced countries has caused a number of social problems. Stress, burnout and a feeling of lack of meaning are perhaps the most conspicuous of them. The aim of increasing the material wealth and economic growth of a society does not necessarily entail increasing happiness and satisfaction.”¹

Table of content

Sustainable Development and the Design Professions	2
Purpose of this course	2
Learning outcomes	3
Content and schedule	3
Important dates	4
Compulsory literature and study material	4
Seminars	4
Course assignment	8
Additional resources and study material	9
Course requirements	11
Course management	11
Canvas	11
Information screens, lecture halls and study rooms	12
Course evaluation	12
Background and context	12
Compulsory literature and study material for seminar 1 & 3	15

¹ From: “Global Challenges for the 21st Century – development, environment and the future of the world”. By Hanna Wetterstrand & Robert Österbergh on behalf of “21st century Drama”

COURSE PROGRAMME

Sustainable Development and the Design Professions

What are the main challenges concerning environment and development – today and in the years to come? What are the interpretations and perspectives on the global vision of sustainability and the concept of sustainable development? What does sustainable development and the sustainable development goals imply for the planning, design and management of the built environment – for architecture and urban design? How do the necessary changes and transitions that sustainable development entail affects our professional practices? These are the overall questions this course intends to highlight.

The global challenge of sustainable development needs to be implemented within a wide variety of local situations. Moreover, sustainable development is a multi-dimensional concept that comprises ecological, economic, social as well as institutional aspects. The protection of natural resources and the environment, socio-economic development, fair distribution of resources and people's right to participation and influence are all closely interlinked.

Accordingly, processes of change within the built environment, in order to support sustainable development, comprise a wide spectrum of issues. It contains the *planning, design and management* of buildings, land and infrastructure in a manner that increases the efficiency of resource use and decreases environmental impacts. It is, however, also about the *initiatives and processes of change* that create conditions for a social development and for human daily life to advance within the limits set up by the carrying capacity of the ecosystems. This also acknowledges a fair distribution of resources in time and space.

Within the field of planning and design for sustainable development, many different strategies and approaches have been developed. Due to the urgency of the problems, it is no longer enough only to adopt mainstream sustainable design approaches - focusing on eco-efficiency and zero-impact. Instead, it is necessary to increase the ambition and focus on how to regenerate and revitalize existing environments as well as safeguarding that new design projects add new and positive values to the existing context. Regenerative design, restorative design, “cradle to cradle” design, circular design, biophilic design and biomimicry are examples of such approaches which will be highlighted during the course.

Purpose of this course

The course *Sustainable Development and the Design Professions* is a compulsory introductory course to the two master's programmes Architecture and Urban Design (MPARC) and Architecture and Planning Beyond Sustainability (MPDSD). The overall purpose is to provide all students with a foundation and an ability to creatively and critically consider, reflect on and integrate questions related to the planning, design and management of the built environment in regard to global challenges and sustainable development.

Important parts of the course are to independently seek knowledge and information from different sources, as well as to reflect upon the implications of global challenges and the vision of sustainable development in relation to architecture and urban planning and design.

The purpose is, moreover

- to give an orientation about global challenges concerning environmental degradation, climate change and development issues.
- to provide an orientation and an understanding of different perspectives on sustainable development and the UN Agenda 2030 and the Sustainable Development Goals (SDGs).
- to present different approaches to the implementation of the call for sustainable development and Agenda 2030 within the planning, design and management of the built environment at different levels (global–local) and in different contexts.
- to encourage critical reflection regarding what the notion sustainable development entails for the planning, design and management of the built environment and for professional practices within these fields.

Learning outcomes

After completion of this course you are expected to be able to:

- give an orientation about global challenges concerning environmental degradation, climate change and development issues.
- explain different challenges and perspectives of sustainable development and the UN Sustainable Development Goals
- explain and identify the implications of sustainable development within the field of planning, design and management of the built environment.
- reflect upon the professional role, including ethical considerations, in relation to sustainable development.

Content and schedule

The course starts on Tuesday September 3, is carried out in study period I and 2 and comprises of 7,5 credits. The course runs on a fulltime basis during week 36-38, and then on a part-time basis during the remaining part of study period 1 and 2.

The course consists of lectures, films, a panel discussion, a card game activity, literature studies, seminars and a course assignment (see separate course schedule). The scheduled activities and the literature/study material explore a wide spectrum of problems and questions related to the vision of sustainable development as a global, as well as a local, challenge. The scheduled activities and the literature/study material also present different approaches to the implementation of sustainable development within analysis, planning, design and management of the built environment. The fulltime part of the course concludes with a film festival on Friday September 20 (partly voluntary participation). The course assignment is to be delivered on Friday the 17th of January 2020.

Common study visits are not organised within the course, but you are recommended to make some study visits on your own. A presentation of possible visits in Gothenburg will be presented during the course and time for study visits is included in the schedule. Additionally, further information about possible study visits are provided in a separate PM about Study visits, available on the course homepage.

Important dates

11 September	Seminar 1: <i>Sustainable development – challenges, perspectives and potentials</i>
19 September	Seminar 2: <i>Examples of sustainable architecture, urban planning and design</i>
20 September	Film festival
23 October	Seminar 3: <i>Sustainable development and the design professions</i>
27 November	Seminar 4: <i>The course assignment – work in progress</i>
17 January 2020	Hand in of course assignment

Compulsory literature and study material

Taking the course includes reading the compulsory literature and taking part of the other compulsory study material according to the appended list in this course programme. The compulsory literature/study material will be discussed at two of the seminars. These seminars will be carried out in smaller groups (about 11 students). Time for literature studies etcetera is included in the overall course schedule. Parts of the compulsory literature/study material you will find on assigned websites, while other parts are available on the course home page (see appended list). One book you will have to buy or borrow: *Sustainable Development. Nuances and Perspectives*, by Fredrik Hedenus, Martin Persson and Frances Sprei (2018). The book is available at Store in the Student Union Building.

Seminars

The course includes four seminars – all in smaller groups. The point of departure for seminar 1 and seminar 3 is the compulsory literature/study material. Seminar 1 has a focus on the topic “Sustainable development – challenges, perspectives and potentials” and seminar 3 on the topic “Sustainable development and the design professions”. Seminar 2 will be focused on examples of design for sustainable development. Seminar 4 has a focus on presentations and discussions regarding course assignments as work in progress. Seminar 1, 2 and 3 are also intended to be a support for the individual work on the course assignment.

Seminar 1 (Wednesday September 11)

Topic: Sustainable development – challenges, perspectives and potentials

In the first seminar the discussion is based on the wide range of threats and challenges that we are facing, the notion of sustainable development, different perspectives that this encompasses and the potentials for change towards such a development. Use the compulsory literature/study material and the lectures etcetera provided in the course so far as a point of departure. You find the literature/study material especially assigned for this seminar in the appended list under the heading “Sustainable development – challenges, perspectives and potentials”.

Guiding questions for the dialogue and discussion are:

- What are the main threats to environment and survival to be addressed – the main challenges?
- What are the perspectives on sustainable development, including UN Agenda 2030 and the Sustainable Development goals, coming forward?
- What are the potentials for change and what are the obstacles?

Preparations for seminar 1

Read/take part of the compulsory literature/study material assigned for the seminar. You find this material at the end of this programme. While you read/take part of the material, prepare yourself for the seminar by:

- 1) making a short account of the most important message of the text/recorded presentation/film
- 2) note down some reflection related to the guiding questions above
- 3) critically reflect on the content and message of the text/recorded presentation/film

Design of seminar 1

Groups and rooms are organised by the course and information regarding this will be delivered separately. The intention is that the students themselves carry out a constructive seminar. Each group appoints a chairperson and a secretary for the seminar, the tasks may alter between different persons during the seminar. The task for the chairperson is to open the seminar and to see to that each participant gets the opportunity to come forward with reflections and questions/topics for the discussion. The secretary should take notes during the discussion, including a list of the participants. These notes are then to be submitted on Canvas after the seminar (handwritten notes are ok, it is not necessary to make a fair copy). During Seminar 1 you are also to prepare for the Seminar 3 (see further below).

Seminar 2 (Thursday September 19)

Seminar 2 is meant to be an opportunity to discuss different examples and approaches to sustainable architecture, sustainable urban planning and design, and to be inspired by what others have found. It is also an occasion to discuss examples that have been presented during the course so far, as well as in the course literature/study material and voluntary study visits.

Preparation for seminar 2

Each of you choose three examples to present briefly at the seminar as a starting point for the discussion. Each example should represent a different type of project:

- one newly constructed project.
- one renovation, transformation or preservation project.
- one city structural or urban planning/urban design project.

You are encouraged to search for examples in books, magazines, on the internet or from study visits. You can find inspiration in the PM '*Examples of projects for seminar 2*' which is available on the Canvas site. Many of the books in the course library also present different examples from around the world. Bring digital or printed images of the projects to the seminar.

Design of seminar 2

Groups and rooms are organised by the course and information regarding this will be delivered separately. (Please note that the groups for this seminar will not be the same as for the Seminars 1 and Seminar 3.) Each group appoints a chairperson and a secretary for the seminar, the tasks may alter between different persons during the seminar. The task for the chairperson is to open the seminar and to see to that each participant gets the opportunity to come forward with reflections and questions/topics for the discussion.

Each student receives time to present, try to divide time for presentations evenly. You will have about 15 min for each person – about half the time for presentation and half the time for discussion. You can choose to discuss the projects presented after each presentation of three examples or you can make a grouping, letting for examples 3 persons present and then have a discussion. Decide at the start how to organise the group discussion.

The secretary is to take notes during the discussion inform of a list of the projects and/or approaches discussed, including a list of the participants. These notes are then to be submitted on Canvas after the seminar (handwritten notes are ok, it is not necessary to make a fair copy).

Seminar 3 (Wednesday October 23)

Topic: Sustainable development and the design professions

The topic for Seminar 3 is what the notion of sustainable development, including the Sustainable Development Goals, and necessary measures to manage present threats to environment and survival, imply for planning, design and management of the built environment. What does it imply for architecture and urban design, planning and for your future professional practice? The points of departure for the seminar are partly lectures, films, literature/study material, voluntary study-visits etcetera and partly your own reflections so far in your work on the course assignment. Literature/study material especially assigned for this seminar is listed in the appended literature list under the heading “Sustainable development and the design professions”.

Guiding questions for the dialogue and discussion are:

- What does the demands for change towards sustainable development imply for planning, design and management of the built environment?
- What does it imply for architecture and urban design and planning and for your professional practice?
- What criteria and guidelines for design, planning and management of the built environment can you use for your professional work in order to promote a sustainable development?

Preparation for seminar 3

All students read/study all compulsory literature/study material on the appended list. Though, we also recommend you to, at Seminar 1, go through the literature/study material for Seminar 3 and to divide responsibility of the material and to give a short account/summary (about 5 min) of this at the seminar. Based on this account, you are also to raise some questions for the

discussion. The distribution of different texts and other study material is meant to take place during seminar 1 (Wednesday 11 September). As the seminar is intended to be a support in the work on the course assignment, also prepare to give some reflections concerning your work so far on your personal strategy.

Design of the seminar

The same procedure as for Seminar 1 (see above). Seminar 3 will be carried out in the same seminar groups as Seminar 1. The notes, including a list of the participants is to be delivered on Canvas after the seminar, (handwritten notes are ok, it is not necessary to make a fair copy).

Seminar 4 (Wednesday November 27)

Topic: The course assignment –work in progress

This seminar will focus on the course assignment as work in progress. The seminar will take place in smaller groups and one teacher will attend in each group, these groups and rooms are organised by the course and information regarding this will be delivered separately.

Preparation for seminar 4

Before the seminar each student is to prepare three simple mind maps/draft posters in A3.

- one for the explicit personal design strategy.
- one for the chosen project/process.
- one linking your current design project to the course context.

The mind maps/draft posters will be used to communicate your work in progress and may contain text, illustrations etcetera. The aim is to use these mind maps/draft posters to visualise and communicate the reflections that you have made so far to fellow students and teachers, they will not be handed in to the course. Use the guiding questions for the Course Assignment to develop the work.

Design of seminar 4

During the seminar each student gives a short presentation of the work so far and raises some issues for a discussion. The attending teacher will be the moderator of the seminar. The ambition is to divide the time in a fair way within the different groups, and we will have about 15-17 minutes for each student. Half of the time is used to present, then one of your fellow students gives some comments/raises some questions based on your presentation. Thereafter, everybody is welcome to participate in a discussion. You are not asked to deliver any material for the seminar in advance. As for comments on one of your fellow students, you listen extra carefully to the presentation in order to be prepared. You are to comment on the person coming after you on the lists below (this means the last person on the list comments on the first person on the list).

Course Assignment

The course assignment has its point of departure in the lectures, films, review of the literature/study material, voluntary study visits and your earlier knowledge and experience concerning the issues in focus in the course. The assignment is carried out on an individual basis and contains three parts.

In **part one** of the course assignment, the task is to reflect upon your own future professional practice in relation to global challenges of environment and development and the notion sustainable development, including the sustainable development goals. You are to outline *a personal design strategy* for how You perceive and understand the demands for change towards sustainable development and how this will affect planning, design and management of the built environment.

Guiding questions are:

- How do you understand the global challenges of environment and development?
- How do you understand the vision of sustainable development?
- What does, in your opinion, the vision of sustainable development and the Sustainable Development Goals imply within the field of planning, design and management of the built environment? Which approaches and strategies could be relevant?
- What criteria and guidelines for design, planning and management of the built environment can you use for your professional work in order to meet the challenges and promote sustainable development?

Taking a point of departure in this understanding and these reflections, **part two** of the course assignment involves choosing, presenting and critically reflecting on a planning, urban or building project or process that you see as relevant and having ambitions in relation to sustainable development. This project/process may be identified through reading journal articles and literature, by browsing the internet or from lectures, films and voluntary study visits. Describe the project and use the criteria and guidelines you propose in your personal strategy to reflect upon the strengths and weaknesses of your selected case.

Part three of the course assignment is about assessing and reflecting on your studio project – in the different design studios you will follow starting in week 39 - in the perspective of your personal strategy. How does your studio project consider global challenges of environment and development, the notion sustainable development and the sustainable development goals?

Presentation and delivery of course assignment

The course assignment is to be presented in a short written report. This scope of the report should be 15.000 characters including spaces (+/- 10%), excluding pictures and a list of references. About 50% of the scope of the report are meant for the part 1 on the assignment, about 25% for part 2 and about 25% for the part 3 of the assignment.

References to your background material are required. In your report, present the different parts of the assignment starting on a new right-hand page. The part 2 of the report will later be assembled in a folder and be available in the Department of Architecture and Civil Engineering Library (ACE Library). Include your name in the footer on each page of the report.

The course assignment report is to be delivered at the latest on Friday 17 January. One printed copy of the report is to be submitted and a digital copy should be handed in on Canvas. Name your files “Surname_name.pdf”. Further instructions concerning where to deliver the printed copy will come.

Additional resources and study material

Additional resources and study material are to be found in the Architecture and Civil Engineering library (ACE Library) and in a set of PM:s (short documents).

Course library

In the ACE Library there is a collection of books, especially assigned for this course, containing literature on design for sustainable development, as well as about sustainability and environmental issues in general. These books are displayed on special shelves in the library and possible to borrow for a shorter period. Most of these books are also to be found in the ordinary library collection and may be borrowed from there. A list of the books especially assigned for this course, the course library list, is available on the course homepage and in the library.

Film library and film/video tips

In the ACE Library there is a smaller collection of films, especially assigned for this course. Some of the films included in the course schedule are also available here. A list of the films is available on the course homepage and in the library, including some tips on other relevant films and presentations available online.

Examples of projects for seminar 2

A PM with a selection of websites and magazines concerning concrete examples of design for sustainable development is available on the course homepage. This can be used as an inspiration in relation to Seminar 2 and the course assignment.

Study visits

A PM with information about possible study visits in Gothenburg and the surrounding areas is available on the course homepage.

Web resources

A PM with some useful web resources/websites in relation to sustainable development, environmental issues and design for sustainable development in general is available on the course homepage.

Climate change

A PM with resources concerning climate change and planning and design for climate change mitigation and adaptation. Available on the course homepage.

Regenerative design, biophilic design, biomimicry and permaculture design

A PM with resources concerning design approaches and strategies that go beyond mainstream sustainable design.

Urban/Local Food Production

A PM with resources concerning design and planning for food production, especially in urban contexts. Available on the course homepage.

Sustainable Materials

A PM with resources concerning sustainable material regarding reuse, recycling and biobased.

Straw and Earth as building materials

A PM with resources concerning straw bales, earth and clay as building materials.

Reference literature list

A list of reference literature is available on the course homepage. This list, which is thematically organised, comprises a wide selection of literature dealing with different aspects of sustainable development and design for sustainable development. The list is intended as a support and inspiration for continued studies – for example within the different design studios in the master's programmes. It may also be of support for more in-depth studies of a special theme you consider to be of special relevance or interest in relation to the course assignment.

Ecological Footprint Quiz

During the course we encourage you to take a quiz to estimate your personal ecological footprint. The ecological footprint measures how much land it takes to support your lifestyle. You find footprint calculators here:

Global Footprint network:

<https://www.footprintnetwork.org/resources/footprint-calculator/>

WWF:

<http://footprint.wwf.org.uk>

Center for Sustainable Economy:

http://myfootprint.org/en/cse/about_us/

Course requirements

The grading in the course is passed/not passed. For passing the course is required:

- Presence at scheduled activities (lectures and films) 80% minimum (lists of attendance have to be signed)
- Attendance at one film at the film festival
- Active participation and presence at the seminars
- Submission of course assignment in accordance with the assigned criteria and the programme

Course management

Liane Thuvander, associate professor, examiner

Dept. of Architecture and Civil Engineering, Division of Architectural theory and methods, floor 3, Sven Hultins gata 6

Phone: 031-772 2431, 076-227 58 57, email: liane.thuvander@chalmers.se

Ida Röstlund, architect, MSc MPDSD, artistic lecturer, course coordinator

Dept. of Architecture and Civil Engineering, Division of Urban Design and Planning, floor 3, Sven Hultins gata 6

Phone: 073-250 15 88, email: idar@chalmers.se

Anita Ollär, architect, MSc MPDSD, PhD-student, course assistant

Dept. of Architecture and Civil Engineering, Division of Building Design, floor 3, Sven Hultins gata 6

Phone: 031-772 6460, email: ollar@chalmers.se

Lena Falkheden, senior lecturer, course planning and senior advisor

Dept. of Architecture and Civil Engineering, Division of Urban Design and Planning, floor 3, Sven Hultins gata 6

Phone: 031-772 2431, 070-864 27 49, email: lenaf@chalmers.se

Canvas

The course programme, course schedule and other information material related to the course are available on the course's Canvas site. You can access this from the Student portal <https://student.portal.chalmers.se/en/>, go to the bottom of the page, to the right, and click on "canvas". Here you have to login, using your Chalmers username and password. After logging in, you choose ARK650 *Sustainable Development and the Design professions*. All documents are found under the heading *Files*, some in different subfolders. Here, you will also find parts of the compulsory literature/study material and some additional literature and reports that might be of interest. Additional texts, slides from some of the lectures, etcetera will gradually be placed on the course home page during the course. Canvas is also where the digital hands-in to be submitted.

Additional information will continuously be sent out by email, via canvas. Please make sure you check your Chalmers email on a daily basis.

Information screens, lecture halls and study rooms

There are information screens for the course, located outside the lecture halls SB-H1 and SB-H2 during week 36-38. Here you will find paper copies of the course programme and the schedule as well as some of the PM:s mentioned above. There will also be floor plans showing where to find the different rooms for lectures, seminars and self-studies on these screens.

Course evaluation

The course will be evaluated according to the Chalmers course evaluation process (<https://student.portal.chalmers.se/en/chalmersstudies/courseinformation/courseevaluation/Pages/default.aspx>). 4-6 student representatives will be selected. They will have meetings with the responsible teachers, two meetings during the course period and one meeting after the course is finished. In addition to this there will be a web-based questionnaire distributed to all students by email.

Background and context

Global Challenges and Sustainable Development

Sustainable development is a development that meets the needs of today without jeopardising the possibilities of future generations to fulfil their needs. Sustainable development is about the right of every human being, living today or yet not born, to social and economic development within the limits imposed by the carrying capacity of ecosystems and the planetary boundaries. It is a political vision based on the understanding that vigorous measures are necessary in order to manage urgent problems related to poverty, uneven distribution of resources, environmental degradation and climate change.

Humanities annual demand on resources and ecosystem services continues to grow and increasingly exceeds what the Earth can renew. This year the “ecological overshoot” – the demands exceeding the biocapacity on a global average level - is well above 50 percent more than the biocapacity of the planet. Currently, 1,75 Earths are needed in order to provide the goods and services humanity uses during one year.² At the same time, resources are increasingly unevenly distributed. For example, if all people in the world would live like an average EU citizen, 2,8 Earths would be needed. According to a report by Oxfam, 42 people own the same wealth as the poorest half – 3,7 billion - of the world’s population.³

Gradual progress and incremental changes of policies and performance is no longer enough. Developing a sustainable and resilient society demands deep transformative change and far-reaching transitions – long-term structural changes – within all aspects of society.

² Earth Overshoot Day 2018

<https://www.overshootday.org/newsroom/past-earth-overshoot-days/>

³ Oxfam 2017, *An Economy for the 99 percent*

<https://www.theguardian.com/inequality/2018/jan/22/inequality-gap-widens-as-42-people-hold-same-wealth-as-37bn-poorest>

Climate Change and environmental degradation

Today, one of the major issues in focus is how to manage climate change, both through mitigation and adaptation. During 2015, the UN conference on climate change, COP21, took place in Paris between November 30 – December 11.⁴ COP21 was the largest climate conference ever organised and crucial for the possibilities to mitigate climate change. The urgency and importance of the conference was stated on the COP21 website: “The stakes are high: the aim is to reach, for the first time, a universal, legally binding agreement that will enable us to combat climate change effectively and boost the transition towards resilient, low-carbon societies and economies.”⁵ An agreement was adopted by all 196 Parties to the United Nations Framework Convention on Climate Change on 12 December 2015. In the Paris agreement, all countries agreed to work on limiting global temperature rise to well below 2 degrees Celsius, and given the grave risks, to strive for 1.5 degrees Celsius. The agreement was signed on 22 April 2016.⁶

In October 2018, The Intergovernmental Panel on Climate Change (IPCC), the official climate science assessment body of the United Nations, published the special report *Global Warming of 1,5°*. Here, it is clearly pointed out that global carbon dioxide emissions have to be cut by 50% by 2030 and reduced to zero in 2050 in order to avoid the global warming to rise above 1,5 degrees Celsius.⁷ A continuation of current trends regarding greenhouse gas emissions point at a global average temperature increase of above 4 degrees Celsius which would mean catastrophic and possibly uncontrolled climate change. This autumn, September 21-23, the Secretary-General of the United Nations will host a Climate Action Summit in New York to boost the ambition and rapidly accelerate action in order to implement the Paris Agreement.⁸

Additionally, the awareness and concern regarding climate change have increased dramatically during the last years, both by governments and politicians and within the public globally. Several countries – among them UK, France, Ireland and Canada and 658 jurisdictions and local governments – have during the spring of 2019 declared a state of climate emergency, recognising a climate crisis.⁹ Many countries have policy documents to be net-carbon neutral by 2045 or 2050. The UK government has also, as the first country in the world, in June 2019 passed a law to be net-carbon neutral by 2050.¹⁰ School strikes, initiated by the Swedish teenager Greta Thunberg, are spreading, and activist movements like 350.org, Fridays for Future and Extinction Rebellion are gaining more and more support.

In May, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) launched a new report highlighting that “Nature is declining globally at rates unprecedented in human history. The health of ecosystems on which we and other species

⁴ 21st Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change (UNFCCC)

⁵ <https://se.ambafrance.org/COP21-Officiell-hemsida>

⁶ <https://unfccc.int/news/closing-paris-agreement-signing-press-release>

⁷ IPCC 2018, *Global Warming of 1,5 °C*

⁸ <https://www.un.org/en/climatechange/>

⁹ <https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>

¹⁰ <https://www.independent.co.uk/news/uk/politics/theresa-may-global-warming-2050-law-climate-change-uk-a8954406.html>

depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life world-wide”.¹¹ One million species are at risk of extinction, threatening the ecosystems human life depend on.

The Brundtland Report and Agenda 21

In the *Brundtland Report* (World Commission on Environment and Development 1987), as well as in the documents from the UN summits on environment and development 1992, 2002 and 2012 (RIO+20), there is a specific emphasis on the unequal distribution of resources and unsustainable patterns of production and consumption, in particular in the industrialised countries, as being the fundamental causes of the continuing problems related to environmental degradation and uneven development. The vision of sustainable development is adopted by a majority of the countries in the world in the form of mutual declarations and national policy documents. The *Agenda 21* document, adopted at the UN Earth Summit on environment and development in Rio de Janeiro 1992 (UNCED 1992), is an action plan for sustainable development that identifies the need for co-ordination between different policy areas and societal sectors at all levels, from the global to the local. Efforts at the local level are particularly emphasised along with the need for broad participation, especially by the less affluent groups of society. Further, especially emphasized are gender aspects and the significance of strengthening the conditions for women’s participation in processes of change and planning in support of sustainable development.¹²

The Sustainable Development Goals

During 2015, the UN adopted the action plan the *2030 Agenda for Sustainable Development*, including 17 Sustainable Development Goals (SDGs). The SDGs are a set of goals, targets and indicators, to be used as a framework for global, national and local policies during the coming 15 years, replacing the Millenium Development Goals. The SDGs consist of 17 goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. All goals have connections to the design of the built environment and of special relevance is goal number 11, *Sustainable cities and communities*. The SDGs were agreed to at the United Nations Summit to Adopt the Post-2015 Development Agenda, on September 25-27, 2015 in New York.¹³ The Agenda 2030 and the 17 Sustainable Development Goals are meant to influence policies, programmes and activities not only within the public sector but also within the business sector, academia and civil society. The progress of the SDGs is assessed annually and in September 2019, Heads of States and Governments will meet in a UN meeting to review promises and progress made after four years of committing to work on the Agenda 2030.¹⁴

¹¹ IPBES 2019 (<https://www.southpole.com/sv/news/ipbes>)

¹² For more information about the state of the world’s women and the gender gap, see <http://www.unwomen.org/en> and the UN report *Progress of the world’s Women 2019-2020 Summary* (<http://www.unwomen.org/media/headquarters/attachments/sections/library/publications/2019/progress-of-the-worlds-women-2019-2020-executive-summary-en.pdf?la=en&vs=3513>). See also UN Women – United Nations Entity for Gender Equality and the Empowerment of Women (<http://www.unwomen.org/en>). Statistics concerning the conditions in Sweden is to be found in the report *På tal om kvinnor och män. Lathund för jämställdhet 2018*, available on the course home page (for information about the course homepage, see page 12).

¹³ <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

¹⁴ <https://sustainabledevelopment.un.org/sdgsummit>

Compulsory literature and study material for seminar 1 & 3

PLEASE OBSERVE: If the internet links do not work by “clicking” on them, copy the address into the address bar in your internet browser.

SUBTITLES IN ENGLISH (and other languages) are available on TED talks videos.

Seminar 1 (Wednesday September 11):

Sustainable development – challenges, perspectives and potentials

NOTE: Articles and films are listed in a suggested order of reading/viewing, but you can read them in any order you choose.

UN Environment 2019, *GEO 6 Global Environment Outlook. Summary for Policymakers*. Cambridge University Press
https://wedocs.unep.org/bitstream/handle/20.500.11822/27652/GEO6SPM_EN.pdf?sequence=1&isAllowed=y
(also available on the Canvas)

International Geosphere-Biosphere Programme (IGBP) 2014, “Welcome to the Anthropocene” (video 3 min)
https://www.youtube.com/watch?v=PGtCkv7_nIs

Rockström, Johan 2015, “Bounding the Planetary Future: Why We Need a Great Transition”. A Great Transition Initiative Essay
http://www.tellus.org/pub/Rockstrom-Bounding_the_Planetary_Future.pdf
(also available on Canvas)

Rockström, Johan 2017, “WEF 2017: Beyond the Anthropocene” (video 21 min).
Talk at the World Economic Forum 2017. Stockholm Resilience Centre
<http://www.stockholmresilience.org/research/research-news/2017-02-16-wef-2017-beyond-the-anthropocene.html>

Hedén, Fredrik, Persson, Martin & Sprei Frances 2018, Chapter 1 “Sustainable development: Through the lens of environmental history” and Chapter 2: “Sustainable Development: Definitions and interpretations”. In: Hedén, Fredrik, Persson, Martin & Sprei Frances 2018, *Sustainable Development. Nuances and Perspectives*. Studentlitteratur.
(available to buy in Store, Student Union Building)

Watts, Jonathan 2018, “We have 12 years to limit climate change catastrophe, warns UN”. In: The Guardian Mon 8 Oct 2018 **4 s**
<https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report>
(also available Canvas)

Intergovernmental Panel on Climate Change (IPCC) 2018, *Global Warming of 1,5 °C. Summary for Policymakers*. [Read extensively](https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/)
<https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>
(also available on Canvas)

Rockström, Johan 2019, “The big picture on a Hothouse Earth”. Introduction by Johan Rockström at the World Economic Forum’s Annual Meeting 2019 (video 4 min)
<https://www.stockholmresilience.org/research/research-videos/2019-05-02-the-big-picture-on-a-hothouse-earth.html>

United Nations Framework Convention on Climate Change 2017, “Summary of the Paris Agreement”
<http://bigpicture.unfccc.int/#content-the-paris-agreemen>
(also available on Canvas)

World Economic Forum 2019, “Greta Thunberg Special Address”, Annual Meeting of the World Economic Forum 2019 (video 6 min)
<https://www.youtube.com/watch?v=M7dVF9xylaw>

Behiye Karakitapoglu, Emine, Larsson, Marcus & Reuben Adam 2017, “Chapter 2: Climate Refugees: Significance, Magnitude and Future Estimations” and “Chapter 3: Important Triggers of Climate Migration”. In: Behiye Karakitapoglu, Emine, Larsson, Marcus & Reuben Adam 2017, *Climate Refugees. The Science, The People, The Jurisdiction and the Future*. Fores
https://fores.se/wp-content/uploads/2017/10/ClimateRefugees_Online.pdf
(also available on Canvas)

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2019, “Media Release: Nature’s Dangerous Decline Unprecedented; Species Extinction Rates ‘Accelerating’”.
(also available on Canvas)
<https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

Global Footprint Network 2019, “Ecological Footprint”
<http://www.footprintnetwork.org/our-work/ecological-footprint/>

Global Footprint Network 2016, “National Footprint Accounts – Ecological Balance Sheets for 180+ Countries” (video 3 min)
https://www.youtube.com/watch?v=_T5M3MiPFW4

Global Footprint Network 2016, “Sustainable Development: two indices, two different views”
<http://www.footprintnetwork.org/2016/07/20/measure-sustainable-development-two-new-indeces-two-different-views/>

United Nations 2015, *Transforming Our World: The 2030 Agenda for Sustainable Development*, p 1-28; p 15-28 read extensively
<https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
(also available on the Canvas)

United Nations 2016, “The future is now” (video 4 min)
<http://www.un.org/sustainabledevelopment/blog/2016/05/the-future-is-now/>

United Nations 2015, “Mobilizing citizens around the world to achieve the 2030 Agenda ” (video 3 min)
<http://www.un.org/sustainabledevelopment/blog/2016/05/mobilizing-citizens-of-the-world-to-achieve-the-2030-agenda/>

United Nations 2018, “Overview”. In: *The Sustainable Development Goals Report 2018*, p. 4-13.
<https://unstats.un.org/sdgs/files/report/2018/TheSustainableDevelopmentGoalsReport2018-EN.pdf>
(also available on the Canvas)

Hedenus, Fredrik, Persson, Martin & Sprei Frances 2018, Chapter 4 “ Sustainable development from an ethical point of view”. In: Hedenus, Fredrik, Persson, Martin & Sprei Frances 2018, *Sustainable Development. Nuances and Perspectives*. Studentlitteratur.
(available to buy in Store, Student Union Building)

Summers, J.K. & Smith, L.M. 2014, “The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable” In: *Ambio* 2014 Oct; 43(6): 718-728
<https://link.springer.com/article/10.1007/s13280-013-0483-6>
(also available on the Canvas)

Kopnina, Helen 2014, “Environmental Justice and Biosphere Egalitarianism: reflecting on a normative-philosophical view of human-nature relationships”. In: *Earth Perspectives* 2014, 1:8
<https://earth-perspectives.springeropen.com/articles/10.1186/2194-6434-1-8>
(also available on the Canvas)

Real Media 2019, “The Crime of Ecocide – Polly Higgins Interview 26th February 2019” (video 13 min)
<https://www.youtube.com/watch?v=qfUamcJgAOA>

Eradicating Ecocide 2019, Ecocide Law. Proposed Amendment to the Rome Statue”
<https://eradicatingecocide.com/the-law/factsheet/>
(also available on Canvas)

UN Women 2014, *World Survey on the Role of Women in Development 2014. Gender Equality and Sustainable Development*, p 7 & p 10-16.
<http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2014/world-survey-on-the-role-of-women-in-development-2014-en.pdf?la=en&vs=3045>
(also available on the Canvas)

Stevens, Candice 2010, “Are Women the Key to Sustainable Development?”
Sustainable Development Insights 003 April 2010. Boston University
<http://www.bu.edu/pardee/files/2010/04/UNsdkp003fsingle.pdf>
(also available on the Canvas)

“Globalization and Poverty: Interview with Dr Vandana Shiva by Gary Null, 2008
<http://www.globalresearch.ca/globalization-and-poverty/11540>

Kallis, Giorgos, Demaria, Federico & D’Alisa Giacomo 2015, “Introduction. Degrowth”. In: D’Alisa, Giacomo, Demaria, Federico & Kallis Giorgos 2015, *Degrowth. A Vocabulary for a new era*. Routledge
https://www.academia.edu/10263706/Introduction_Degrowth_A_Vocabulary_for_a_New_Era_Routledge_2014
(also available on Canvas)

Leonard, Annie et. al. *The Story of Stuff* (video 20 min) <http://www.storyofstuff.com/>
(look under the heading “Movies”)

Raworth, Kate 2018, “A healthy economy should be designed to thrive, not grow”
(video 15 min)
Talk on: *TED - Ideas worth spreading*
https://www.ted.com/talks/kate_raworth_a_healthy_economy_should_be_designed_to_thrive_not_grow

Oxfam 2017, “An Economy for the 99%”. Oxfam briefing papers – summary.
https://www-cdn.oxfam.org/s3fs-public/file_attachments/bp-economy-for-99-percent-160117-en.pdf
(also available on Canvas)

Wilkinson, Richard 2011 “How economic inequality harms societies” (video ca 17 min) Talk on: *TED - Ideas worth spreading*
http://www.ted.com/talks/richard_wilkinson.html

Stockholm Resilience Center 2014. *What is resilience?* p 1-7
http://www.stockholmresilience.org/download/18.10119fc11455d3c557d6d21/1398172490555/SU_SRC_whatisresilience_sidaApril2014.pdf
(also available on the Canvas)

Ellen McArthur Foundation 2011, “Re-thinking Progress: The Circular Economy”
(video 4 min)
<https://www.youtube.com/watch?v=zCRKvDyyHmI>

European Commission 2015,” Circular Economy. Closing the Loop. An Ambitious EU Circular Economy Package”. Factsheet. 2 s
https://ec.europa.eu/commission/sites/beta-political/files/circular-economy-factsheet-general_en.pdf

Wijkman, Anders & Skånberg, Kristian 2015, *The Circular Economy and Benefits for Society. Swedish Case Study Shows Jobs and Climate as Clear Winners*, page 3-8. Club of Rome, MAVA Foundation & Swedish Association of Recycling Industries
<http://www.clubofrome.org/wp-content/uploads/2016/03/The-Circular-Economy-and-Benefits-for-Society.pdf>
(also available on the Canvas)

Sustainable Lifestyles: Today's facts & Tomorrows Trends 2012. SPREAD Sustainable Lifestyles 2050. European Commission European Research Areas.
http://www.sustainable-lifestyles.eu/fileadmin/images/content/D1.1_Baseline_Report_short.pdf
(also available on the Canvas)

Nyborg, Karine et al. 2016, “Social norms as solutions”. *Science* 07 Oct 2016
<http://science.sciencemag.org/content/354/6308/42.full>
(also available on the Canvas)

Ekelund, Lotta & Bradley, Karin 2015, *Sharing is the New Owning* (film 28 min) LottaFilm with support by Formas, Malmö City and Mistra Urban Futures
<https://vimeo.com/127297293>

Carpenter, Stephen R et al 2019, “Dancing on the volcano: social exploration in times of discontent”. In: *Ecology and Society* 24(1):23
<https://www.ecologyandsociety.org/vol24/iss1/art23/>
(also available on Canvas)

Beling, Adrian E. et.al. 2017, “Discursive Synergies for a “Great Transformation” Towards Sustainability: Pragmatic Contributions to a Necessary Dialogue Between Human Development, Degrowth, and *Buen Vivir*. In: *Ecological Economics* 144 (2018) 304-313
<https://reader.elsevier.com/reader/sd/pii/S0921800917303798?token=A02AC2B8E243F94653F71652B75970B0AA55FA6AE65F46A9557196EA5F5A22C8903167335E4C5554DC61570D3E8AC240>
(also available on Canvas)

Assadourian, Erik 2010, “Cultural Change for Bearable Climate”. In: *Sustainability, Science, Practice & Policy* Fall 2010, Volume 6, Issue 2
<http://d20nn6mxpbiih2.cloudfront.net/sspp-journal/SSPP-v6.2.editorial.assadourian.pdf>
(also available on Canvas)

SDSN (Sustainable Development Solutions Network) 2019, “Global Happiness and Well-Being Policy Report Trailer”. Video 4 min.
<https://www.youtube.com/watch?v=h2HL5eM4Nm8>

Leach, Melissa, Raworth, Kate & Rockström, Johan 2013, "Between social and planetary boundaries: Navigating pathways in the safe and just space for humanity". In: *World Social Science Report 2013: Changing Global Environments*, sid 84-89. OECD Publishing and Unesco Publishing.

<http://www.worldsocialscience.org/documents/wss-report-2013-part-1.pdf>

(also available on the Canvas)

Hopkins, Rob 2009, "Transition to a world without oil" (video 16 min).

Talk on: *TED - Ideas worth spreading*

https://www.ted.com/talks/rob_hopkins_transition_to_a_world_without_oil

Seminar 3 (Wednesday October 23):

Sustainable development and the design professions

du Plessis, Chrisna 2012, "Towards a Regenerative Paradigm for the Built Environment". *Building Research and Information*, 40:1, 7-22
<http://www.tandfonline.com/doi/full/10.1080/09613218.2012.628548?scroll=top&needAccess=true>
(also available on Canvas)

AD Editorial Team 2015, "AD Essentials: Sustainability". ArchDaily July 2015
<http://www.archdaily.com/769365/ad-essentials-sustainability>
(also available on Canvas)

International Union of Architects UIA 2019, "UIA SDG Dhaka Declaration"
https://www.uia-architectes.org/webApi/uploads/ressourcefile/264/dhaka_declaration_forpublication.pdf
(also available on Canvas)

"UK Architects Declare Climate and Biodiversity Emergency". Architects Declare 2019
<https://www.architectsdeclare.com>

Bennett, Elena M et al. 2016, "Bright spots: seeds of a good Anthropocene". In: *Frontiers in Ecology and the Environment* 2016; 14(8): 441-448
<http://onlinelibrary.wiley.com/doi/10.1002/fee.1309/epdf>
(also available on Canvas)

Stoknes, Per Espen 2017, "How to transform apocalypse fatigue into action on global warming" (video 15 min).
Talk on: *TED - Ideas worth spreading. TEDGlobal NYC*
https://www.ted.com/talks/per_espen_stoknes_how_to_transform_apocalypse_fatigue_into_action_on_global_warming

Renner, Michael 2016, "Chapter 8. Reducing the Environmental Footprint of Buildings". In: The Worldwatch Institute 2016, *State of the World. Can a City be Sustainable?*. Island Press
https://books.google.se/books?id=xZZ_CwAAQBAJ&pg=PT153&lpg=PT153&dq=michael+renner+reducing+the+environmental+footprint+of+buildings&source=bl&ots=h-vrJQ-caz&sig=nlcFdii8ac9O7QPVv8PSIPrMhBE&hl=sv&sa=X&ved=0ahUKEwjxucXb07vNAhWG_ywKHdsBA6AQ6AEIITAA#v=onepage&q=michael%20renner%20reducing%20the%20environmental%20footprint%20of%20buildings&f=false
(copy and paste link into web browser if it does not work when clicking on it)
(also available on Canvas)

Duarte Dias, Bruno 2015, "Beyond Sustainability – Biophilic and Regenerative Design in Architecture". In: *European Scientific Journal* March 2015
<http://eujournal.org/index.php/esj/article/view/5385/5184>
(also available on Canvas)

Roaf, Sue 2013, “Designing Resilient Buildings, Cities and Citizens for the 21st Century” (video 28 min). Global Green Building Forum 2013, first session
<https://www.youtube.com/watch?v=hE3HcrA-Wa8>

ResearchFeatures 2018, “Eco-positive design: moving beyond ecological restoration”. In: *Research Features Magazine* August 22 2018.
<https://researchfeatures.com/2018/08/22/eco-positive-design-moving-beyond-ecological-restoration/>
(also available on Canvas)

Petersson, Caroline 2015, *Enabling Sustainable Choices in Everyday Life. 12 strategies to promote behaviour change*. Global Awareness in Action
http://swedesd.uu.se/digitalAssets/611/c_611806-1_1-k_enabling_sustainable_choices_webb.pdf
(also available on Canvas)

Mulhall, Douglas & Braungart, Michael 2010, *Cradle to Cradle for the Built Environment*, p 1-12. EPEA Internationale Umweltsforschung GmbH
<http://www.epeaparis.fr/FICHIERS/C2C-Inspired/C2C%20Criteria%20eBook.pdf>
(also available on Canvas)

Nudge Nederland 2015, “Documentary Nudge Explores Circular Cities Tour 2014” (video 10 min)
<https://www.youtube.com/watch?v=2tqloScID-s>

McLennan, Jason 2015, “Living Buildings for a Living Future”. TedxBend talk May 26 2015 (video 15 min)
<https://www.youtube.com/watch?v=gSMecC6pcGo>

AD Editorial Team 2015, “AD Essentials: Smart Cities”. In *ArchDaily*, 19 July 2015
<http://www.archdaily.com/769341/ad-essentials-smart-cities>
(also available on Canvas)

Bazaz, Amir et al 2018 Summary for Urban Policymakers. *What the IPCC Special Report on Global Warming of 1,5° means for Cities*. Read: Chapter II. “Why do cities matter?” Chapter III. “Is the urban transition feasible?” Chapter IV. “How can the urban transition be enabled?” C40 Cities, December 2018.
https://c40-production-images.s3.amazonaws.com/researches/images/74_Summary_for_Policy_Makers_On_lineVersion_%281%29.original.pdf?1544400763
(also available on Canvas)

Stockholm Resilience Center 2014, “Cities and Biodiversity Outlook.” Brief 06 2014
https://www.stockholmresilience.org/download/18.10119fc11455d3c557d3dc38/1459560235045/SRC_brief_1_CBO.pdf
(also available on Canvas)

Beatley, Timothy & Newman, Peter 2013, “Biophilic Cities Are Sustainable, Resilient Cities”. In: *Sustainability* 2013, 5
<http://www.mdpi.com/2071-1050/5/8/3328/html>
(also available on Canvas)

Olthuis, Koen 2014, “Top 10 trends towards floating cities” (video 16 min). Talk on TEDxVilnius.
<https://www.youtube.com/watch?v=IqmmuIbchvU>

Till, Jeremy & Schneider, Tatjana 2012, “Invisible Agency”. In: *Architectural Design* 2012:4 (Theme: Scarcity. Architecture in an age of depleting resources)
<http://onlinelibrary.wiley.com/doi/10.1002/ad.1426/epdf>
(also available on Canvas)

Arroyo, Vicki 2012, “Let’s prepare for our new climate” (video ca 10 min) Talk on: *TED - Ideas worth spreading*
https://www.ted.com/talks/vicki_arroyo_let_s_prepare_for_our_new_climate

DeKay, Mark 2016, “Solving the climate crisis by design”. MicNite presentation (video 7 min)
<https://www.youtube.com/watch?v=VeClcvy6Aj4>

The Landscape Institute 2013, “Water Sensitive Urban Design” (video 4 min)
https://www.youtube.com/watch?v=b_DTnOzYTR4

“Berlin is Becoming a Sponge City” 2017 (video 4 min)
Bloomberg. Video by Gloria Kurnik
<https://www.youtube.com/watch?v=uWjGGvY65jk>

“Sponge Cities absorb and re-use rainwater” 2019 (video 2 min)
Veolia Group
<https://www.youtube.com/watch?v=ZCizKJJKYes>

Voraakhom, Kotchakorn 2018, “How to transform sinking cities into landscapes that fight floods” (video 13 min)
Talk on: TED Ideas worth spreading
https://www.ted.com/talks/kotchakorn_voraakhom_how_to_transform_sinking_cities_into_landscapes_that_fight_floods

“Sustainable Development in Brazil?” (video about the city of Curitiba, 20 min).
<https://www.youtube.com/watch?v=r4sumpEqnIY>

City of Copenhagen 2012, *CPH 2015 Climate Plan. A Green, Smart and Carbon Neutral City*.
https://kk.sites.itera.dk/apps/kk_pub2/index.asp?mode=detalje&id=931
(also available on Canvas)

Chaouni, Aziza 2014, “How I brought a river, and my city, back to life” (video 6 min). Talk on: *TED Ideas worth spreading*
https://www.ted.com/talks/aziza_chaouni_how_i_brought_a_river_and_my_city_back_to_life

Lynge, Sinus 2019, “The Greatest Design Challenge of Our Age” (video 16 min). Talk at TEDxLinz. TEDxTalks published April 24 2019.
<https://www.youtube.com/watch?v=A1GSLA9thJw>

Australian Association of Architects 2012, “Ken Yeang and Bioclimatic Architecture” including “An interview with architect Ken Yeang (video 3 min)
<http://architecture.org.au/news/enews/354-ken-yeang-and-bioclimatic-architecture>

Gerini, Jorge 2017, “Anupama Kundoo: Current Methods of Construction are Producing More Problems Than They Solve”. *ArchDaily 7 October 2017*
<https://www.archdaily.com/880897/anupama-kundoo-current-methods-of-construction-are-producing-more-problems-than-solving-it>

Benimana, Christina 2017, “The next generation of African architects and designers” (video 11 min). Talk on *TED Ideas worth Spreading, TEDGlobal August 2017*.
https://www.ted.com/talks/christian_benimana_the_next_generation_of_african_architects_and_designers

Maritz, Nina 2013, “I focus on sustainable construction” (video 5 min). Talk at 2013 AZA Architecture Conference. Design Indaba
<https://www.youtube.com/watch?v=xyuGGBcx3fA>

Golden, Elizabeth, 2012, “Traditional Materials Optimized for the Twenty-first Century”. 2012 ACSA International Conference
(available on Canvas and as a pdf online, search title)

Vandkunsten 2019, “Social Housing Designed for Reuse. Circle House” (including video 1 min)
<https://vandkunsten.com/en/projects/circle-house>

Hardy, Elora 2015, “Magical houses, made of bamboo” (video 10 min). Talk on: *TED – Ideas worth spreading*
https://www.ted.com/talks/elora_hardy_magical_houses_made_of_bamboo

Green, Michael 2013, “Why we should build wooden skyscrapers” (video 12 min). Talk on: *TED – Ideas worth spreading*
https://www.ted.com/talks/michael_green_why_we_should_build_wooden_skyscrapers

Ban, Shigeru 2013, “Emergency Shelter made from Paper” (video 12 min) Talk on: *TED - Ideas worth spreading*
https://www.ted.com/talks/shigeru_ban_emergency_shelters_made_from_paper#t-304441

Cockram, Michael 2016, “Catching Rays. Building Integrated Photovoltaics”. In: *Architectural Record* 2016:4 p. 110-116.
<http://www.architecturalrecord.com/articles/11590-building-integrated-photovoltaics>
Please observe: in the online version you have to click on the pictures separately.
(also available on Canvas)

Van Aubel, Marjan 2018, “Rethinking Solar Energy” (video 5 min)
What Design Can Do. WDCD Challenge 2018
<https://www.whatdesigncando.com/talks/rethinking-solar-energy-marjan-van-aubel/>

Stevenson, Fionn 2015, “Professor Fionn Steveson on Building Local resilience” (video 3 min). Sheffield Shool of Architecture
<https://www.youtube.com/watch?v=Cc4bFWbMIac>

Petrescu, Doina 2015, “Professor Doina Petrescu on Building Local resilience” (video 3 min). Sheffield Shool of Architecture
<https://www.youtube.com/watch?v=WwX1DDIQAUU>

Hamdi, Nabeel 2014, “Participation in Practice”. UN-Habitat Worldwide, Urban lecture series (video 9 min)
<https://www.youtube.com/watch?v=7r9IYl4CtKI>

Berry, Laura H. et al 2019, “Making space: how public participation shapes environmental decision-making”. Stockholm Resilience Institute. SEI discussion brief January 2019
<https://www.sei.org/wp-content/uploads/2019/01/making-space-how-public-participation-shapes-environmental-decision-making.pdf>
(also available on Canvas)

Petcu, Constantin & Petrescu, Doina 2018, “Commoning Architecture. Common lecture by Constantin Petcu and Doina Petrescu (Atelier D’Architecture Autogéere/Paris)”. In: Underreiner, Walter (ed) 2018, *Emerging Architecture. The changing shape of architectural practices*. Arkitektskolen Aarhus
(available on Canvas)

Parvin, Alastair 2013, “Architecture for the people by the people” (video ca 13 min)
Talk on: *TED - Ideas worth spreading*
http://www.ted.com/talks/alastair_parvin_architecture_for_the_people_by_the_people

Gang, Jeanne 2016, “Buildings that blend buildings and nature” (video ca 12 min)
Talk on: *TED - Ideas worth spreading*
https://www.ted.com/talks/jeanne_gang_buildings_that_blend_nature_and_city

Aravena, Alejandro 2014, “My architectural philosophy? Bring the community into the process (video 16 min)
Talk on: *TED - Ideas worth spreading*
[https://www.ted.com/talks/alejandro_aravena_my_architectural_philosophy_bring_t he_community_into_the_process](https://www.ted.com/talks/alejandro_aravena_my_architectural_philosophy_bring_t_he_community_into_the_process)

Murphy, Michael 2016, "Architecture that's built to heal" (video ca 15 min)
Talk on: *TED - Ideas worth spreading*
https://www.ted.com/talks/michael_murphy_architecture_that_s_built_to_heal

Napawan, Claire N., Burke, Ellen & Yui, Sahoko 2017, "Women's work: An Eco-Feminist Approach to Environmental Design". In: *Avery Review* 27 (November 2017)
<https://averyreview.com/issues/27/womens-work>
(also available on Canvas)

Sinclair, Cameron 2006 "My wish: A call for open-source architecture" (video ca 23 min) Talk on: *TED - Ideas worth spreading*
http://www.ted.com/talks/cameron_sinclair_on_open_source_architecture#t-13971

Steel, Carolyn 2009, "How food shapes our cities" (video 15 min). Talk on TEDGlobal 2009.
https://www.ted.com/talks/carolyn_steel_how_food_shapes_our_cities

Karanja, Nancy & Njenga, Mary 2011, "Feeding the Cities". In: *State of the World 2011. Innovations that Nourish the Planet*, page 133-137. The World watch Institute
<https://books.google.se/books?id=R4TCBgAAQBAJ&pg=PA109&lpg=PA109&dq=karanja+nancy+feeding+the+cities&source=bl&ots=ITtMiBMXH2&sig=Gw3Fd4JX0RwUi8kWKmMfrvk0-Yc&hl=sv&sa=X&ved=0ahUKEwj3pfWhso3bAhULJ5oKHbQqCDMQ6AEINDAC#v=onepage&q=karanja%20nancy%20feeding%20the%20cities&f=false>
(also available on Canvas)

Bohn, Katrin & Viljoen, Andre 2016, "The Productive City: Urban Agriculture on the map". In: *Urban Design* 2016, issue 140
https://www.researchgate.net/publication/329196219_The_Productive_City_Urban_agriculture_on_the_map
(also available on Canvas)

Nair, Joe, Komisar, June & Gorgolewski, Mark 2014. "Urban Agriculture as ordinary urban practice: Trends and lessons". In: Bohn, Katrin & Viljoen, André 2014, *Second Nature. Urban Agriculture. Designing productive cities*, page 21-31. Routledge
https://books.google.se/books?id=jxwWBAAAQBAJ&pg=PA24&lpg=PA24&dq=Urban+Agriculture+as+ordinary+urban+practice:+Trends+and+lessons&source=bl&ots=IyT2sJDV9&sig=oVNslE4FRXvm4_0DDfvi-Xq2wh8&hl=sv&sa=X&ved=0ahUKEwjM0e7u2KzNAhUCFywKHZBSCP0Q6AEIKTAB#v=onepage&q=Urban%20Agriculture%20as%20ordinary%20urban%20practice%3A%20Trends%20and%20lessons&f=false
(copy and paste link into web browser if it does not work when clicking on it)

Makower, Joel 2017, "Biomimicry @ 20: A conversation with Janine Benyus". GreenBiz, Monday, July 24, 2017.
<https://www.greenbiz.com/article/biomimicry-20-conversation-janine-benyus>
(also available on Canvas)

Pawlyn, Michael 2010, "Using nature's genius in architecture" TedSalon Lndon 2010, (video ca. 14 min) Talk on: *TED - Ideas worth spreading*
http://www.ted.com/talks/lang/eng/michael_pawlyn_using_nature_s_genius_in_architecture.html

Mooi, Alexander 2014, "What Will the Architect be Doing Next? How is the profession of the architect evolving as the focus of society shifts from sustainability to resilience or reactivist-driven design demands?". In: *Footprint. Delft Architecture Theory Journal* Spring 2014, pp. 119-128
<http://journals.library.tudelft.nl/index.php/footprint/article/view/806/1005>
(also available on Canvas)

Mossin, N., Stilling, S., Bøjstrup, T., & Larsen, V. G. 2018, "An Architecture Guide to the UN 17 Sustainable Development Goals", The Institute of Architecture and Technology at The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation, the Danish Association of Architects and the UIA Commission on the UN Sustainable Development Goals
https://docs.wixstatic.com/ugd/ee4432_1e3228fb158e42e0942ff3631b56d25f.pdf

RIBA, 2017, "United Nations Sustainable Development Goals in Practice"
<https://www.architecture.com/-/media/gathercontent/un-sustainable-development-goals-in-practice/additional-documents/11064ugncbrochurea4fora5v12webpdf.pdf>

RIBA, 2019, "Ethics in Architectural Practice"
<https://www.architecture.com/-/media/gathercontent/un-sustainable-development-goals-in-practice/additionaldocuments/ethicsinarchitecturalpracticecasestudiespdf.pdf>