Session outline

1. Course starter and introduction
2. Getting to know each other
   Break
3. Sustainability and sustainable development
4. Sustainability in your fields: First reflections
   Break
5. Sustainability education
## Your expectations

<table>
<thead>
<tr>
<th>Learn about sustainability &amp; teaching it in general</th>
<th>Concrete tools to apply in own teaching</th>
<th>Facing sustainability-related emotions</th>
<th>Sharing experiences and building a teaching community</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Learn more about sustainability related topics in general”</td>
<td>“To get new ideas on how to consider and implement sustainability in my teaching”</td>
<td>“The [sustainability] topics are not easy because they are very broad, and they can also be emotionally challenging (both the teacher and the students)”</td>
<td>“Getting to know more Aalto colleagues.”</td>
</tr>
<tr>
<td>“I expect to get some new ideas and insights of both contents and methods to be applied in my teaching.”</td>
<td>“Knowledge on concrete actions on how I can incorporate sustainability aspects to my teaching.”</td>
<td>“To get tools for working with anxious students.”</td>
<td>“I expect to have good discussions with others.”</td>
</tr>
<tr>
<td>Also: • Considering sustainability on programme level • SDG tags in curriculum planner</td>
<td></td>
<td></td>
<td>“To learn from experienced peers”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“Get tips on good readings and resources”</td>
</tr>
</tbody>
</table>
Warm-up

Draft individually (in key words/writing or drawing):

What does sustainability mean to you?
Cocktail party

General guidelines:

• Find 1-2 colleagues you don’t know in advance
• Discuss until bell rings (~5 min)
• Change groups

Topic of discussion:

• Tell your colleagues what you drafted about sustainability. Elaborate.
• Round of spontaneous comments!
Break
Introduction to sustainability
We are not doing well!

Guardian, 26.2.2018
Anthropocene – the Epoch of Man

(CRUTZEN 2002)

Indefinite growth on a finite planet?

Steffen et al., 2015a
Planetary Boundaries

- Earth system = life supporting processes
- Defining and quantifying a safe operating space for humanity
- Nine boundaries

PB origins: Rockström et al 2009, updated Steffen et al 2015b)
Safe and just operation space for humanity: 
The doughnut model

Raworth 2017
SYKE Policy Brief 2018, based on O'Neill et al 2018
Sustainability crisis

- Complex
- Interconnected + reinforcing
- Unprecedented magnitude
- Large scale – global
- Long-term and pervasive
- Involving uncertainty
- Including contradiction and trade-offs
- Including conflicts of values
- Human induced

Aral Sea, Unsplash
Designated group

**Group 1**: Tamara, Victor, Janet, Marja

**Group 2**: Jouni, Sam, Henrikki

**Group 3**: Janika, Eero, Sami

**Group 4**: Karolina, Irina, Henrik, Oguz

**Group 5**: Eeva B., Susan, Julia

**Group 6**: Ville, Eeva-L. R., Jacky
# Small group discussion

## General guidelines:

**Table groups:** (15 min)
- Field specific groups
- Team chair: last one to celebrate birthday this year
- Chair is briefly reporting back to whole group

## Topic of discussion:

Based on your advance readings, and previous discussions:
- What new (or surprising) did you learn about sustainability?
- Which sustainability dimension(s) are most pronounced in your field? Elaborate.
Concepts

**sustinere**: uphold, support, to continue supporting over a timespan

**habilis**: have the capacity or power to do something

→ **sustainability**
- Target state, characteristics of a system
- The ability to uphold / sustain to an indefinite future

**sustainable development**
- Human activity with the intention of change towards sustainability, process
What is being sustained?

- World as a resource
- Interconnected
- Regenerative

Anthropocentric
Ecocentric
Sustainable Development is...

"...development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Report, WCED 1987: 43)

"...development that meets the needs of the present while safeguarding Earth's life-support system, on which the welfare of current and future generations depends." (Griggs et al 2013)


“Sustainable development is an oxymoron”. (Brown 2015)

Sustainable development is “constructively ambiguous” (Robinson 2004)

Human centric
Value laden
Political
Contested
Break
Sustainability (in) education
Education aiming to support the students’ ability to contribute to a change towards sustainability
Goal: Students that are able to contribute to a more sustainable world

- Sustainability related knowledge
- Sustainability related skills/competencies
- Knowledge about the connections of one's own field to sustainability challenges and solutions.
- Skills to participate in solving sustainability challenges from the perspective of one's own field
- Motivation and courage to act
- Field(s) specific knowledge
- Field(s) specific skills
- Academic knowledges and skills
  - E.g. critical thinking, research skills, interpersonal skills
Goal: Students that are able to contribute to a more sustainable world

**Sustainability related knowledge**

**Sustainability related skills/competencies**

Knowledge about the connections of one’s own field to sustainability challenges and solutions.

**Field(s) specific knowledge**

**Field(s) specific skills**

Skills to participate in solving sustainability challenges from the perspective of one’s own field

Motivation and courage to act

Academic knowledges and skills

E.g. critical thinking, research skills, interpersonal skills
Types of knowledge for sustainability (Soini et al 2022)

System knowledge (What is?)
- Understanding socio-ecological systems, structures, developments and ways of working
- Descriptive, explanatory, sets frames for the context of the more specific problem
- Enables identification of leverage points for change, alternative pathways

Target knowledge (What should be?)
- Clarifies the desired target states, involves values, contradicting targets by different stakeholders
- Important for decision making

Transformative knowledge (How?)
- Solution oriented knowledge: examines status quo critically, contributes to change, renewing ways of thinking and acting
- Includes reflexivity, (meta)learning

Speculative knowledge (What if..?)
- Identifying and dealing with uncertainties, unanticipated effects
- Understanding counter forces of sustainability transformations
Change towards sustainability

- Deliberate, unintended
- Incremental, disruptive

**Spheres of sustainability transformation** (O’Brien, 2018)

- **Practical** (technical, behaviours)
  - direct contribution to desired outcome, measurable
- **Political** (systems and structures)
  - facilitates or constrains practical
- **Personal** (beliefs, values, worldviews)
  - influence understanding of practical and political

→ Personal and political generate conditions for practical transformations

All spheres necessary, and must be recognized!
Examples

Practical:
• New component increasing energy efficiency of industrial process
• Behavioral change: car -> bicycle

Political:
+ R&D funding for component development
- No bike lanes available or maintained

Personal:
- Belief that cycling is dangerous
+ Mindset of enhancing energy efficiency
Small group discussion

General guidelines:

1. In groups of 2-3
   (15 min)
   • Field specific group

Topic of discussion:

Think of your field and the spheres of change
• What types of knowledge does your field contribute to?
• Which spheres of change does your field contribute to?

• What about the topics of your course?
System knowledge (What is?)
- Understanding socio-ecological systems, structures, developments and ways of working
- Descriptive, explanatory, sets frames for the context of the more specific problem
- Enables identification of leverage points, alternative pathways

Target knowledge (What should be?)
- Clarifies the desired target states, involves values, contradicting targets by different stakeholders
- Important for decision making

Transformative knowledge (How?)
- Solution oriented knowledge: critical to status quo, contributes to change, renewing ways of thinking and acting
- Includes reflexivity, (meta)learning

Speculative knowledge (What if..?)
- Identifying and dealing with uncertainties, unanticipated effects
- Understanding counter forces of sustainability transformations
Developing your teaching towards integrating sustainability

- Identifying your starting points as teacher
  - Your unique situation in terms of course topics, practical limitations, leeway to do changes

- Refining your goals for this course?
  - Finding meaningful sustainability connections
  - Integrating specific themes and content
  - Developing teaching methods
  - …
Looking for starting points for sustainability integration: I work on..

**Programme**
- New programme
  - Sustainability is in the core of the programme
- Existing programme
  - The relation to sustainability is not yet made visible

**Course**
- New course
  - Intended learning outcomes are fixed
  - Content to be modified
- Existing course
  - Sustainability is outside the core of the course
  - Intended learning outcomes are fixed
  - Content fixed

My refined goals: to work on e.g.:

- Participation in programme development work
- ILOs
- Teaching methods
- New content to course
- Other
How did it go?
# Timeline of the course *(changes possible)*

<table>
<thead>
<tr>
<th>Reading task for respective week</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability(now-material)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.9. <em>Session 0</em>: Course practicalities</td>
</tr>
<tr>
<td>Wiek et al 2011</td>
<td>12.9</td>
<td>13.9</td>
<td>14.9</td>
<td>15.9</td>
<td>16.9. <em>Session 1</em>: Introduction to sust. &amp; Sust. in field specific context</td>
</tr>
<tr>
<td>SDG-articles (tbc)</td>
<td>19.9</td>
<td>20.9</td>
<td>21.9</td>
<td>22.9</td>
<td>23.9.</td>
</tr>
<tr>
<td>Video</td>
<td>26.9</td>
<td>27.9</td>
<td>28.9</td>
<td>29.9</td>
<td>30.9. <em>Session 2</em>: Integration of sustainability in higher education, Competencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Next week…

- Reading task: Wiek et al 2011 (pdf in MyCourses).
- Home assignment: Instructions and assisting questions in MyCourses (dl 27.9. noon)

Next session Fri 30.9.2022!

Extra / voluntary:
Save the date: 28.10. after work in Taproom with sustainability games
Literature


Raworth, K., "A Safe and Just Space for Humanity: can we live within the doughnut", Oxfam Discussion Papers (2012)

Questions, comments

aalto.fi