



HÖGSKOLAN
DALARNA

Sustainable Development in Education

A guide for self-assessment and development of
educational programmes

Decision: Council for Sustainable Development (Rådet för hållbar utveckling)

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Purpose

One of Dalarna University's sustainable development goals is intended for our educational programmes and has the following overall aim:

In all education that leads to a degree, issues dealing with different aspects of sustainable development must be introduced, discussed and problematised based on the subject area or the student's future professional role. This is to strengthen the student's ability to understand and handle complex problems and to reflect on how different perspectives, interests and values affect the priorities of individuals and societies.¹

For the goal to be achieved, all university programmes need to be involved in this effort. To this end, all programmes are asked to describe and assess the work they are currently doing that can contribute to the achievement of this goal. They are also asked to suggest changes where they see gaps and opportunities. The purpose of this document is to support programmes as they carry out this work. At the end of this document, there is a list of self-assessment questions.² Some are intended for discussion and response in a workshop with teachers, and some are intended to be addressed by a self-assessment group on a separate occasion. The list of self-assessment questions is also for the purpose of collecting suggestions for changes that are put forward during discussion.

Part 1 of the document (p. 2-9) is intended to help programme staff prepare for the workshop and should be read in advance by everyone who plans to attend. Section 1.1 provides a brief introduction to the concept of sustainable development, and section 1.2 describes different ways of looking at education for sustainable development. Part 2 contains a description of implementation and a list of self-assessment questions.

Part 1 – Background

1.1 Sustainable development

The last century has been marked by unprecedented rapid technological, scientific, and social advances and a steadily increasing exchange of information, products, and investments between the countries of the world. Such development has contributed to better living conditions for a large proportion of the world's population in the form of, for example, increased material welfare, reduced child mortality, and increased life expectancy. Yet there is a downside to such progress. Humankind is living at levels that Earth cannot sustain. The result of this is that many important processes and functions in nature are under dire threat, such as the climate system and large-scale ecosystems on land and in the oceans. Furthermore, the distribution of benefits and rights is extremely unequal. Great social and

¹ Dalarna University. (2021). *Goals and Actions for Sustainable Development at Dalarna University 2021-2026*. Taken from <https://www.du.se/en/about-du/this-is-dalarna-university/sustainable-development/sustainable-development/goals-for-sustainable-development>

² The questions in the self-assessment were inspired by the *Assessment Instrument for Sustainability in Higher Education* (AISHE), a framework for evaluating sustainable development in higher education. In the present document, however, areas to be assessed have been both added and removed. Also the design of the levels against which assessment is to be made has changed: where AISHE uses a five-level scale, this version has mainly yes/no questions followed by questions with free-text answers. For the AISHE model, see Roorda et al. 2009: https://www.researchgate.net/publication/327551379_AISHE_20_Manual_-_English_Edition

economic divides exist both between countries and within countries, as well as between men and women. The current state of development is, in many respects, unsustainable.

Sustainable development is a concept that was introduced in the early 1980s. It came to global attention through the publication in 1987 of the UN report *Our Common Future* (informally called the Brundtland Report). The report brings together a number of issues that until that time had been for the most part treated separately: for example, global environmental issues, population issues, the fight against poverty, and peace and security. The report also contains the definition of sustainable development that has become widely accepted:

*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*³

The concept of sustainable development can therefore be seen as a compromise between the environmental movement and the development movement, and the need to manage these in a coherent way. Since then, sustainable development has shaped the work of the UN, even if the emphasis on the issues in focus has varied over the years.

In the development of Agenda 2030, the focus on sustainable development was made more concrete. The 2030 Agenda was adopted by UN member states in 2015 and includes 17 global goals for sustainable development (Figure 1). Through these goals and the total 169 targets in the Agenda, the countries of the world seek to end poverty and hunger everywhere; combat inequalities within and between countries; build peaceful, just, and inclusive societies; protect human rights; achieve gender equality and the empowerment of women and girls; and ensure the lasting protection of the planet and its natural resources.⁴



Figure 1. Agenda 2030 includes 17 global goals to be achieved by 2030. From <https://www.globalgoals.org/>

It is common for the concept of sustainable development to be described in terms of three dimensions: social, environmental, and economic. *Social sustainability* is about people's living conditions – food, health, security, education, and the exercise of power – from an individual perspective but also in terms of how these rights are distributed among people.

³ World Commission on Environment and Development. (1987). *Our Common Future, Report of the United Nations World Commission on Environment and Development*. Oxford: Oxford University Press.

⁴ Government of Sweden. (2018). *Agenda 2030 and the Global Goals*. Translation based on an excerpt from <https://www.regeringen.se/regeringens-politik/globala-malen-och-agenda-2030/>

Environmental sustainability is about Earth’s ecosystems and maintaining their biodiversity and functions in the long term, such as the ability to produce food and energy, to provide clean water, and to regulate the climate. *Economic sustainability* is about how the structures that regulate production, trade, and consumption should be designed to promote the management of material and human resources.

A common way of looking at social, environmental, and economic sustainability is to view them as three interacting goals with the same weight and value. Three circles are often used to symbolise this (Figure 2). An alternative way to illustrate the three dimensions is to assume that society depends on nature. The outside circle, environmental sustainability, therefore sets the framework within which social sustainability takes place – that is to say, how humans feel and how their needs are met. The innermost circle symbolises economic sustainability, which includes the ground rules that humans agree on for the exchange of goods and services. With this conceptualisation, human goals and the demands of the economy need to be accommodated within the boundaries of the planet.⁵

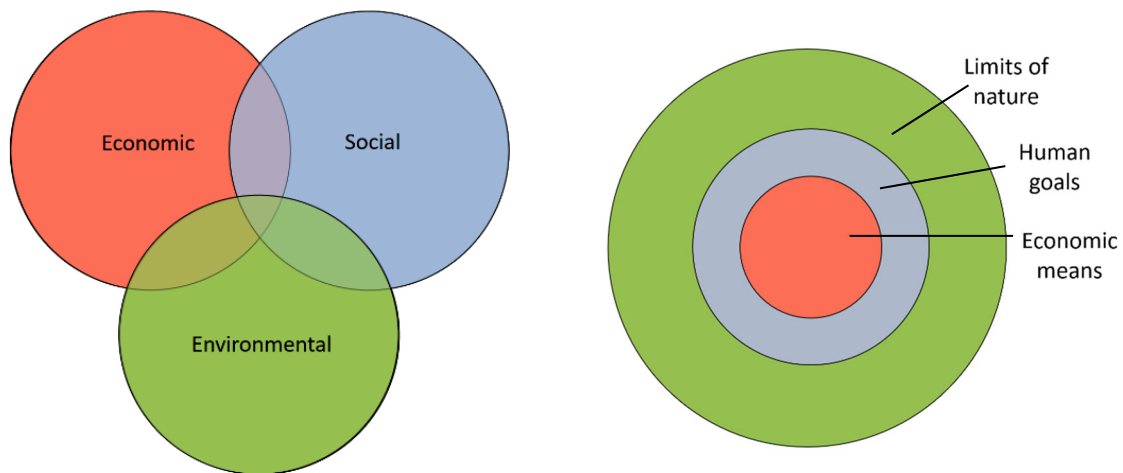


Figure 2. Two ways to illustrate sustainable development.

Sustainable development is about a normative way of relating to both people and the environment. This comes from the realisation that the planet’s resources are limited and builds on an ethical approach where future generations are attributed an intrinsic value. The concept is normative because it says something about *what we must do*: we must care about both the current and the future generation. This is sometimes described as an *expanding circle of concern* (*expanderande omsorgscirkel*).⁶ Based on the idea that all people are equal regardless of where they live (UN Declaration of Human Rights, 1948), a change has been made – through the concept of sustainable development – that broadens the circle of moral care to include future generations.

It can be easy to create unity and sympathy around a concept such as sustainable development, especially in light of the thought model that merges social, environmental, and economic development. The individual can project their hopes onto such a model. However, when it comes to concrete issues, it is impossible in the long run to pretend that the different

⁵ See, for example, Bonnedahl, K.J. (2012). *Från ekonomiskt till hållbart, från exploatering till samexistens*. Lund: Studentlitteratur.

⁶ Hedenus, F., Persson, M., Sprei, F. (2018). *Sustainable Development – Nuances and Perspectives*. Lund: Studentlitteratur.

dimensions are always reconcilable in a simple way. At times, there are positive synergies. At other times, the different dimensions conflict with each other. A concrete example is a proposal to build a mine in an area of natural beauty. If a review of the request for a building permit results in approval, this can lead to new employment opportunities and access to metals that are needed, for example, to manufacture electric car batteries. Yet in the process, an environmental resource will be destroyed. What is a reasonable trade-off? There is, of course, no simple answer to that question. It depends on both how important the electrification of our vehicles is felt to be at the time in question and how important nature is felt to be for people today and in the future. Therefore, there are widely differing views on what a sustainable society is. Whereas some envision a return to a simpler life where people are more self-sufficient and live on local resources, others believe that strong economic growth and continued rapid technological innovations are what is needed. Where some argue that a radical change of both lifestyle and social structures is needed, others see the solution to lie in small step-by-step reforms and gradual changes in economic policy.

1.2 Sustainable development in education

Higher education has a central role in democratic society. With the sustainability challenges outlined above, new demands have been placed on us as a higher education institution. This is stated in the Swedish Higher Education Act (Chapter 1, Section 5):

In the course of their operations, higher education institutions shall promote sustainable development to assure for present and future generations a sound and healthy environment, economic and social welfare, and justice.

Equality between women and men shall always be considered and promoted in the operations of higher education institutions.

The collected international activities of each higher education institution must enhance the quality of its research and education, and make a national and global contribution to the sustainable development described in paragraph one above.

Higher education institutions shall also actively promote and widen recruitment to higher education.

In their operations, higher education institutions must promote lifelong learning.⁷

There are thus great, and justified, expectations that higher education institutions will equip students with the necessary knowledge, skills, and assessment abilities so that they can contribute to sustainable development. As a higher education institution, we must meet these expectations. However, so as not to clash with the role of the university as an independent institution within society, where the motivation of the individual and free pursuit of knowledge are central, a well-thought-out approach is needed where research-related education of high quality is at the foundation. What does this mean in practice?

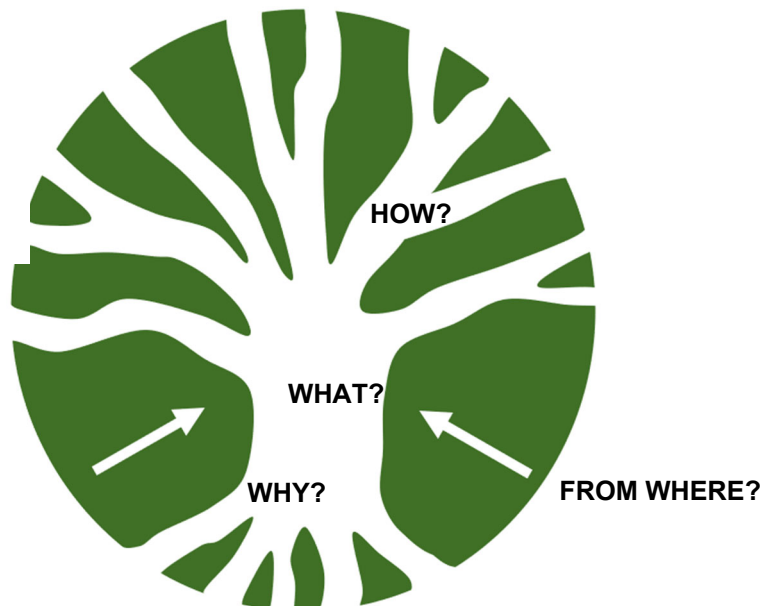
That question cannot be answered in any other way than by starting at the level of the individual educational programme. In the literature on education for sustainable development, there are descriptions that derive primarily from the knowledge content: *What do students need to learn about?* Another way is to begin by looking at the pedagogies and learning activities in the programme: *Which pedagogies best support learning?* A third common

⁷ Higher Education Act (1992:1434)

starting point is study results: *What kinds of skills do the students need to have acquired by the end of their programme?* It is reasonable to ask such questions in the development or follow-up of sustainable development in education. As a support in the discussion, the figure below depicting a tree can be useful with its presentation of the questions *Why?*, *What?*, *From where?*, and *How?*

The roots that fix the tree beneath the ground symbolise *why* a concept such as sustainable development is needed – that is to say, an understanding of the challenges and opportunities that humankind faces. The trunk symbolises *what* is to be studied – that is, the knowledge content that concerns sustainable development that is most important in the programme-specific context. The arrows pointing to the trunk from different directions symbolise the need to look at the knowledge content from different perspectives – that is to say, *from where?* Finally, the branches symbolise where to go in the form of specific student competence, something that is determined by, for example, the pedagogies used in the programme: *how* should the learning take place? Each question is discussed in more detail below.

Figure 3. A tree symbolising the questions to ask in the development or follow-up of education for sustainable development.



1.2.1 Global challenges – *why?*

New graduates need – as the excerpt from the Swedish Higher Education Act states – to have knowledge and understanding of the meaning of the concept of sustainable development. This includes knowledge and understanding both of the most important global events that led to the resource-intensive and unequal societies we live in today as well as of what the biggest challenges or obstacles are in terms of sustainable development. It may also be beneficial to have knowledge and understanding about the emergence of the very concept of sustainable development, how it is usually interpreted, and which are the foremost lines of division in the debate. To be able to bring together facts and figures from the social, environmental, and economic areas, knowledge and understanding are also needed about the meaning of a number of other central concepts that often feature in the discussion on sustainable development. Examples include “tipping point”, “economic decoupling”, and “social capital”.⁸

⁸ Bränberg, A., Holmgren, U., Wester, M. (2020) *Att undervisa för hållbar utveckling*. Lund: Studentlitteratur.

It is also important to highlight the values associated with sustainable development. Only when these values are made explicit can they be reviewed and debated. Examples of values that are usually associated with sustainable development are solidarity with both living and future generations of people; the freedom and integrity of the individual; and respect for nature.⁹

1.2.2 Programme content – *what?*

Each programme needs to define the knowledge content that is relevant from a sustainability perspective. What is the relationship between the programme's academic field and current major social challenges? How does the programme meet the requirements set by the Higher Education Act to promote sustainable development, contribute to gender equality, increase understanding of international conditions, and promote lifelong learning?

While in one programme, energy and resource issues may be central, in another, social issues or politics and social systems may be central. However, for the student to be able to gain a holistic understanding of sustainable development, it is essential that elements in some courses in the programme seek to make connections beyond their specialist field of interest. Content related to, for example, renewable energy, health, or democracy is not necessarily about sustainable development. The holistic approach that sustainable development is based on means that the content addresses, at least to some extent, the relationships between several dimensions of sustainability – that is, a social, environmental, or economic perspective.

It is only when academia has a solid scientific foundation that it can find out what needs to be done to move development in a more sustainable direction and how this can be achieved. Educational elements related to sustainable development, as with all teaching, need to be based on research. The term *research-based education* is often used and means, among other things, that the education has a basis in research, where relevant research results are integrated into the education; that students' ability to make independent and critical assessments with a basis in research is promoted; and that students have knowledge and understanding about the research being conducted within the university school (*institution*) that provides the education.¹⁰ In addition to a solid basis in research, a well-thought-out progression is needed so that the elements link to sustainable development. One suggestion is that we should use the concept *educational progression* when talking about quality in education and teaching.¹¹ This quality description includes a gradual increase of requirements that can be achieved with the help of expected learning. Progression between courses in an educational programme then means that subsequent courses constitute specialisations or broadening of the knowledge the students achieved in previous courses.

Support for putting sustainable development in a context that is specific to the programme in question can be obtained from Agenda 2030 and the global goals. The Agenda, with its 17

⁹ Torbjörnsson, T. (2014). *Solidaritet och utbildning för hållbar utveckling* (doctoral thesis). Uppsala: Uppsala University.

¹⁰ Uppsala University. (2006). *Forskningsanknytning - ett underlag för diskussion om begreppets innebörd och tillämpning*. Translation based on an excerpt from <http://www.diva-portal.org/smash/get/diva2:623796/fulltext01.pdf>

¹¹ Säfsström, A. I. (2017). Progression i högre utbildning. *Högre Utbildning* 7(1), 56-75.

global goals and 169 targets, unites a large number of perspectives and provides a basis for holistic thinking.¹²

1.2.3 Highlighting different perspectives – *from where?*

Throughout history, education and research have been successful in their study of details and individual elements of reality. It is therefore also common for students to expect there to be a “right” solution to various kinds of problems.¹³ As educators, we should therefore place great emphasis on holistic understanding and highlight perspectives such as short-term / long-term, local / global, and human / nature. It is particularly important to highlight those cases where there are conflicts in terms of goals or values – for example, efficiency (high growth and employment) on the one hand and the even distribution of income and the need to protect nature on the other. In other cases, it may be necessary to highlight synergistic effects – that is to say, actions that have a certain purpose but that have several positive effects and can contribute to addressing several social challenges. One particular challenge is also to understand or view one’s own area of knowledge from the outside, what is sometimes called *a meta-perspective*. Adopting a meta-perspective can help draw attention to power relations or lock-ins in one’s own disciplinary thinking systems.¹⁴

In practice, this means that students, in addition to having subject-specific knowledge, need to be able to work with issues that are to be found outside traditional academic disciplines. They need to be able to discuss events where there are complex connections between natural and social systems such as globalisation, automation, climate change, or water scarcity¹⁵. Often, collaboration across disciplinary boundaries is proposed as a way to support the development of knowledge and facilitate understanding of such issues. Here we have chosen the concept of interdisciplinarity, as named in Dalarna University’s Strategy, to mean the knowledge from different academic disciplines that can be linked for the purpose of investigating a certain theme or problem. This differs from a multidisciplinary approach, which is when several different academic disciplines, individually and from the perspective of their own field of knowledge, contribute to highlighting a particular issue.

1.2.4 Pedagogies and key competencies – *how?*

What learning outcomes and pedagogies should we use so that our students have a good basis from which they can find solutions to key societal challenges? In addition to subject knowledge and knowledge and understanding of current challenges, the student’s ability to contribute is likely enhanced by a number of areas of competence. There is an extensive international literature that describes so-called *key competencies* for sustainable development. In an oft-cited article, Wiek et al.¹⁶ describe how general competencies, such

¹² UNDP. (2018). *Global goals*. Taken from <http://www.globalamalen.se/>

¹³ Lönngren, J., Svanström M., Ingerman Å., Homberg J. Dealing with the multidimensionality of sustainability through the use of multiple perspectives – a theoretical framework. *European Journal of Engineering Education*, 41:3, 342-352.

¹⁴ Claris, L., Riley D. (2012). Situation Critical: Critical Theory and Critical Thinking in Engineering Education. *Engineering Studies*, 4 (2): 101-120.

¹⁵ Fortuin, K.P.J., Van Koppen C., Kroeze C. (2013). The contribution of systems analysis to training students in cognitive interdisciplinary skills in environmental science education. *Journal of Environmental Studies and Sciences* 3(2):139-152.

¹⁶ Wiek, A., Withycombe, L. & Redman, C.L. (2011). Key competencies in sustainability: a reference framework for academic program development. *Sustainability Science*, 6 (2): 203–218.

as critical thinking and communicative skills, are of great importance, but how there are also specific key competencies for sustainable development that have so far not been given sufficient focus in traditional education and therefore now require special attention. This has been our starting point. Several sources were used for the description of the key competencies below^{11,17,18}, but the selection is, of course, subjective, and other competencies may be more central to a particular academic field or professional group. The following key competencies have been considered central to learning about sustainable development:

Collaborative skills: the ability to learn from others; to understand and respect the needs, perspectives, and actions of others; to include and facilitate diversity in a group; to manage conflict in a group; to collaborate across disciplinary boundaries.

Systems-thinking: the ability to recognise and understand relationships; to analyse complex systems while taking into account, for example, feedback, inertia, and cascading effects to deal with uncertainty.

Anticipatory competence: the ability to visualise and evaluate different futures – possible, likely, or desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions.

Normative competence: the ability to understand and reflect on the norms and values that underlie one's actions; to understand the values behind the idea of sustainable development; to understand and consider underlying values when there are conflicting interests or uncertain knowledge.

Strategic competence: the ability to design strategies and employ innovative measures that promote sustainability locally or in a larger context; to understand different intentions, dependencies, obstacles, and alliances.

There is research linking these key competencies for understanding sustainable development with different pedagogical approaches and methods. There, emphasis is often on the importance of student-centred and student-active forms of study. In a literature review¹⁹, Evans examined research that showed possible links between pedagogies and key competencies, and concluded that “integrative, active, collaborative, and applied approaches” would best support the development of such competencies. Concrete pedagogical methods that may be appropriate in this context have been proposed by Svensson and Johansson²⁰, who highlighted, among other things, problem-based learning (PBL), case methodology, role-play, and project-oriented methods; however, what is still lacking is consensus as to which pedagogies best prepare students for future sustainability challenges.

¹⁷ UNESCO. (2017). *Education for Sustainable Development Goals: Learning Outcomes*. Paris: UNESCO.

¹⁸ Rieckmann, M. (2012). Future-oriented higher education: Which key competencies should be fostered through university teaching and learning? *Futures*, 44 (2): 127-135.

¹⁹ Evans, T. (2019) Competencies and Pedagogies for Sustainability Education: A Roadmap for Sustainability Studies Program Development in Colleges and Universities. *Sustainability*, 11(19): 1-36.

²⁰ Svensson, T., Johansson, M. (2016). Miljövetenskaplig undervisning i högre utbildning. In T. Hansson (Ed.), *Pedagogik för högskolelärare* (p. 262-288). Möklinta: Gidlunds förlag.

Part 2 – Implementation and self-assessment questions

2.1. Implementation

Implementation includes answering the questions below, which will result in a self-assessment and possibly suggestions for development. The planning, organisation of resources, and decisions on the implementation of proposals for development are *not* included here.

Implementation is envisaged as follows:

1. The *programme director (programansvarig)* (or someone else who is appointed) receives information about the purpose and structure.
2. A *self-assessment group* is appointed. The group should comprise the programme director and two or three teachers who teach on the programme and (if possible) two students who are preferably in the latter stages of the programme.
3. A *workshop* is held (3-4 hours) where questions 1-3 from the self-assessment are answered. This workshop is attended by the self-assessment group and the course coordinators (*kursansvarig*) on the programme. It would be useful if all teachers on the programme are invited to attend.
4. The *course coordinators* answer the sub-questions for their course(s) under question 4 (during or after the workshop).
5. The self-assessment group meets on a separate occasion and completes the remaining parts of the self-assessment and development plan (about 3-4 hours).
6. The self-assessment and development plan are sent to the Sustainable Development Council.
7. Feedback and dialogue – meeting between the Sustainable Development Council and the self-assessment group.

The head of the department in question (*avdelningschef*) is responsible, after consultation with the programme director, for appointing those who will be members of the self-assessment group.

2.2 Self-assessment and development plan

Question 1: Sustainable development in a programme-specific context

The question is to be answered during an introductory workshop.

Describe in brief how you believe the global sustainability challenges relate to the area or areas of knowledge included in your programme (see section 1.2.2 above). Describe in brief the role that those attending the workshop feel the academic field/department/profession has, or can have, when it comes to meeting these challenges. You may find it useful to include Agenda 2030 and the global goals and targets as a basis in the discussion.

After the workshop, was there consensus as to the role and responsibility of the programme when it comes to sustainable development? (circle your answer)
<i>Yes - Somewhat - No</i>
Summarise how you want to describe sustainable development in a programme-specific context; alternatively, describe the different views had by attendees during the workshop.
<i>Free text</i>

Question 2: Learning activities and key competencies

The question is to be answered during an introductory workshop.

In education for sustainable development, certain key competencies are highlighted as crucial to enable students contribution to sustainable development. Some learning activities are considered particularly suited to promote the development of such key competencies (see section 1.2.4 above). Describe examples of learning activities in the programme that you consider important in the preparation of students to address future sustainability challenges.

Are there examples of learning activities in the programme that you believe promote key competencies for sustainable development as described above? (circle your answer)
<i>Yes - Somewhat - No</i>
Briefly describe any examples of learning activities during the programme that promote such key competencies or other generic competencies you consider central to the context.
<i>Free text</i>
Do you have any ideas or suggestions for change?
<i>Free text</i>

Question 3: Coordination, progression, and collaboration

The question is to be answered during an introductory workshop.

In this context, the concept of progression means the gradual increase in requirements, that subsequent courses constitute a specialisation or deeper knowledge of what students acquired in previous courses. On this question, you should assess the degree of coordination, progression, and collaboration that exists within those parts of the programme that in different ways address sustainable development (content, forms of study, or examinations). Start from the programme-specific description you agreed on in question 1. Use the following criteria, and assess the level of coordination and progression within the programme.

Level 0 – Not addressed Aspects of sustainable development are not addressed during the programme. To the extent that the programme includes issues such as health, human rights, democracy, social and economic justice, gender equality, economic responsibility, climate or biodiversity, in these cases only one dimension of sustainable development (social, environmental, or economic) is highlighted.
Level 1 – Individual initiatives The programme includes the study of aspects of sustainable development. This is done in such a way that relationships between two or three dimensions of sustainable development (social, environmental, and/or economic) are highlighted. These elements are mainly the result of individual teachers' decisions to include content or initiate learning activities – that is to say, the decision to focus on sustainable development is made without coordination between courses in the programme.
Level 2 – Coordinated and with progression There is coordination of, and progression in, the content that deals with sustainable development over the course of the programme. Decisions on how to integrate sustainable development into courses have been made jointly by colleagues and/or programme director and others in charge of the programme. There are several examples of content where more than one dimension of sustainable development (social, environmental, and/or economic) are treated in such a way that relationships between them are highlighted.
Level 3 – Development-oriented Level 3 means that the criteria for level 2 are met. In addition, work with quality assurance continues in terms of how sustainable development is integrated into education. This can be done by including questions in course and programme evaluations or by ensuring that the feedback from students and teachers that is received in other ways is given attention in the development of the programme.
Level 4 – Collaboration-oriented The fourth level means that the criteria for levels 2 and 3 are met and, in addition, that sustainable development is integrated in collaboration with society at large. For example, there can be a programme council (<i>programråd</i>) that includes external stakeholders; there can be students who collaborate with businesses and organisations as they complete their theses; and there can be students who have placements at businesses and organisations. What these examples have in common is that they serve to bridge theory and practice, and are an opportunity to critically test the reasoning about sustainable development that was integrated into the programme.
Which level above applies to the programme? (circle your answer)
0 / 1 / 2 / 3 / 4
Comment:
<i>Free text</i>
Do you have any ideas or suggestions for change?
<i>Free text</i>

Question 4: Courses – content and learning outcomes

Each course coordinator should answer this question and complete the table below. Help from other course teachers can be enlisted.

To begin, use the description of sustainable development agreed upon by the group of teachers in question 1. Currently, what course content addresses these questions? Please indicate whether the main focus of this content is social, environmental, or economic sustainability, or if it is more than one of these dimensions. Are there other questions or perspectives that could be addressed during the course?

Course name and course code:
<i>Free text</i>
Are there learning outcomes in the course syllabus that relate to sustainable development as described above? (circle your answer)
<i>Yes - Somewhat - No</i>
If yes, what is or are the learning outcome(s)?
<i>Free text</i>
Describe in brief current course content that links to sustainable development (regardless of whether this is stated in the learning outcomes or not)
<i>Free text</i>
What content <i>could</i> be covered in the course in the future?
<i>Free text</i>

Use a separate table for each course in a programme.

Question 5: Basic concepts and awareness

The self-assessment group answers this question.

Are students introduced to sustainable development as a concept? Such an introduction includes the central components of sustainability thinking and different interpretations of the concept. It might also include the emergence of the concept or the ethical assumptions underlying it (see section 1.2.1 above). Such an introduction is not, or is only partially, limited to the area(s) of knowledge that is (are) included in the programme. If circumstances change because of the student's choice (for example, a different specialisation or main field of study within their degree), then this should also be described in the comments section.

Is there an introduction to sustainable development? (circle your answer)
<i>Yes - Somewhat - No</i>
Describe when and how the introduction is given, or describe the reason for the lack of an introduction.
<i>Free text</i>
Do you have any ideas or suggestions for change?
<i>Free text</i>

Question 6: Perspectives and interdisciplinary integration

The self-assessment group answers this question.

Global sustainability challenges are, by definition, complex and require interdisciplinary collaboration if solutions are to be found. Students need to be given the opportunity to reflect on goal conflicts and how different perspectives and interests affect the priorities of individuals and society. Interdisciplinary integration is one way to achieve this, which means that knowledge from different scientific disciplines is brought together to investigate a particular theme or problem (see section 1.2.3 above).

Are there examples of interdisciplinary integration in the programme, such as is described above? (circle your answer)
<i>Yes - Somewhat - No/Not applicable</i>
Describe in brief one or more examples of interdisciplinary integration, or describe other ways in which goal conflicts and different perspectives are made apparent in the programme.
<i>Free text</i>
Do you have any ideas or suggestions for change?
<i>Free text</i>

Question 7: Research-based education

The self-assessment group answers this question.

Describe how the requirement that the education is research-based is met in those parts of the programme that deal with sustainable development (see section 1.2.2 above).

Is there research within the department related to sustainable development that is made evident in the programme?	
<i>Yes - Somewhat - No/Not applicable</i>	
Describe how the requirement that the education is research-based is met in those parts of the programme that deal with sustainable development. If the answer to the above question is yes, describe how the research conducted in your department that relates to sustainable development is evident in the programme.	
<i>Free text</i>	
Do you have any ideas or suggestions for change?	
<i>Free text</i>	

Question 8: Learning outcomes in the programme syllabus

The self-assessment group answers this question.

Describe how the integration of sustainable development in education is expressed in the programme syllabus.

Are there learning outcomes in the programme syllabus that relate to sustainable development? (circle your answer)	
<i>Yes - Somewhat - No</i>	
If yes, what is or are the learning outcome(s)?	Comment:
<i>Free text</i>	

Question 9: Teacher competencies

The self-assessment group answers this question.

Describe the need, if any, for professional development of teachers that has been identified during the process of self-assessment.

During the process of self-assessment, did it become apparent that teachers need professional development in the area of sustainable development?
<i>Yes - Somewhat - No</i>
If yes, describe in brief the need for professional development.
<i>Free text</i>

Question 10: Development Plan

The self-assessment group answers this question.

During the discussions (questions 1-9), a number of possible suggestions for changes were no doubt made. Evaluate each of these: Is the suggestion concrete and realistic? How beneficial would it be if it were to be realised? Select the most important suggestions and based on each of them, formulate future action. Also assess when in time such a situation would be realistic (e.g., within 1, 2, or 3 years) and what activities are needed to get there.

Suggestions for changes	Preferable future situation and time plan	Activities
<i>Free text</i>	<i>Free text</i>	<i>Free text</i>

Question 11: Implementation

The self-assessment group answers this question.

Describe the process of drawing up the self-assessment and development plan: Who were the members of the self-assessment group? Did the set-up function? Did you choose to deviate from the instructions?

<i>Free text</i>
