



Universities and the 2030 Agenda

TEACHING, LEARNING AND ACTING ON THE SUSTAINABLE DEVELOPMENT GOALS



TITLE: Universities and Agenda 2030: Teaching, Learning and Acting on the Sustainable Development Goals into Teaching

EDITORS: Kes McCormick and Emily Boyd

CONTRIBUTORS: Ulrike Krantz and Joyce Soo

ACKNOWLEDGEMENTS: Ann Åkerman

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Introduction

This compendium explores the 2030 Agenda and the Sustainable Development Goals (SDGs) from three core perspectives – knowing, measuring and leading. It represents a guiding document for everyone, everywhere working with universities and teaching, learning and acting on the 2030 Agenda and the Sustainable Development Goals and is designed to complement the course Universities and the 2030 Agenda on Canvas.

WHAT IS THE 2030 AGENDA AND WHY DOES IT MATTER?

The 2030 Agenda for Sustainable Development is a “plan of action for people, planet and prosperity” with the 17 Sustainable Development Goals (SDGs) at its heart to be achieved by the year 2030. When the Agenda and the SDGs were adopted by all United Nations Member states in 2015, it was the first time in history that nations cooperated in a participatory way on setting a universal set of goals, applicable to every nation and sector. It was the first time that several agendas were integrated, each of which had been in progress for decades. Typical development sector goals, which were previously expressed in the Millennium Development Goals, were combined with social and ecological goals to create a set of integrated goals.

The SDGs recognise that the work for poverty eradication and social justice must go hand-in-hand with the improvements in health and education, the stimulation of economic growth, the reduction of inequalities as well as global environmental protection and the fight against climate change in ways that leave no one behind.

It is crucial to train teachers and educators across all disciplines and levels who can enable and encourage students to acquire the competences and knowledge necessary to achieve the 2030 Agenda.

WHAT ARE THE SDGS?

The SDGs are interlinked and need to be looked at as an overall framework. They are indivisible and need to be implemented in an integrated manner.

The SDGs are global in nature and universally applicable, taking into account national realities, capacities and levels of development and specific challenges.

All countries have a shared responsibility to achieve the SDGs, and all have a meaningful role to play locally, nationally as well as on the global scale.

Each of the 17 SDGs has a list of targets (169 targets in total) that are measured with indicators. Like the formulation of the 17 goals, the targets and indicators are the result of a political negotiation and need to be looked at critically. The SDG targets are an ideal set of goals.

They are defined as global in scope and are aspirational. Governments are responsible for setting their own national target with local priorities and global aspirations in synergy. Governments are also responsible for how goals and targets are considered within strategic planning and policy processes at the national level.



Figure 1: The 2030 Agenda is based on these seventeen Sustainable Development Goals (SDGs). (Source: UN.org)

WHERE DID WE AT LUND UNIVERSITY GET THE IDEA FOR THIS COURSE?

Lund University has a Strategy for Sustainable Development, which complements the University's strategic plan and observes the Higher Education Act. The requirement for Sweden's higher education institutions to promote all dimensions of sustainable development is stated in the Higher Education Act (1992:1434 Chapter 1, Section 5). The strategy covers the University's entire organisation and all employees. The aim of the strategy is to provide a direction and establish a number of visions, not to regulate how the implementation is to be carried out. With its comprehensive range of disciplines, Lund University can follow the holistic approach of the 2030 Agenda by creating and conveying knowledge with a scientific and artistic basis.

In 2019, the foundations for this course were established by Lund University Centre for Sustainability Studies (LUCSUS), Lund University Commissioned Education (LUCE) and Lund University School of Economics and Management (EHL), through a Swedish Institute funded Capacity Development Programme in Africa. The pedagogy was further developed by LUCSUS for the 2030 Agenda summer school in 2020 and transformed later into an online course worth 7.5 ECTS credits

In keeping with the far-reaching nature of the SDGs and the 2030 Agenda, this material is designed and intended to inspire educators and trainers across all disciplines and levels anywhere and to integrate both into teaching.

WHAT ARE THE OBJECTIVES OF THE COURSE?

- to be a source of inspiration for everyone, everywhere working with universities and teaching, learning and acting on the 2030 Agenda
- to increase knowledge and understanding of the 2030 Agenda among teachers and students, to remain relevant and competitive as a university
- to stimulate the integration of the 2030 Agenda and the Sustainable Development Goals into teaching to advance and prepare students to work with the goals in their future careers
- to contribute to the emerging conversation about the role of universities in a changing world and how to take action on the 2030 Agenda and the Sustainable Development Goals
- to encourage sharing and learning between teachers and teaching activities at Lund University

Emily Boyd | Professor at LUCSUS | Introduces to the course Universities and the 2030 Agenda.



"The course will utilise the Agenda 2030 and the 17 SDGs as a pedagogical tool to help make the complexities of sustainable development more understandable.

The course sets out to stimulate understanding of the Agenda 2030, to prepare students in their future careers and to encourage sharing and learning between teachers and teaching activities at Lund University. It is an opportunity to support an emerging conversation about the role of our teaching in a changing world. In this context we ask can Agenda 2030 and the SDGs help us to think about how we can make a difference and how can we engage our students in new ideas and learning.

Hopefully you will gain some inspiration for advancing your roles as teachers and for our students as future change agents within the broader framework of the Agenda 2030. Ultimately, you can take away this learning to use how you wish. It is hoped this introduction has sparked your curiosity to pursue the course. You will meet and engage with fellow colleagues and learn many new things about Lund University and its offerings we really wish you the very best of luck on your journey."



<https://youtu.be/QXN5wTHBeT8>

Mariana Lopez Davila | An environmental student's perspective on learning and the 2030 Agenda

"I think it is very important to incorporate and learn about Agenda 2030 and sustainable development because ultimately it will make me a better rounded professional. Today, organizations both in the public and the private sector are actively thinking and working to align themselves with sustainable development and Agenda 2030."



<https://youtu.be/wgFUqgipcGg>

Pedagogical relevance

What relevance does the 2030 Agenda have for your teaching? The following section will provide reasons for its pedagogical relevance, including challenges in integrating the SDGs into learning, and their relevance to pedagogical theory.

LINKING SDGS AND EDUCATION

Education is an essential strategy for the achievement of the 2030 Agenda. It is included in the 17 sustainable development goals as a stand-alone goal, SDG 4, and also as a means for achieving all the other SDGs.

SDG implementers need a range of cross-cutting skills and key competences for addressing SDGs and include: Systems and critical thinking, self-awareness, integrated problem-solving, and anticipatory, normative, strategic and collaboration skills; creativity, entrepreneurship, curiosity and learning skills, design thinking, social responsibility, partnership competences, and familiarity with inter-disciplinary settings.

For students to develop such a variety of competences, skills and knowledge, a multi-method approach is necessary, i.e. the combination of different methodologies and pedagogies.

CHALLENGES IN TEACHING THE SDGS

There are challenges to effectively integrate SDGs and learning:

1. A pedagogical framework is missing on how to teach the 2030 Agenda with its 17 SDGs and indicators as a whole, and in an integrated manner. A more holistic understanding of the 2030 Agenda allows potential for students to develop more than just knowledge about the SDGs, but also transversal competences, contributing to becoming SDGs implementers.
2. Despite the fact that the 2030 Agenda is explicit in its recognition of the interdependencies between the SDGs, the SDG framework and resource material does not put enough weight on the interlinkages between the SDGs, the pedagogy of measuring and monitoring the SDG indicators, nor the soft skills and leading components of the SDGs.
3. The interconnectedness of SDGs and complexity of sustainability concepts pose new challenges to relate to the SDGs in educational learning outcomes. Transformations to sustainability require specific knowledge, skills, behaviours, and attitudes.

HOW OUR STRUCTURE LINKS TO THESE IDEAS

In this online course we present a learning structure of how to better understand the 2030 Agenda and open up a discussion of the relevance to our teaching.

The module Knowing is to be understood as a foundational module and aims at deepening the basic

knowledge of the SDGs and targets. It emphasises the interlinkages between the SDGs and shows trade-offs.

The module Measuring builds on the Knowing module, and engages with ideas of measurement, goals, targets and indices, as well as critical reflection on what quantifying and measuring the goals means. Measuring is the backbone of the 2030 Agenda. It is important to critically discuss measurement, because if the Goals are to be reached by 2030, it is important to be able to understand the role of measurement and its limitations.

The module Leading builds on the previous modules and engages with different leadership models highlighting sustainable, transformational leadership.

PEDAGOGY AND SUSTAINABILITY THEORY

Theories provide specific pedagogical choices depending on the pedagogical and educational goals, and the context or learning environment (Lozano et al., 2017). For example, an important starting point is: Who are the students and who are the teachers, and where will the learning take place and be used? One important element is that a diversity of approaches is a good thing. It allows students to explore and develop new and different learning approaches in a portfolio of activities. In theory, this should allow students to be able to grow and learn in new ways, that will stimulate their learning and potential leadership capacity on complex topics. There are many good ideas on how to create learning communities for teachers to exchange useful methodologies.

There are many methodologies such as case studies, project and/or problem-based learning, community service learning, jigsaw/interlinked teams, participatory action research, eco-justice and community, place-based environmental education, and supply chain/life cycle analysis with a good coverage of the competences.

It becomes clear that conventional classroom teaching style alone cannot foster SDG competences. It is not enough to cherry pick some. SDGs and the indicators are appealing and straightforward and there is abundance of material to learn about the different SDGs. The colourful graphical design has the potential to be a good pedagogical tool to teach sustainable development, however, this is not sufficient for teachers or students who have not been exposed previously to the topic of sustainable development. This is important as SDG 4 seeks inclusive and equitable quality education and promote life-long learning by 2030.

Emily Boyd | Professor at LUCSUS | Linking SDGs and education into teaching.



"Education is an essential strategy for the achievement of the Agenda 2030. It is included in the 17 Sustainable Development Goals as a standalone goal, SDG4, and also as a means for achieving all the other SDGs.

There has been a decade-long discourse about education and sustainable development which led to the well-established approach of education for sustainable development. One strand of discussion within ESD is about competencies. SDG implementers need a range of cross-cutting skills.

Conditions for change include competencies of open-mindedness, empathy and metacognition, such as monitoring and action allowing for connecting: "what I learn, what I think, and what I do" in a frame of mind and action. Competencies are also underpinned by ethical frameworks and norms and values. For students to develop such a variety of competencies, skills and knowledge, a multi-method approach is necessary which is the combination of different methodologies and pedagogies people such as Lozano et al are among the first scholars to combine the discourses about education for sustainable development competencies and the education for sustainable development methodologies and they develop a framework. Their study shows that no single pedagogical methodology alone covers the whole set of ESD competencies.

There are many methodologies such as case studies projects or problem-based learning or community service learning, as well as interlinking teams participatory action as well as place-based environmental education and all of these give a good coverage of different competencies. In the theory, Lozano et al provide specific pedagogical choices depending on the pedagogical and educational goals and the context of the learning environment.

In this online course, we present a learning structure of how to better understand the agenda 2030 and open up a discussion of the relevance to our teaching at Lund University."



<https://youtu.be/jUjEKhfy4Zs>

SUSTAINABILITY COMPETENCES

The selection of sustainability competences is important. These include both cognitive aspects, knowledge and understanding of environmental, social and economic systems and higher order thinking, such as reasoning and synthesis, as well as social skills, values, emotions, and 'affective domain' or change in learning.

Competences are also underpinned by ethical frameworks and norms and values. Kioupi and Voulvoulis (2019) have systematically collated a list of key sustainability competences:

Sustainability competences

- Systems thinking: capability to engage with complex systems
- Future oriented thinking: ability to anticipate and take into account different futures
- Collaboration: ability to work with others
- Strategic thinking: ability to set goals and plans and evaluate
- Normative thinking: capacity to deal with norms and values in individuals and society
- Critical thinking: capacity to ask questions about personal and collective thinking and norms
- Self-awareness: possession of personal motivations, feelings and beliefs
- Emotional Intelligence: engagement with perspectives, responsibilities, emotions
- Social media and communication skills: capacity to communicate, collaborate, act
- Problem-solving: ability to deal with complexity and ambiguity
- State of the planet: engagement in deep scientific understanding and assessment

WE INCLUDE IN OUR THINKING THREE DOMAINS OF LEARNING:

1. Cognitive domain. This comprises knowledge and thinking skills necessary to better understand the SDG and challenges in achieving it.
2. Socio-emotional domain, which includes social skills that enable learners to collaborate, negotiate and communicate to promote the SDGs as well as self-reflection skills, values, attitudes and motivations that enable learners to develop themselves.
3. Behavioural domain, which describes action competences.

Course structure

This course explores the 2030 Agenda and the Sustainable Development Goals from three core perspectives – knowing, measuring and leading.

KNOWING, MEASURING AND LEADING: THE CORE MODULES

The formation of three interlinked teaching modules allows for a structured approach to advance knowledge and understanding of sustainable development and to critically assess measurement and effectively and better understand the role of leadership and the soft skills required in advancing action on the SDGs. We see these elements as critical and tightly interwoven into a structured learning model on the SDGs, see figure 2.

We can think of Knowing in terms of concepts and ideas

Knowing is about increasing our knowledge and interdisciplinary understanding of Agenda 2030 and the Sustainable Development Goals, as well as encouraging systems thinking. It involves learning about and considering the interlinkages between the Sustainable Development Goals but also the trade-offs and tensions as well as how to move from knowledge to action.

We can think of Measuring as tools

Measuring is about discussing our knowledge and understanding of the role of measurement and its limitations for Agenda 2030 and the Sustainable Development Goals. It involves learning about assessment, tools and methods for measurement and addressing critical questions raised about how to design measuring.

We can think of Leading as actions

Leading is about taking our knowledge and understanding of Agenda 2030 and the Sustainable Development Goals and translating it into leadership in a changing world. It involves learning about leadership in terms of action, storytelling, anticipating, communication, networking, negotiation and even resistance.

MODULE COMPONENTS

Each module in turn is made up of three components and an assignment.

Module components

Concepts:

This component provides concepts relating to Knowing, Measuring and Leading and explains why it matters.

Competences:

This component demonstrates a variety of competencies and examples of how teachers integrate SDGs into their teaching.

Good practices:

This component provides ideas, tools and materials on how to implement SDGs into your teaching.

Assignments:

Each module rounds off with an assignment that stimulates you to apply what you have learned to the context of your own discipline and teaching.



Figure 2: The three core modules: Knowing, Measuring and Leading, and their interlinkages: tools, concepts and action.

Module - Knowing

Where did the SDGs come from and what do they want to achieve? The module focuses on systems thinking and should deepen knowledge of the Sustainable Development Goals and its targets and indicators, as well as synergies and trade-offs between the goals.

ORIGINS OF THE 2030 AGENDA

The concept of Sustainable Development was introduced to United Nations policy work by the Brundtland report "Our common future" in 1987. This report recognised that human resource development in the form of poverty reduction, gender equity, and wealth redistribution was crucial to formulating strategies for environmental conservation, while also recognizing that environmental limits exist in terms of economic growth.

The eight Millennium Development Goals (MDGs) launched in 2000, were successful in supporting a global political consensus around issues such as hunger, inequality, poverty and health. But they were also criticized for their narrow focus on human aspects of development, while overlooking the importance of material limits in the biosphere.



Emily Boyd | Professor at LUCSUS | Background to the SDGs.

Their implementation at national levels is challenging and stakeholders at all levels and across all sectors are expected to engage in formulating the targets and goals. Since there are interlinkages between all of the goals, different sectors of society – that were previously considered separate and distinct – are expected to cooperate.

So, for example, we see in the context of the global COVID 19 pandemic shows the critical importance of tackling, for example, SDG 15 Land, SDG 3 Health and SDG 10 Inequality in collaborative ways. Here, for example, researchers have the opportunity to collaborate across departments. Departments in universities should think about opportunities to collaborate across boundaries on both teaching and research in new integrated ways.

Capacity challenges include the lack of knowledge about interconnections between sectors and goals, perhaps a limited understanding of the role of measurement and the potential development implications of measurement.



https://youtu.be/yUu4hLIV_5E

Furthermore, the MDG framework failed to capture the complex interdependencies between the goals, and there was little interrelation between targets and indicators. The MDGs have also been criticized for their top-down approaches, overemphasis on developing countries, and for not having the universal ambition of transforming sustainability pathways for all countries.

The 2030 Agenda for sustainable development seeks to build on the MDGs and to complete what they did not achieve. The 2030 Agenda is a plan of action for people, planet, prosperity, peace and partnership; known as the five PS, see figure 3.

When adopted by all United Nations Member States in 2015, it was the first time in history that nations cooperated in a participatory way on setting a universal set of goals applying to every nation and sector. Typical development sector goals were combined with social and ecological goals to create a set of integrated goals. The SDGs recognised that the work for poverty eradication and social justice must go hand in hand with the improvements in health and education, the stimulation of economic growth, the reduction of inequalities, as well as global environmental protection, and the fight against climate change.



Figure 3: At the heart of the 2030 Agenda are five critical dimensions: people, prosperity, planet, partnership and peace, also known as the 5Ps.

Concepts

Knowing is underpinned by concepts of pedagogy and sustainability. The module Knowing aims to strengthen knowledge about the sustainability challenges we face and their drivers and impacts. The SDGs are additionally explored as a framework for transformations. In the following video excerpt, Emily Boyd establishes a basic understanding of the interdisciplinary nature of the SDGs, as well as their embedded synergies and trade-offs.

Emily Boyd | Professor at LUCSUS | Concepts of Knowing



The first module knowing aims to strengthen knowledge about the SDGs and synergies and trade-offs between SDGs.

The first module is associated with concepts and is organized as a basic background training in the history, context and development of the SDGs. It focuses on establishing the basic understanding of the interdisciplinary nature of the SDGs. The first module builds on the idea of cognitive domain and the knowledge and thinking skills necessary to better understand SDGs and challenges in achieving the goals.

So for example, interdisciplinary courses would make use of the students' different knowledges. You talk about big topics and then address some specifics that you address with specific expertise. And you make use of the students different knowledges that they bring with an interactive approach with students.

The pedagogical competencies for knowing SDGs are associated with systems thinking and complexity, normative skills, including beliefs, values and awareness, critical thinking with a focus on whose knowledge counts, what kind of knowledges matter, tolerance for ambiguity and uncertainty, for example, when data is not available.

From a pedagogical perspective, three groups of competencies on SDGs can be examined through the Knowing module. So we give a bit more detail here on the first one which is critical thinking and the competence, which is the ability to step back from the immediate problem and reframe how one defines and solves a problem. The second is systems thinking and the competence there, which is the ability to see how organizational systems or people interact and influence each other and how these

systems create and contribute to specific issues and strengths. Thirdly the normative competence. This is the ability to communicate about value issues in objectively neutral terms within a pluralistic environment. In an interdisciplinary course you might think about finding a specific entry point that is understandable for all. For example, the moment of eating for a course about sustainable food. If we take one example SDG 15 Life on Land, land is naturally occurring finite resource that holds everything that constitutes terrestrial ecosystems and provides the foundation for the survival of living things.

Land is at the heart of the interdisciplinary challenge of learning about how to tackle multiple and interrelated issues of environment, economy and society. The starting point and the whole premise of land use and land use change management is an interdisciplinary challenge. So to halt land degradation deforestation and biodiversity loss to reach the SDG goal, it cannot be achieved by focusing only on the natural resources. You also have to look at the drivers and impacts of the problems and these have to be analysed and comprehended from many different perspectives.

To identify and understand the effects of synergies and trade-offs involves going beyond individual disciplines. It's also important to recognise local understandings of nature and also to acknowledge local knowledges and skills of managing natural resources or other dimensions of the SDGs.

To train students in critical systems thinking you could for example start by drawing a problem tree of a selected Land Challenge or analysing the problem using the DPSIR framework. Or you might want to do a group exercise in group work as a cornerstone for the development of an interactive transdisciplinary and sharing learning environment.



<https://youtu.be/UKJTCRTTr9Y>

NATURE OF THE SDGs

To make progress on sustainable development with no one left behind requires knowledge on how the Sustainable Development Goals (SDGs) interact with each other, at different scales and time frames, as well as physical limits and underlying social dynamics.

The SDGs are interlinked and need to be looked at as an overall framework. They are well integrated as a whole, indivisible and need to be implemented in an integrated manner. The interconnectedness and indivisibility of the SDGs means that a “one instrument per problem” approach (Schill et al., 2019), will backfire on the entire undertaking, while understanding first, second and higher order interactions, and harnessing synergies will make success more likely (Nilsson, Griggs and Visbeck, 2016). Tackling the complexity arising from the SDGs will require deep knowledge from both the natural and social sciences, across different sectors and stakeholders.

A way of looking at the SDGs is as a ‘cake’ with interlinked layers of economy and society and biosphere, see figure 4. In order to attain the SDGs, societies are required to transition toward a world logic where the economy serves society so that it develops within the safe operating space of the planet. There are three underpinning conditions to achieve the SDGs (Norström, et al., 2014). First, seeing people as integral to the biosphere, where humans and nature are integrated as a whole. Second, navigating trade-offs between the

goals and actor interests. In order to be motivating, the goals and targets need to be set at a level that is achievable for different groups in society. Third, the goals need to be connected to existing values and norms, in particular recognising local understandings of nature and acknowledging diverse forms of managing natural resources with local knowledge and skills.

The SDGs are global in nature and universally applicable, taking into account national realities, capacities and levels of development and specific challenges. All countries have a shared responsibility to achieve the SDGs, and all have a meaningful role to play locally, nationally as well as on the global scale.

Each of the 17 SDGs has a list of targets (169 targets in total) that are measured with indicators. Like the formulation of the 17 goals, the targets and indicators are the result of a political negotiation and need to be looked at critically. The SDG targets are an ideal set of goals. They are defined as global in scope and are aspirational.

Governments are responsible for setting their own national target with local priorities and global aspirations in synergy. They are also responsible for how goals and targets are considered within strategic planning and policy processes at the national level.



Figure 4: The SDG ‘cake’. This figure shows how the SDGs can be viewed in terms of three layers with economy and society embedded in the biosphere. © Azote Images for Stockholm Resilience Centre, Stockholm University

Competences

The following section will explain some competences you may want to draw upon in order to integrate the SDGs into your teaching.

CONCEPTS THAT INFORM OUR COMPETENCES

Given the complexity of the challenges, many scholars and practitioners recommend a systems thinking approach (Allen et al., 2018; Reynolds et al., 2017; Stafford-Smith, 2017; Collste et al., 2017), to not only make clear the interlinkages but to see beyond the confines of your own field, and identify, prioritise as well as collaborate for points for leverage (Abson et al. 2017).

Other useful concepts are the Planetary Boundaries concept by Johan Rockström and colleagues, as well as its extension to include social boundaries, called Doughnut Economics, by Kate Raworth. Despite the 2030 Agenda recognition of the interdependencies between the SDGs and the SDG framework, the interlinkages between the SDGs are not always clear.

The interconnectedness of the SDGs and complexity of sustainability concepts pose new challenges to relate to the SDGs in educational learning outcomes. Knowing is composed of various elements, such as cognitive aspects, knowledge and understanding of environmental, social and economic systems, reasoning synthesis, social skills, values, emotions and accepting and exploring alternative forms of knowing. Knowing builds on the idea of importance of knowledge and thinking skills necessary to better understand SDGs and challenges in achieving the goals. The pedagogical competence for knowing is associated skills listed in the following table.

Pedagogical competences in Knowing

- Systems thinking and complexity.
- Normative skills, including beliefs, values, awareness
- Critical thinking with a focus on whose knowledge counts/what kinds of knowledge matter
- Tolerance for ambiguity and uncertainty (e.g. there is not always data available on land use change)
- Empathy and perspective (field trips; sharing perspective, peers)
- Collaborative and communication skills

Lena Halldenius | Professor of Human rights | "A just transition to sustainable societies"



This PhD course is about applying a human rights perspective to the issue of sustainable development and the transition towards sustainable societies. We know that our societies need to transform quite radically to be sustainable. In any major social transformation, there is a risk that already vulnerable groups and persons bear a disproportionate cost of the transition and have their legitimate interests and human rights violated. We wanted to discuss this from a human rights perspective.

The course is open to all PhD students in any faculty. We wanted to engage critically with the assumption that sustainable development and working towards human rights are kind of the same thing. I think there is a possible disconnect in the development language in terms of aggregate indicators, goal-oriented thinking and the human rights-based perspective, where we continuously think about how social change impacts individuals' everyday lives and their position within their societies. There is also a potential and we wanted to discuss that critically, so that the issue of human rights doesn't get lost in the new sustainable development language that is framing our political discussion now.

One of the benefits of the Agenda is how it teaches us that everything is interconnected. If you want to work with issues of inclusive societies, you also need to work with issues on gender equality, health education etc. We invited a number of guest speakers from various disciplines, so they spoke from their own scholarly and research expertise, we also wanted to make it collaborative. The PhD students come with their own research interests and it was important for us to integrate this, so we asked big questions human rights and sustainable development. But we broke it down into themed workshops focusing for instance on labor rights or on migration, so that the big things were filtered through a sharp thematic focus with expertise.



<https://youtu.be/9HLHqjXE-xQ>

Good Practices

What practices will you need to demonstrate in your teaching when integrating the SDGs? The following section will explain what a good practice is, in terms of ideas, tools and materials.

BACKGROUND

As mentioned earlier in the section on the pedagogical relevance of linking SDG into education, there are some challenges to effectively integrate SDGs and learning. These challenges include how to better integrate a more holistic understanding of Agenda.

In this section, we focus on providing good practice examples of teaching and learning at Lund University. You are presented with ideas, tools and materials that can stimulate how to create interlinkages between the SDGs.

IDEAS

Ideas make up an important part of Knowing. It is the teacher's responsibility to harness and utilise the most suitable ideas to nurture students' knowledge and skills and empower them to engage with the 2030 Agenda and SDGs. The following provides some examples of how teachers from different disciplines incorporate diverse ideas into their teaching.

FINDING MEANING IN REAL WORLD CHALLENGES

SDGs are complex processes. The arts is a complex organism. At Lund University, researchers and artists collaborate around narratives of the future under climate change. There are emerging spaces for artists to work on different types of sustainability. For example, we need (SDG1) or exploitation of forests (SDG15), in order to fill the gap that exists when we constantly present facts and different entry points into solutions and artists working with questions of melting icebergs (SDG13), poverty

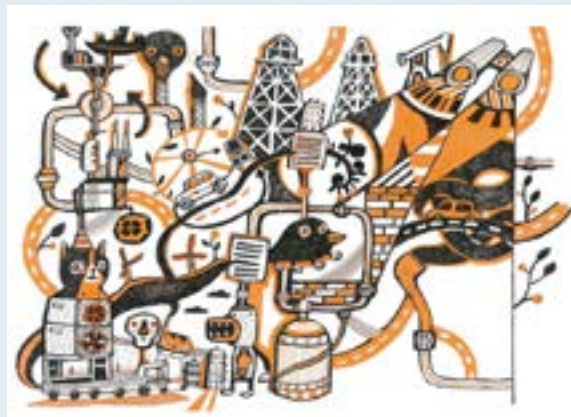
MATERIALS

There is a wealth of material provided by the United Nations, NGOs and other similar organisations, Lund University also has many online resources related to teaching sustainability.

For example interactive exhibitions can be utilised as a tool for learning. They can encourage interests and conceptual understandings. They can also generate discussions and understandings about interlinkages in the SDGs. For example the exhibition Carbon Ruins (see following) links SDG 13, SDG12 and SDG 4.

The DPSIR framework (provided opposite) is another example of a method to further develop systems thinking competences.

Narrating Climate Futures | Carbon Futures | Interactive exhibition as a tool for learning



The Carbon Ruins exhibition is the result of several initiatives at Lund University, most notably the Narrating Climate Futures Initiative, the Climaginations project and the think tank LU Futura. The aim is to transport visitors in space and time, to a future where transitions to post-fossil society has already happened, to spark a visionary and tangible conversation on what we leave behind and what we take with us.

By focusing on physical objects, recognisable and culturally powerful, it bridges the gap between the concrete every day lives of humans and the abstract impacts of climate change.

The choice of the objects and the associated stories are based on an aggregate of climate models and expertise from the Narrating Climate Futures network. The participating characters and events which construct the story have been generated through participatory workshops with researchers and practitioners in food, transport, steel, energy and plastic.

Carbon Ruins has, since its inception in 2019, taken many forms and visited many sites. It currently exists as a mobile exhibition, audio exhibit, educational material for schools, as part of the Human Nature exhibit at the Ethnographic museum in Stockholm, as performance and in a Scottish version displayed during COP26. Read more about the different varieties of Carbon Ruins below.

See more at

<https://www.climaginations.org/carbon-ruins>



Photo: Participants of the Land is Life capacity building programme using the DFPSIR framework to analyse land degradation. (Credit: Ann Åkerman)

**Sara Gabriellsson | Senior Lecturer at LUCSUS |
“Analyzing Human-Environment interactions
using DPSIR”**



The DPSIR assessment framework is a tool that can be used to analyze the origins and consequences of complex environmental problems. The framework was developed by the European Environment Agency to describe interactions between

society and the environment, with particular focus on identifying how human activities cause environmental changes and how we can respond to these.

The DPSIR framework consists of a chain of five causally linked components:

1. D – Driving Forces
2. P – Pressures
3. S – State
4. I – Impacts
5. R – Responses

As a first step in an DPSIR assessment data and information on all the different elements in the DPSIR chain is collected. Then possible connections between these different aspects are postulated. The component DRIVERS includes elements such as different economic sectors or human activities that fulfill a need in our society. Examples on an individual level could be: shelter, food, water, need for mobility, entertainment and culture. Examples on a collective level could be: population, transport, electricity, industry, agriculture, education.

To meet these societal needs, we then exert pressures on the environment through various production or consumption processes. These PRESSURES can then be identified in increased use of specific natural resources such as water wells, or be seen in how land use patterns change, for example through deforestation or through emissions of various kinds.

As a result of these exerted pressures, the ‘state’ of the environment is affected. This state is a combination of all the physical, chemical, biological, and epidemiological conditions of a specific place (either national, regional, local or urban) and they include components that can be measured such as, for example, the quality of air, water or soil. The changes in physical, chemical, biological and/or epidemiological state of the environment impacts the functioning of ecosystems, which in turn has consequences for the system’s ecological sustainability, economic stability and social performance.

To deal with these oftentimes undesired impacts policy makers or other societal actors can implement different types of responses directed towards any part of the chain between drivers to impacts. These could be political responses or it could entail setting up benchmarks or targets to reduce use/emissions



or waste of a resource or raise awareness to change behaviors.

<https://youtu.be/yY9WVMivAGw>

Assignment



KNOWING MODULE - UNDERSTANDING INTERCONNECTIONS WITH THE SDGS

Reflective questions:

1. Which SDG is relevant to your teaching?
2. What competences do you focus on in your teaching?
3. Can you find an example of good practice in your department?

Relevant further readings:

- Lozano, Rodrigo, Michelle Y. Merrill, Kaisu Sammalisto, Kim Ceulemans, and Francisco J. Lozano. 2017. "Connecting Competences and Pedagogical Approaches for Sustainable Development in Higher Education: A Literature Review and Framework Proposal" *Sustainability* 9, no. 10: 1889. <https://doi.org/10.3390/su9101889>
- Wiek, A., Withycombe, L. & Redman, C., 2011. Key competencies in sustainability: A reference framework for academic program development. *Sustainability Science*, Vol. 6, p. 203–218.
- Kioupi, V. & Voulvoulis, N., 2019. Education for Sustainable Development: A Systematic Framework for Connecting the SDGs to Educational Outcomes. *Sustainability*, 11 (21).



Photo: Gunung Sindur, West Java, Indonesia (Credit: Tom Fisk)

Module - Measuring

How important is measuring to the 2030 Agenda? What do we understand as measuring, how is it carried out and by whom, and how is it connected to the other modules Knowing and Leading?

Concepts

The second module is designed to show the challenges of measuring and implementing the SDGs. Measuring with indicators is essential to understand the magnitude of the problems we face and to track our progress in accomplishment of the SDGs. Reliable and disaggregated data related to these indicators is key to measuring and, in turn, decision-making and leading.

The module also focuses on the relevance of measuring in terms of realising the problems inherent in different value systems and indicators. For example, in how we measure land use change, or how we capture and present data on public health and its impact on different groups.

The aim is to build skills in how to make use of tools of measurement to identify the scale of certain problem(s) and to keep track of and predict the progress and effectiveness of specific measures. The module is associated with tools and is underpinned by the question of data, and by the ways in which we construct the pathway to assessing the targets and goal.

For the SDGs to be successful, every level of government needs to benchmark and assess their progress on each goal. Each goal is broken down into a range of targets, with a total of 169 targets spread out across the 17 goals. The measurement of sustainability has been a topic of fierce debate among researchers, policy makers and other stakeholders (Holden et al., 2014; Costanza et al., 2016).

At the UN level, reports are issued each year in which every country is ranked according to its performance in terms of meeting certain indicators and targets. In addition to individual country rankings, there is a spillover index that assesses each country's impacts on other country's abilities to achieve the SDGs. This is done according to three dimensions: environmental & social impacts embodies into trade, economy & finance and security.

CHALLENGES WITH MEASURING

What may look technical and academic is rather the result of political processes that translate values, priorities, and social norms into targets and indicators. In some cases, finding an adequate indicator proved to be difficult. For

other goals, for example, reduced inequalities, there is a contestation about the agenda and the selection of indicators which can "pervert the meaning of the goal" (Fukuda-Parr & McNeill, 2019, p. 10).

The 2030 Agenda puts much emphasis on measurement and progress indicators. In this course, the Measuring module is closely related to the other two modules that make up the teaching portfolio – Knowing and Leading. Understanding that measuring and monitoring constitutes an integral part of 'Knowing' the state of knowledge. Leading benefits from the knowledge and information provided through measuring and monitoring.

LINKS TO KNOWING AND LEADING

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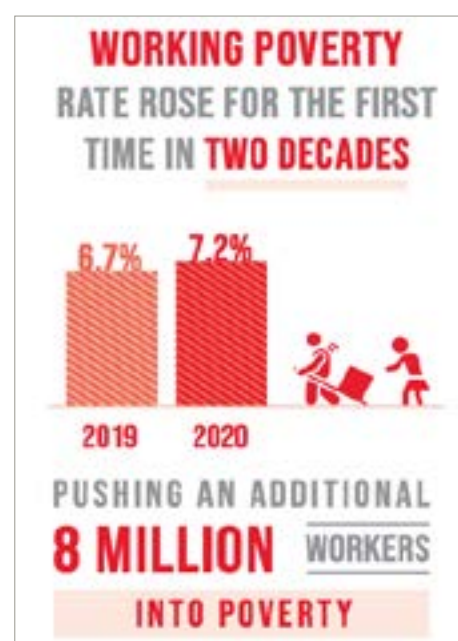


Figure 5: An example of an indicator used in the yearly UN SDGs progress report to measure progress on SDG 1: No poverty. (UN 2022)

Competences

The following section will explain which competences and skills in terms of measuring you will need to draw upon in order to integrate the SDGs into your teaching

Pedagogical competences in Measuring

- Systems thinking, complexity and dealing with change
- Normative skills (which target counts most)
- Critical thinking: who decides what to measure and the target (performativity)
- Tolerance for ambiguity and uncertainty (when there is no data)
- Anticipatory capacity (foresight, future)
- Integrated problem-solving competence

Understanding of assessment and evaluation *Systems thinking competence* which is defined by scholars (Wiek & Kay, 2015) as “the ability to collectively analyse complex systems across different domains (society, environment, economy, etc.) and across different scales (local to global), thereby considering cascading effects, inertia, feedback loops and other systemic features.

Normative competence refers to understanding and reflecting on the norms and values that underlie our actions; and how we negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge

and contradictions. A critical thinking approach is indispensable for teaching about measuring in the context of sustainable development. The indicators used to measure the SDGs have been criticised for oversimplifying highly complex and contested issues and for their appearance as objective and complete descriptions of the goals to be achieved (Mair et. al. 2017). Important critical questions to ask are who decides to measure what and how as well as what do we not measure.

Anticipatory competence is the ability to understand and evaluate multiple futures and the possible, probable and desirable futures and how we create our own visions for the future. For example we may apply the precautionary principle, assess the consequences of action, and tackle risks and changes.

Strategic competence can be thought of as the ability to collectively design and implement interventions, transitions, and transformative governance strategies toward sustainability” (Wiek & Kay, 2015).

Finally, integrated *problem-solving competence* is our “ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the aforementioned competences” (UNESCO, 2017).



Photo: Taken during Guy Jackson’s fieldwork (see following) with Bedamuni Peoples, North Fly District, Western Province, Papua New Guinea (Credit: Guy Jackson)

Guy Jackson | Postdoc at LUCSUS | Measuring the intangible



Food has a material dimension, of course, it's a part of ensuring nutrition, or food security in development talk. But it also holds intangible values. A particular crop, the taro (a root vegetable), holds particular significance to

the culture of the Bedamuni people in Papua New Guinea, where I carried out fieldwork. It's one of their key traditional foods. They hold particular values in relation identity, to the idea of cultural heritage, to the different types of food that they grow and the different times of year and celebrations they eat particular food. So even though there's a material dimension, there's an intangible value that comes from that. So most material values have intangible values too.

Intangible values, such as a home or a culture's territory, almost always have intangible values. Intangible values include such things as sense of place, so the feeling that we get when we are in our home environment. It can be a place we move to and begin to have place attachment with. It's the sort of value we place on places and each culture is different.

Our identity can be an intangible value. That is how we identify and present ourselves to the world based on our history, culture and values. Self-efficacy and self-worth are intangible values that are important to measure, but often aren't. Indigenous and local knowledge is the knowledge that people hold over a local area. For example, these can be lost from climate change where seasonality changes

and familiar patterns are lost and local knowledge becomes less effective. It would be important to measure this in relation to sustainable development. Mental and physical health have tangible and intangible values that are important to measure. Non-material cultural heritage, such as languages, and other values, are pride in one's culture and other kinds of physical and psychological well-being are just a few examples of non-tangible values that would be important to measure in assessments either of either losses and damages from climate change or development, for example. But they are also indicators that can be used to judge the success of sustainable development.

But how can they be measured and why is it important in relation to the SDGs? To understand what people value on must first recognise and embrace cultural difference and listen to people and understand that certain values, intangible values, that people hold may be different in relation to their culture. In this regard, it's important to talk to people to understand and situate yourself in that certain cultural context. Even if you do it well, you will still get imperfect information but it's really important to take yourself outside of your cultural norms to understand that values are different everywhere.

In this way, universalisation is useful to capture things that are unscientific. This may come across as a strange statement considering some sciences talk about universal truths. However, in this regard it's very place-based, context-specific. Therefore, we must try to identify themes that might be true in most places but understand the nuances when measuring intangibles.



<https://youtu.be/2r9t6K0AltC>



Photo: Kullaberg (Credit: Gunnar Menander)

Good practices

How can we help our students to understand the importance and complexity of measuring the SDGs? What tools are used to measure the SDGs? What resources can help to understand the importance of measuring? What is an appropriate method to measure progress?

One of the challenges with the SDGs is how to measure progress with the 169 targets. The SDG targets only become meaningful if they can be measured. This is no easy task.

Given the complexity of the agenda and its indicator framework, key questions that arise are:

1. What is an appropriate method to summarise information?
2. How to ensure everyone is counted?

Measuring the SDGs is a complex process. At Lund University, researchers in the natural science, physical geography and sustainability sciences use fieldwork visits to demonstrate methods of measurement, for example, in carbon fluxes or in knowing the quality of biodiversity and environmental conditions for bees. There are a range of tools that they use to teach students about measurement and how to measure to improve multiple targets such as climate change (SDG13), agricultural practices (SDG15) and economy (SDG8).



Figure 6: The Sustainable Development Report and The Sustainable Development Goals Report from 2022.

TOOLS

There is a selection of useful tools and resources for learning and exploring the various data sources and methods used to measure the progress of the SDGs.

The Sustainable Development Goals Report (United Nations)

Yearly progress reviews of the 2030 Agenda for Sustainable Development, using the latest available data and estimates to track global progress of the 17 Goals with in-depth analysis of selected indicators for each Goal.

<https://unstats.un.org>

The Sustainable Development Report (Sachs et. al. 2022)

A yearly global assessment of countries' progress towards achieving the Sustainable Development Goals. It is a complement to the official SDG indicators and the voluntary national reviews.

Rankings, interactive maps, country profiles data explorers and further material.

<https://dashboards.sdindex.org/>

The SDG Impact Assessment Tool (Gothenburg Centre for Sustainable Development)

A free, online, learning tool that visualises the results from a self-assessment of how an activity, organisation or innovation affect the SDGs. Rankings, interactive maps, country profiles data explorers and further material.

<https://sdgimpactassessmenttool.org>

Wim Carton | Senior lecturer at LUCSUS | Treeplanting as a climate solution, potentials and drawbacks



Today I will be talking a little bit about tree planting as a climate solution. We'll talk about the potentials but also the potential drawbacks of using tree planting as a climate solution.

You might know that there has been a lot of recent attention to tree planting as a climate change mitigation technology or method. We've seen headlines such as tree planting has mind-blowing potential to tackle climate change that build we could plant a trillion trees to capture a huge amount of carbon dioxide. Also in the scientific literature there's been a focus on this and there's of course many reasons for this so afforestation or tree planting as well as reforestation which is a plant increase where there previously have been POS forests has a lot of possible benefits. Of course I mean forests tend to be very popular as type environmental conservation and mitigation strategy everybody tends to like forest.

Of course, there are a lot of good things with forests. We can see many biodiversity and ecosystem co-benefits potentially with expanding the forest area that we have also climate adaptation benefits. Especially in cities for example. Planting trees tends to have a local effect that reduces temperatures and therefore can help adapt to heat waves. For example, there's a lot of livelihood benefits. In the global South planting trees can come with options to diversify income by, for example, growing food or fruits. You can also have timber of course from trees and it's often being promoted as a way to have a very kind of cheap, cost-effective solution to climate change.

But we see that there's also a lot of potential problems and trade-offs with tree planting. The first being that the biodiversity and ecosystem co-benefits really depend on the kind of tree planting that you do. We see that in a lot of countries' commitments so far, a lot of this focuses on plantations for temperature production which tend to be monocultures which have very few of these biodiversity benefits. It really depends on what kind of trees you plant and how we also should note that afforestation tree planting cannot compensate for emission reductions from fossil fuels. The two are not equivalent and that is because of course after a tree has been planted there's no guarantee that

the carbon that these trees have taken up while they grow actually stays there. There's a lot that can happen during the lifetime of a tree: wildfires, illegal log cutting, which can release that carbon again to the atmosphere. Trees of course also take a very long time to grow, and we really need to be cutting emissions here and now. So we don't really have that kind of long period of time to help them scale. Furthermore, the exact climate benefits also tend to be uncertain because a lot of it really depends on where you plant trees, what the previous land use was, etc.

Then there are also a lot of environmental justice concerns that we need to be conscious of: whose land are we actually using for this; whose carbon are we compensating for by planting these trees. Often the focus has been on tree planting in the global South because this can create a lot of supposed sustainable development benefits but there are also a lot of ethical concerns with this. Of course it transfers responsibility to some of the poorest most vulnerable parts of the world. There are also potential benefit trade-offs with food security and other land users. Therefore, we need to really ask who's gaining and who's losing from this.

To sum up we see that there's an increasing focus on tree planting as a potential climate mitigation strategy. This is often seen as some kind of silver bullet it's being oversimplified, I would argue and presented as an alternative to rapid emission reductions.



https://youtu.be/7-JO6_a3Th8



Photo: Forest plantation in Sweden
(Credit: Ann Åkerman)

**Sara Gabriellson | Senior Lecturer at LUCSUS |
“Implications of a lack of data on SDG 6 Clean water and sanitation”**



SDG 6 ‘Clean water and sanitation’ includes targets 6.1 and 6.2 focused on universal access to safe and affordable drinking water and adequate and equitable sanitation and hygiene respectively.

The WHO/UNICEF Joint Monitoring Programme (JMP) is responsible for tracking progress for SDG 6.1 and 6.2 and is the self-described ‘custodian’ of global WASH data (water, sanitation and hygiene). This data is obtained from international household survey programmes, as well as national census data.

In the majority of the world, the responsibility for management of water and sanitation and hygiene is put on women and girls and research on WASH repeatedly shows how males and females face differences in WASH access and use. Despite this SDG 6 indicators are generally gender blind, in other

words they do not capture the gender inequalities that exist linked to access or use of water, sanitation or hygiene resources or services. For example there are no measurements on the risks of harassment and physical and sexual violence females face when accessing water or sanitation facilities. There are also no measurements of injuries, emotional distress and depression females endure when access to water is scarce or sanitation services are lacking or inadequate. There are also no specific measurements on the access to safe WASH services during menstruation, or pregnancy, delivery and post-partum periods.

Instead it is assumed that overall WASH improvements may lead to positive impacts for women and girls, but indicators do not directly measure this.

Many countries put limited resources on collecting and analyzing WASH data, leaving much of this task up to individual organizations or outside researchers, resulting in national, regional and local data gaps.



https://youtu.be/1bTePPx4j_k

Assignment



MEASURING MODULE - TRACKING THE SDGS

Reflective questions

1. What and how do you measure in your teaching? What methods or tools of measurement do you use in your courses?
2. Choose one SDG that you think is particularly relevant to your teaching. What are the challenges involved in its measurement?
3. How do you explain limitations of measurement to you students to help them think critically about the SDGs?

Relavant further readings:

- Zeng, Y., Maxwell, S., Runting, R.K. et al. Environmental destruction not avoided with the Sustainable Development Goals. Nat Sustain (2020). <https://doi.org/10.1038/s41893-020-0555-0>

Module - Leading

The third module introduces leadership and is underpinned by different ideas of social change. We emphasise both traditional and non-traditional forms of leadership and in both its individual and collective forms. These forms are connected to personal and societal values and structures. Rather than define and discuss different forms of leadership, this module will focus on how you can integrate leadership into your teaching, as well as encourage leadership in its various forms.

Concepts

Emily Boyd | Professor at LUCSUS | Concepts of Leading



Leaders can be found in many different contexts: politics, business, civil society, academia, and also in various non-profit organizations. Today we're in the midst of a transformation so leadership is really important.

The social and environmental transformation process is characterized by great uncertainty, by complexity, and by the urgency of these challenges. The present climate crisis calls for immediate attention where drastic reductions of CO2 emissions can only be achieved through sustainable consumption and production.

For example, better structures for sustainable land management and governance of land resources are at the heart of the fight against poverty, food insecurity, inequality, unemployment and environmental degradation. Social injustice and inequality need to prompt a fair balance between the global North and the global South. At the same time we're encountering other crises in health, economy and politics. There are many different forms of leadership and here in this module we're not focusing so much on the definitions of leadership but we'd like you to start to think about your teaching and your leadership and how that can be informed by pedagogical leadership competences for and in your teaching in relation to the SDGs.

Through the forms of leadership presented in this module, it is hoped that students will be encouraged

This module also engages in how critical thinking, negotiation and conflicts are reflected in the SDGs.

You may start to think about how to include different perspectives of one of the same thing. For example, you might want to use role plays and games to complement lectures. You might want to experience the difficulty of negotiating between different interests in a simulation of a UN summit.

Collaboration is at the heart of the SDGs. The intention of this leading module is to somehow stimulate and inspire you to think about how you can collaborate with your peers in teaching. It's important to think of leadership in reflection to the Knowing module and what we know about the SDGs. Leadership is not merely a set of competencies but should also inform your activities as a teacher and a leader in how you decide and communicate to your students on which knowledge they need to think critically on regarding the SDGs. Similarly importantly is to think about how your teaching is informed by the opportunities and challenges around the SDGs, in the way we've constructed our goals and limitations.

As a leader you might want to think about how you might integrate SDGs into your teaching with insight on what alternatives or solutions exist. This can also open up opportunity for collaboration across disciplines and teaching. You may want to find or use collaborations for designing courses that integrate the SDGs.



<https://youtu.be/LDVWSf1d7g8>

TRANSFORMATIONS

We are in the middle of large and rapid transformations. Leadership is important to achieving more sustainable societies. These changes include uncertainty and complex urgent challenges. For example, the climate crisis, COVID pandemic and cost-of-living crisis call for immediate attention to ensure new and innovative forms of leadership, which requires leadership to recognise power imbalances. Actors and institutions are important to handle everyday impacts and manage sustainable transitions. Governance requires leadership to tackle social injustice and inequality to promote fairness globally. At the same time, we have to tackle multi-layered crises in health, economy and politics.

We can think of transformations at different scales or spheres of decision making. Transformations can be physical and qualitative changes in form, structure, or meaning (IPCC, 2014), or psycho-social processes that lead to change for a better life. It can also constitute an internal shift that results in changes in the way that individuals experience and relates to oneself, others, and the world. Karen O'Brien and Linda Sygna (2013) talk of three interconnected spheres of transformation: the practical, political and personal (see figure below). These can be used as a tool for understanding how, why and where transformations toward sustainability may take place. Combining the spheres in a doughnut demonstrates the breadth and depth of transformations and multiple avenues

for sustainability outcomes. According to them, the practical sphere represents both behaviours and technical solutions to climate change. These include behavioural changes, social and technological innovations, and institutional and managerial reforms. The political sphere includes the social and ecological systems and structures that create the conditions for transformations in the practical sphere.

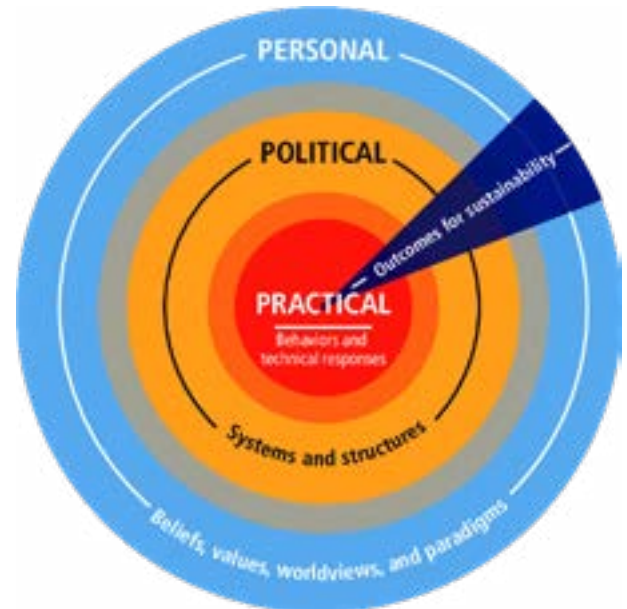


Figure 7: A heuristic model upon which a teacher can explore transformations for sustainability with students. This can be an opportunity to discuss diverse knowledges, scales, processes and actions occurring in transformations. (O'Brien & Sygna 2013).



Photo: The cyclist takes the lead. (Credit: Therese Myrstad)

Competences

The following section will explain which competences and skills in terms of leading you will need to draw upon in order to integrate the SDGs into your teaching. Two videos demonstrate how these competences can be integrated into everyday teaching.

This module could inform ways that students actively influence and push sustainable policy-making and implementation. This module also engages in how critical thinking, negotiation and conflicts are reflected in the SDGs. The SDGs also represent different interests and the challenges discussed in previous modules with regards to knowing and measuring – what, by whom, for whom, and how.

You may think about to include different perspectives of one of the same thing by using role plays and games and complement lectures with this. For students to experience the difficulty of negotiating between different interests in a simulation of a UN summit or a role play about competing interests in an urban redevelopment project. .

Leadership competences and skills to tackle sustainability comprise a combination of thinking about leading and leadership. There is an ever-growing literature around leadership and climate change. Leadership is critical to solving complex society and nature challenges. Nevertheless there is limited understanding about how leadership for sustainability connects to pedagogy. The competences we have identified are those that we see cross over between competences for understanding sustainability and for implementing leadership.

Pedagogical competences in Leading

- Systems thinking, thinking, complexity and dealing with change pathy and perspective (justice, responsibility and ethics perspectives)
- Normative skills (which goal counts most)
- Critical thinking (whose interests matter, who wins and who loses, how to navigate conflicts)
- Decision-making under uncertainty (what do you do if there is no data or it is of poor quality)
- Anticipatory competence (future and strategic thinking skills)
- Integrated problem-solving competence
- Interpersonal relations and communication
- Empathy and perspective (justice, responsibility and ethics perspectives)
- Collaboration skills

Hanna Hasselqvist | A psychology student's perspective on learning and the 2030 Agenda



"We must learn to cooperate. We must learn about the different problems and solutions that exists within the different sectors and how to tackle them together with a combined knowledge that we have from our different areas of expertise."



<https://youtu.be/samJ74Bt-JQ>

Industrial Design Master's Programme collaborate with UNOPS (the UN Innovation Centre in Lund)



The students of the Industrial Design Master's Programme collaborate with UNOPS (the UN Innovation Centre in Lund) and Sony in order to solve problems in collaboration across educational, private sector and NGO actors in challenge areas relevant to the SDGs.

"At UNOPS we are now establishing a global innovation ecosystem. We're actually aiming for 15 to 20 global innovation centers around the world. We have identified five challenge areas that we have presented to the students and they are referring to resilient infrastructure, for instance, and things that we all know are big problems. Like how do we handle waste? How do we make sure that we get clean water? And and how do we react when we have emergencies and catastrophes happening in the world. Together with Sony, we can coach them along the way to make sure that, their solutions will become as strong and relevant as possible.

What we are trying to do with this course is to help the students to believe that they can use their career to change the world".



<https://www.unops.org/>

Martina Oxling | Project Manager at the Sustainable Future Hub at Lund University School of Economics & Management



Sustainable Future Hub is a collaboration hub focusing on economic and social sustainability. It was launched by Lund University School of Economics and Management in 2019 and funded by Sparbanken Skåne and Sparbanksstiftelsen Finn.

We want to make a difference and to be able to solve complex issues like sustainability we need to work together across sectors. Sustainable Future Hub can get students, researchers, the private and public sector as well as other organisations to work together and collaborate towards a more sustainable future.

Our working approach and role in Sustainable Future Hub is very action oriented. We identify challenges and possibilities and act as a catalyst.

Our way forward is to collaborate and co-create with other change makers. We focus on three areas: Sustainable Future Hub's Student Network, making research accessible for the market and to inspire, strengthen and develop sustainability work for the private and public sector.

Sustainable Future Hub's Student Network is a group of 20 students selected from different faculties and levels at the Lund University. They have both theoretical and practical experience in the sustainability area. They are extremely driven and together we co-create different projects. One example is trendspotting on sustainability together with researchers and companies, another one is the Reversed Mentorship Program where we match students with representatives from companies or organisations for mutual learnings towards a more sustainable future.



<https://youtu.be/KC-8sUEau-s>



Photo: Lund University students of LUMES (Environmental Studies and Sustainability Science).
(Credit: Kennet Ruona)

Good practices

In this section we focus on providing good practice examples of teaching and learning at Lund University. You are presented with ideas, tools and materials that can stimulate how you can incorporate thinking about leading, leadership and competences from leaders in different sectors

As mentioned earlier in the Pedagogical relevance section about linking the SDGs into education, there are some challenges in effectively demonstrating leadership in terms of the SDGs and learning. Moreover the challenges of making our teaching relevant to transformations are immense! These challenges include how to better lead the integration of more holistic understanding of the 2030 Agenda. Interdisciplinarity is at the heart of leading our students to new ways of thinking about how to think about, relate to and act on complex, vast and rapid changes in the real world. how to think about, relate to and act on complex, vast and rapid changes in the real world.

IDEAS

There are many different views on demonstrating leadership in terms of the SDGs for transformations across different sectors. What the different views have in common is how important it is for our students to gain a set of competences that will allow them to develop capabilities to lead with an understanding of the SDGs and their limits. Furthermore, it is important to provide the tools to creatively integrate sustainability and sustainable development into their professional and personal lives.

Here are two clips from professionals that have good advice and ideas on what leading means to them.

Olof Liungman | Former Environmental Strategy Manager at City of Malmö | Self-sustainability as a leader



I would think of two issues with sustainability are with regard to Agenda 2030, I mean sustainability in a global sense and the other is being sustainable yourself. You have to last. You have to make it through. It's easy

to burn out yourself or the people you're responsible for. So when it comes to sustainability in this general sense, as a leader, you have to balance on that knife edge between being realistic and understanding the issues and the problems. I mean, these are not easy issues that we're dealing with.

At the same time, we have to be optimistic. You have to make people feel that we can do this. And I think that's a really hard balance, because if you don't, if you neglect reality, if you just talk about how whatever we can do and how great everything's going to be and we're going to change the world and so on, you won't make it. I think that's really critical. You have to you have to believe that we can make a difference.

I think that's one key issue when it comes to being sustainable in yourself. You have to be nice to yourself as a leader. You have to accept the fact that you're not always going to make it. It's going to be hard. You'll fail, and things won't always go the way you want it to go. And somehow you have to remember the good things that the little steps, the successes, and also realize that there's life outside of work, outside of changing the world, outside of sustainability, free time family, all these things. It's this is nothing new.

I think it's really important when you're talking sustainability because it's a long haul. And you need to make it all the way. So, I think that's an important thing also. And then in general, leading us, I mean, sustainability is complex. It's really, really hard. We don't know how to solve these issues.

As a leader, you need to be prepared to fail and you need to see that you need everyone at the table. You can't just throw a lot of knowledge at these problems. You can't do ecological sustainability without social and economic sustainability. They're all linked together. So this complexity makes it really, really difficult. And as a leader, you need to be aware of that. And you need to bring everyone to the table, and you need to be humble. It's not just pointing in this direction. This is where we want to go because no one knows where we need to know. Well, we know where we need to end up, but we don't know how to get there. So complex problems need a lot of humility and a lot of realization that you don't really know how to get there.



<https://youtu.be/jlwiLOX1Rpc>

Ulrika Geeraedts | Former Director of Regional Development Region Skåne | Transformative Leadership



I think there are quite many challenges in making that transformation come true. We are on a burning platform when it comes to finding prosperity and growth in a sustainable way. In order to do that, you have to look at what is the organization doing

at this moment, you know, in when it comes to, for example, public transport or health care and make sure that the everyday life for our employees is sustainable.

And at the same time have the perspective of, you know, what kind of future do we want to create? What are the sustainable solutions for public transport, for example? And you have to do that simultaneously. That means that people that work in our organization have to keep two different perspectives going at the same time. I think that

can create quite a lot of anxiety. You know, are we doing the right thing? Is this the way we work now? Is that sustainable enough? No, usually it's not. But how can we create the opportunities for the future without them costing too much or demanding too many resources? So I think what we need to do is we need to discuss that complex picture. You need to address the small steps that we can take in everyday life and at the same time be a bit visionary and make the plans for the coming 10 or 20 years.

And understand that these wicked issues are complex. So we probably don't have the solutions within our organization. We might not even have them within our country. So to look for answers, for problems that we have not even acknowledge yet and understand that the solutions we are looking for, we probably don't have either. And I think that that demands quite a lot of the leadership to be able to be in the complex and at the same time being in

the practical, everyday life.



<https://youtu.be/wLooYPdvlqA>

Assignment



LEADING MODULE - CONNECT THE SDGs TO YOUR TEACHING

Reflective questions

Develop a course seminar or assignment that takes an integrated and innovative approach to the SDGs.

Upload your work onto Canvas.

While creating the seminar or assignment, keep the following guiding questions in mind:

1. What kind of a leader are you?
2. What kind of leadership is relevant to your subject/discipline?
3. What leadership competences and skills do you foster in your students?
4. How can you connect leadership in the classroom to the broader societal transformations set out in the SDGs?

Relevant further readings:

- Care, O., Bernstein, M. J., Chapman, M., Diaz Reviriego, I., Dressler, G., Felipe-Lucia, M. R., Zaehring, J. G. (2021). Creating Leadership Collectives for Sustainability Transformations. *Sustainability Science*, 16(2), 703-708. doi:10.1007/s11625-021-00909-y

Resources

There are Massive Open Online courses, (MOOCs) at Lund University related to sustainability. The MOOCs are open to anyone with an interest, regardless of previous experience. The courses are free of charge and are taught in English. They provide some important insights into examples of content for teaching and learning about different aspects of sustainability.

Sustainability Forum at Lund University

The Sustainability Forum is Lund University's umbrella organisation for strategic support and coordination for sustainability issues.

Their activities are based within the University's Strategy for Sustainable Development, with the overarching premise that sustainable development is a fundamental pillar of education, research, collaboration and the development of the organisation.

One of their missions is to stimulate and encourage the integration of sustainability aspects into education at all levels, as well as the development of new educational initiatives focused on sustainability. It is also a great place to keep track of the different sustainability related activities happening at Lund University. More information at:



<https://www.sustainability.lu.se>

MOOCs developed by The International Institute for Industrial Environmental Economics (IIIEE):

The IIIEE at Lund university has developed five Massive Open Online Courses (MOOCs) which are all part of the Greening the Economy series. They are five weeks long and require students to pass quizzes and a final course assignment.

1. Greening the Economy: Lessons from Scandinavia
2. Greening the Economy: Sustainable Cities
Greening our consumption systems
3. Circular Economy: Sustainable Materials Management
4. Urban Nature: Connecting Cities, Sustainability and Innovations
5. Cities and Consumption: Urban Sustainability and the Sharing Economy



<https://www.iiiee.lu.se/moocs-iiiee>

MOOC: Working for a sustainable future: concepts and approaches

In this course, participants are introduced to key notions and concepts evolving in sustainability science that are relevant to all, independent to one's work or field of interest. After having completed the course, participants will have a better understanding of the vocabulary of sustainability used today and should demonstrate the ability to reflect critically to integrate different perspectives of environmental, social, and economic sustainability to their specific area of interest or research.



More information and registration at:

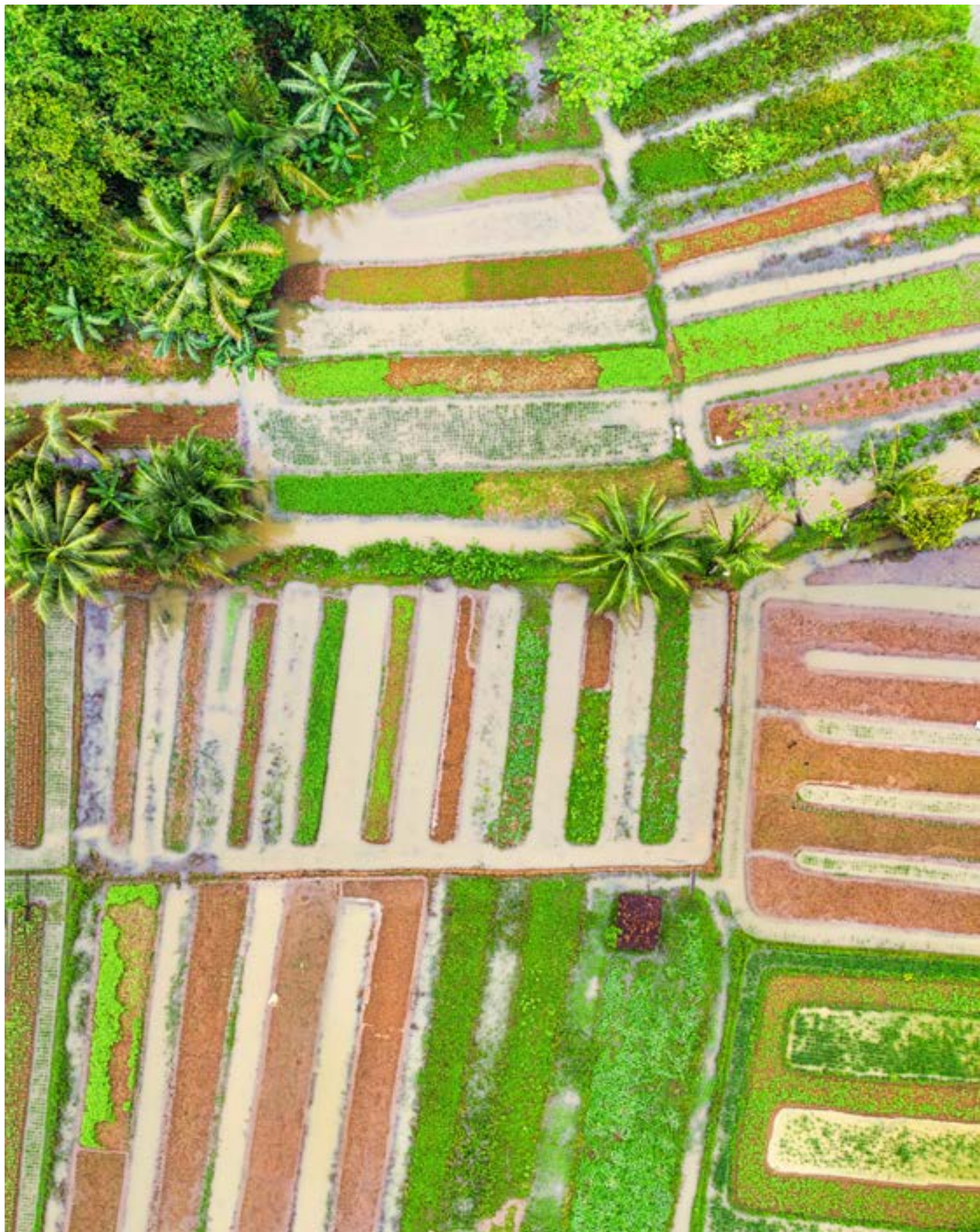
<https://www.coursera.org/learn/working-for-a-sustainable-future>



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WWW.LUNDUNIVERSITY.LU.SE

LUND UNIVERSITY

Box 117
SE-221 00 Lund

Tel 046-222 00 00

www.lunduniversity.lu.se