



Embark on Your Journey

Sustainable Development Toolbox



March 2024
WP 2 – Framework for SD at HEIs

BY
Jessica Siegel & Judith Terstriep



Co-funded by
the European Union

Imprint

© Copyright 2022-2025 the SDS4HEI Consortium, consisting of:

Westphalian University of Applied Sciences Gelsenkirchen, Institute for Work and Technology (IAT), Germany
Momentum Marketing Services Limited (MMS), Ireland
European E-Learning Institute (EUEI), Denmark
Bursa Uludağ University (BUU), Türkiye
Atlantic Technical University (ATU), Ireland
Institut Mines-Télécom Business School (IMTBS), France

Authors

Siegel, Jessica
Terstriep, Judith

Acknowledgement

This toolbox is published as part of the Erasmus+ project “Sustainable Development Strategies for Higher Education Institutions” (SDS4HEI) funded under the Erasmus+ Programme KA222-HED – Cooperation Partnerships in Higher Education, project no. 2022-1-DE01-KA220-HED-000088936, co-funded by the European Union.

Legal notice

The views and opinions expressed in this document are the authors' sole responsibility. They do not reflect the views of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Copyright

The copyright is by the authors. The document is available in open access and licensed under Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See credit lines of images or other third-party material in this report for license information.

Read more about SDS4HEI on the project website: <https://sds4hei.eu/>



Co-funded by
the European Union

CONTENT

0 INTRODUCTION	1
PART I // CHECKING THE BASELINE	4
TOOL 1 RESOURCE STOCKS IN YOUR HEI'S ECOSYSTEM	5
TOOL 2 TRANSFORMATION MODES	8
TOOL 3 STAKEHOLDER MATRIX	12
TOOL 4 MAPPING CAPACITIES	14
TOOL 5 SIX STEPS TOWARDS SD MEASUREMENT	16
PART II // MAPPING SD ACTIVITIES	18
TOOL 6 SD IN EDUCATION	19
TOOL 7 SD IN RESEARCH	22
TOOL 8 SD IN CAMPUS OPERATIONS	25
TOOL 9 SD IN OUTREACH & PARTNERING	28
TOOL 10 SD IN ENTREPRENEURIAL ACTIVITIES	31
TOOL 11 SD IN GOVERNING	34
PART III // EXPLORING REGIONAL ECOSYSTEMS	37
TOOL 12 CHECKLIST REGIONAL CHALLENGES	38
TOOL 13 CHECKLIST ECONOMIC POTENTIALS	41
TOOL 14 LINKING ACTIVITIES TO SDG TARGETS	44
PART IV // SELF-ASSESSMENT	49
TOOL 15 SELF-ASSESSMENT PATHWAY I	50
TOOL 16 SELF-ASSESSMENT PATHWAY II	61
PART V // FURTHER TOOLS FOR SD	76
FURTHER TOOLS	77

0

INTRODUCTION

Welcome to the SDS4HEI Toolbox for Higher Education Institutions!

While Europe embarks on a journey towards Green Recovery to restore European prosperity and secure a good quality of life now and in the future, universities face increased pressure to improve their contribution to the sustainable development goals (SDGs). This toolbox was created to inspire and support higher education institutions (HEIs) members to act and make a difference in their region by implementing the SDGs into the core areas of their institutions: education, research, outreach and partnering, entrepreneurial activities, campus operations and governance. The toolbox provides tools that all actors – from university management to faculty members to students – can use to gain insights into where and how SD activities may pave the way for a greener future.

What Role do Higher Education Institutions Play?

In the face of global challenges, HEIs are increasingly urged to rethink their structures and take on social responsibility. Hence, HEIs worldwide embark on an exciting journey towards a sustainable future. As multipliers, they play a vital role in regional, societal, and global development. They can support the European Union's Green Recovery and address social equality, economic development, and climate change challenges. They are key actors in advancing the SDGs and the United Nations' collective framework for peace and prosperity.

To become a truly transformative 'integrative HEI', taking on social responsibility, universities must adopt a 'whole-institution' approach. This emphasises a holistic perspective, transformative readiness, and individual empowerment. They must rethink their roles, promote transformative learning, address human capital needs, engage globally, and embrace diversity. This approach spans research, teaching, outreach, campus operations, entrepreneurial activities and fostering a 'culture of sustainability'.

What is the SDS4HEI Toolbox?

Who is it for?

- » wish to support their institution in approaching sustainable development strategically in all impact areas.
- » wish to learn how and where to spot areas for implementing immediate actions to promote SDGs, leading to long-term SD.

What's in it for you?

The toolbox assists you in strategically approaching the implementation of the SDGs in your HEI to support quality of life in your region and beyond. The toolbox

- » will help you to get an overview of your institution's SD activities in the six core areas and identify the most important SDG targets and meaningful links to the regional ecosystem.
- » will allow you to connect immediate actions to the regional ecosystem to cause long-term effects.

What's the process?

The tools within this toolbox have been designed to support the seven steps of the SDS4HEI process model. As part of the 'SDS4HEI Framework', the process model provides a knowledge base for HEIs and guides users through the strategic implementation of sustainable development, following the 'whole-institution' approach.

- » **Institutional Baseline:** A smaller set of tools meant to support university members in defining 'Sustainable Development' within their institution.
- » **Mapping SD Activities:** A larger set of simple checklists meant to assist you in mapping SD activities already being conducted in the six core areas to identify focal areas and meaningful SDG targets.
- » **Exploring the Regional Ecosystem:** A limited set of tools to draw connections between the SD activities and regional challenges or potentials to identify missing links to the regional ecosystem.

How do you start?

If you are new to the field of sustainable development, consider reading the [SDS4HEI framework](#) first to get a better understanding of the seven steps towards SD strategies:

If your institution has already formulated a vision for SD and anchored it in its strategic plans, or if you consider yourself to be an experienced trailblazer in your specific field,

actively pushing SD forward in your institution, start with exploring the baseline within your HEI and mapping already existing SD initiatives.

If you or your organisation prioritise the 'Third Mission' or entrepreneurial endeavours and engage in transdisciplinary partnerships but lack a clear understanding of sustainable development (SD) goals, begin by pinpointing challenges or opportunities within your local ecosystem. Working towards your institution, you can base your vision on the challenges or potentials discovered within your region.

Part I

// Checking the Baseline

TOOL 1

RESOURCE STOCKS IN YOUR HEI'S ECOSYSTEM



Question

What are the most important resources in your HEI?

Complexity

low

Completion time

120 minutes

Materials

Pen & paper, flipchart

Note

Monitoring and measuring the stocks of different resources (means) in a specific ecosystem rather than the flows of goods and services makes progress made over long periods visible

What is it for?

The tool 'Resource Stocks in HEI's Ecosystem' envisages helping you and your organisation make well-informed decisions considering available resources. Also, it will assist you in better understanding your HEI's most important resources. It can also be applied to working groups such as departments, faculty, or schools etc. that are below the organisational level.

How to use it?

Start by collecting ideas about what resources should be considered important and what stocks should be assessed as suitable as representatives for SD at your HEI. Your answers will depend on your regional ecosystem, including regional SD challenges, the type of HEI, its structure and organisational culture.

The identified resources should be categorised into two major groups – natural capital and anthropogenic capital – and further divided and made measurable by ‘representative resource stocks’. While natural capital refers to the stock of natural resources and ecosystem functions, anthropogenic (man-made) capital comprises manufactured, human, social and knowledge capital.

The regular measurement of the stocks must then take on two forms: (1) Measuring and reflecting on current paths and (2) evaluating the impact of future pathways.

Resource Group	Specific Resource Group at HEI	General List of Representative Stock Resources
Natural Capital		
Ecosystems	Number of students, education with SD focus, collaborations	Biomass, biodata, communities
Environment	Land use, population	Climate, quality and quantity of land, air, water
Minerals	Fossil fuels for university operations, transportation	Fossil fuels, iron, sand
Anthropogenic Capital		
Manufactured Capital	Number of green buildings, renewable energy, alternative transportation	Roads, buildings, infrastructure
Human Capital	Skilled individuals	Campus communities (incl. external stakeholders) health, educational level, distribution
Social Capital	Regulations on resource usage, incentives for participation, accessibility, inclusion	Institutions include rules, norms, rights, culture, networks, etc.
Knowledge Capital	Diversity, entrepreneurial and sustainability-related skills, Transdisciplinarity	Indigenous, practical, scientific



Example: Resources Stocks for Well-being in HEIs Ecosystems

Further reading

Clark, William C. & Harley G. A. (2020). Sustainability Science: Toward a Synthesis. *Annual Review of Environment and Resources*, 45, 331-386. <https://doi.org/10.1146/annurev-environ-012420-043621>



Resource Group	Specific Resource Group at HEI	General List of Representative Stock Resources
Natural Capital		
Ecosystems		
Environment		
Minerals		
Anthropogenic Capital		
Manufactured Capital		
Human Capital		
Social Capital		
Knowledge Capital		

TOOL 2

TRANSFORMATION MODES



Question

How open is your organisational culture towards transformation?

Complexity

high

Completion time

1 day

Materials

Pen & paper, flipchart

Note

Make sure to talk to members of each important subsystem/impact area within your HEI.

What are 'Transformation Modes'?

'Transformation Modes' describe four different awareness modes of HEIs and their subsystems, such as administration, faculties and other core areas, concerning transformation, including SD. Different subsystems can display different transformation modes. For example, the development task of university administrations is predominantly seen as moving from mode 1.0 to mode 2.0 and professionalising processes to a greater extent. The modes must be viewed as parallel developments, possessing an additive character. To transform itself, a HEI has to go through each modus.

What is it for?

Depending on their modus, HEIs react differently to the challenge of SD in their core areas of research, education, outreach and partnering, governance, campus operations and entrepreneurial activities. Knowing which modus applies to which subsystem within your HEI helps you to:

- Find a way to motivate stakeholders from each subsystem by providing the right incentives.
- Work on a shared vision of SD – a prerequisite for all strategic SD activities, entailing values, beliefs and narratives.

How to use it?

The table can be used to get an overview of the four different transformation modes of HEIs. Read the information provided for each modus carefully. Try to talk to representatives of the various subsystems, for example, deans, and look at the subsystems' strategic plans to figure out which modus they belong to. After that, you can decide which elements are needed for transformation towards an integrative and more sustainable HEI that takes on social responsibility.

Further reading

Giesenbauer, B. & Müller-Christ, G. (2020). University 4.0: Promoting the Transformation of Higher Education Institutions toward Sustainable Development. *Sustainability*, 12(8), 3371. <https://doi.org/10.3390/su12083371>



Example: HEIs Mode of Transformation

	Traditional HEI (Order Thinking)	Modern HEI (Success Thinking)	Postmodern HEI (Considerate Thinking)	Integrative HEI 4.0 (Systems Thinking)
General Focus	<ul style="list-style-type: none"> • Input, authority and hierarchy; providing knowledge 	<ul style="list-style-type: none"> • Number-oriented optimisation, Output, efficiency and competition 	<ul style="list-style-type: none"> • Dialogue with (internal) stakeholders and learners (especially students), transfer thinking, addressing socio-ecological issues 	<ul style="list-style-type: none"> • Systematic solutions, co-creativity and sustainability
Education	<ul style="list-style-type: none"> • Teacher centric • Memorising standardised knowledge • Learning for recognition and academic titles 	<ul style="list-style-type: none"> • Test-centric • Disseminating factual knowledge, analytical strategies and sound methods • Modules and projects • Learning and competitive game for future success 	<ul style="list-style-type: none"> • Learner-centric • competencies-oriented transfer of self-reflective knowledge • Focus on dialogical seminars and project-based learning • Blended learning • Learning as personal growth 	<ul style="list-style-type: none"> • System-centric, holistic • Whole-person approach • Dynamic balance between subject matter, group, individual learners and context • Research-based learning • Co-creative and mindful learning
Research	<ul style="list-style-type: none"> • Search for absolute truths • Self-concept: observing universal natural laws • Focus on solid theories based on both deduction and induction • Construction of disciplines 	<ul style="list-style-type: none"> • Disciplinary research, standardisation of research, processes and peer review • Self-concept: testing and applying natural laws • Competition for grants • Measurement of success with rankings, impact factors, etc. • Focus on quantitative methods 	<ul style="list-style-type: none"> • Inter- and transdisciplinary • Action research • Self-concept: Understanding social dynamics • Dialogical research processes dealing with societal issues • Integration of qualitative research methods 	<ul style="list-style-type: none"> • Transdisciplinarity • Co-creative research • Self-concept: co-creating systemic transformation • Global action university • Living lab approach • Focus on real-life solutions • Idea of open science
Governance, Operations and Culture	<ul style="list-style-type: none"> • Focused on teaching, primary research and technological transfer • Building palaces of knowledge: impressive buildings and extensive libraries • Legitimacy by authority • Compliant by regulation, e.g., waste management and safety • One-dimensional approach to sustainability 	<ul style="list-style-type: none"> • Focused on quantitative growth • Rapid growth in functional buildings with little energy awareness • Control of cash flows and process management • Entrepreneurial activity • Science parks • SD as a management task 	<ul style="list-style-type: none"> • HEI as a place of meeting diverse yet like-minded people • Facilitating community and individual expression • Diversity management • Legitimacy by participation • Goal of climate neutrality • SD as a community task and third mission content 	<ul style="list-style-type: none"> • HEI as space for encounter reflection and inspiration • Physical and virtual integration of different societal and ecological systems • Whole-institution approach to sustainability • Additional fourth mission: co-creation for sustainability



Our HEIs Transformation Modes

	Traditional HEI (Order Thinking)	Modern HEI (Success Thinking)	Postmodern HEI (Considerate Thinking)	Integrative HEI 4.0 (Systems Thinking)
Subsystems of your HEI				

TOOL 3

STAKEHOLDER MATRIX



Question

What are the roles and responsibilities of your key actors?

Complexity

medium

Completion time

6 hours

Materials

Pen & paper, flipchart

Note

-

What is it for?

Promoting sustainable development in higher education institutions requires collaboration and commitment from various stakeholders. 'Stakeholder Matrix' is a great tool for getting an overview of the roles and responsibilities of different key actors in the implementation process of SD at HEIs.

How to use it?

First, get an overview of critical internal stakeholders and trailblazers for SD at your HEI. After that, a colour code (red, yellow, green) will help you to assign each key actor their role and responsibility within the seven steps of the SD implementation process.



Stakeholder Matrix

	Formulating SD Vision	Mapping SD Activities	Linking SD Activities to SDG Targets	Mapping Governance & Capacities	Analysing Regional Challenges or Potentials	Visualisation & Alignment	Gap Analysis
Lead Personal							
Educators							
Non-Academic Staff							
Sustainability Officers							
Researchers							
Deans							
Students							

Colour coding: Initiator(s) of a step
 Lead in carrying the step out
 People actively involved in the implementation

TOOL 4

MAPPING CAPACITIES



Question

What capacities do you need to successfully implement SD activities?

Complexity

medium

Completion time

6 hours

Materials

Pen & paper, flipchart

Note

Not every HEI possesses every capacity. Focus on the most important SD activities to see what capacities need to be developed further.

What is it for?

‘Mapping Capacities’ is a tool for mapping the skills and capacities available as well as the governance and the modes of governing in the HEI and matching them with the necessary capacities to act towards SD effectively. Different SD activities require different (institutional) capacities for the strategic implementation of SD at HEIs.

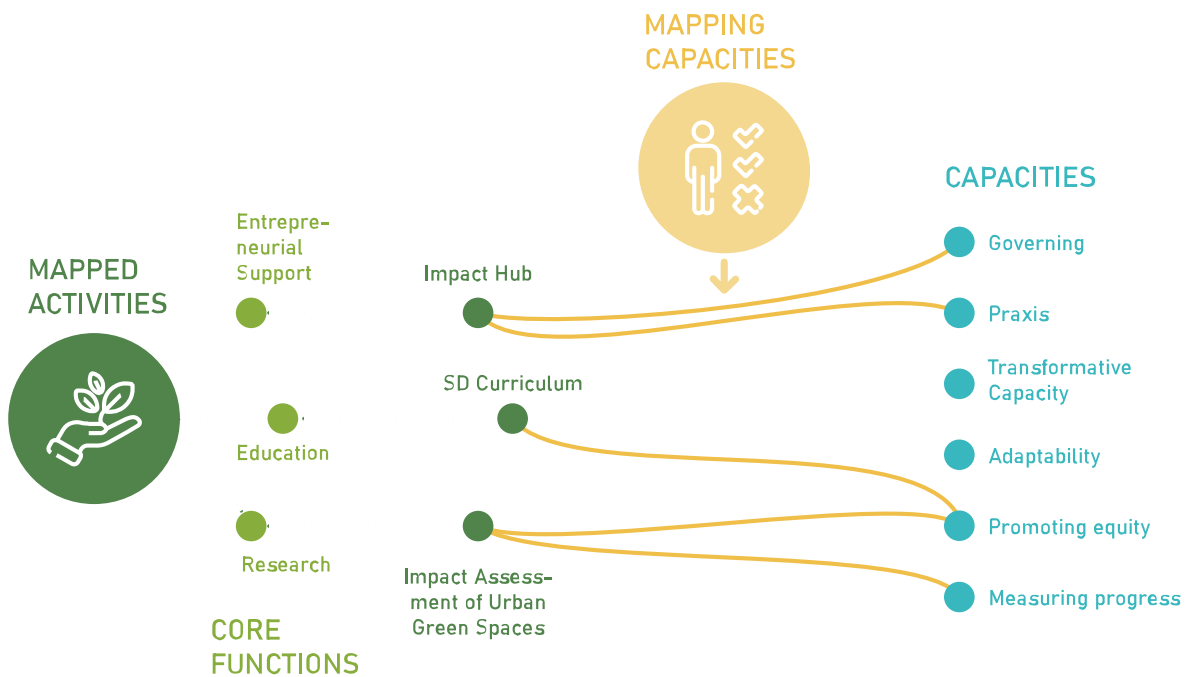
By highlighting the critical capacities of a measure in a core area, key stakeholders can be identified, and governance measures can be planned.

How to use it?

After getting an overview of the activities already being conducted in your institution, HEIs must analyse how these activities relate to the six capacities of transformative HEIs. The capacities include adaptability, measuring progress, transformation, trans-

fer, governing and promoting equity. The linking is done by drawing lines from the activities in the different core areas on the left side to the most important related capacities on the right side of the graphic. For example, entrepreneurial support depends on a HEI's transfer capacity ('praxis'), while 'education' and 'research' impact the capacity to 'promote equity'.

By looking at [SDS4HEI Framework Part II](#), you can also analyse the different variables that make up a capacity to figure out what your HEI needs to work on to strengthen or develop a needed capacity. The following figure illustrates the linkages between activities mapped capacities.



TOOL 5

SIX STEPS TOWARDS SD MEASUREMENT



Question

How can you start measuring progress?

Complexity

high

Completion time

1 day

Materials

Pen & paper or flipchart

Note

Try collaborating with a small group of internal stakeholders with diverse backgrounds to discuss SD and go through the steps.

What is it for?

"The 'Six Steps Towards SD Measurement' serves as a roadmap for individuals and institutions interested in initiating the measurement of SD progress. These six steps aid in developing the essential skills that impact your HEI's capability to measure progress effectively.

How to use it?

Take your time to go through each of the following six steps:



Step 1: Choosing Central Goals

As a first step, HEIs must define their central goals. The SDG targets can be used as an orientation and align with an institution's strategic plans or the potentials and challenges identified in the 'contextual frame'.

Step 2: Defining Relevant Resources

Subject to the respective contextual frame, i.e., the ecosystem in which the HEIs are situated, HEIs must decide on meaningful representative stock resources in the two main categories: (1) natural capital and (2) anthropogenic capital.

Step 3: Finding Meaningful Indicators

To gauge resource stocks, HEIs must establish measurement systems with useful indicators. Data needs to be at hand and cover all dimensions. However, many HEIs concentrate their measuring and reporting efforts on the environmental dimension of SD. Informative indicators need to be meaningful (represent information), relevant (reflective), direct (closely measure change), objective (have a clear operational definition of what is being measured and what data need to be collected), reliable, helpful, understandable (easy to comprehend and interpret) and practical. Aspects such as data collection costs and time resources are inhibiting factors.

Step 4: Evaluating Impact

One of the biggest challenges for HEIs is making the impact of their SD efforts visible and measurable. Deciding on specific SDG targets makes progress more concrete and impact more visible within a region. Developing a 'Theory of Change' linking impacts to activities, outputs, and outcomes can assist in doing so.

Step 5: Adopt an Integrative Perspective

HEIs can perceive all relevant resources as part of a particular context. They can determine the social value represented by resource stocks, move beyond single resources and assess the interactions between the different resource categories.

Step 6: Evaluate Governance Structures

Finally, HEIs should be able to evaluate the efficacy of new governance arrangements and mechanisms, for they are essential for managing and measuring resources.

Part II

// Mapping SD Activities

TOOL 6

SD IN EDUCATION



Question

How can you start measuring progress?

Complexity

high

Completion time

1 day

Materials

Pen & template

Note

Education for SD raises sustainability awareness and equips learners with the knowledge, skills and values necessary to become responsible and active citizens and make informed decisions.

What is it for?

The checklist assists you in getting an overview of the SD activities already conducted in the impact area of 'Education'. It thereby helps you identify strategic and operational focus areas and the most important SDGs and makes gaps visible.

How to use it?

First, collect information on the activities conducted in 'Education' that target SD or, more specifically, the SDGs. You might want to talk to different stakeholders and research your institution's website. Then, try to logically categorise the found activities and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they decide against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++), low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Education

- Curriculum development
- Combining entrepreneurial and sustainable skills
- Extracurricular activities
- Project-based on-campus learning
- Transdisciplinary collaborations with regional stakeholders (e.g., companies, regional development agencies, organised civil society)
- New (digital) teaching and learning methods (e.g., citizen science)
- Establishing incentives such as awards and certificates



Possible Groups of
Measures in 'Education'



Checklist SD Activities in Education

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
SD as part of the curriculum						
Example IMT-BS: Social Innovation Game	++	+++	+++	++	Yes	All of the SDGs and their targets (indirectly); SDG4 (Quality Education), SDG9 (Industry, Innovation, & Infrastructure, SDG10 Reduced Inequalities, SDG11 Sustainable Cities & Communities, SDG17 (Partnerships) (directly
Extracurricular Activities						
Employability						
Entrepreneurial + Sustainable Skills						

strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

TOOL 7

SD IN RESEARCH



Question

What SD activities are already being conducted in Research?

Complexity

medium

Completion time

1 day

Materials

Pen & template

Note

Engage with researchers at your Higher Education Institution (HEI) to identify the areas where SD is influential and where your institution is driving sustainable innovation.

What is it for?

The checklist assists you in getting an overview of the SD activities already conducted in the impact area of 'Research'.

How to use it?

First, collect information on the activities in 'Research' that target SD or, more specifically, the SDGs. You might need to search your institution's website and talk to different stakeholders. In a conversation with researchers, you can ask them:

- What entry points to SD do your academic discipline or research topic possess?
- What impact does your research have on SD and regional development?

After that, try to logically categorise the found activities and research topics and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they choose against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Research

- Employing Responsible Research and Innovation (RRI)
- Experimenting with and adopting new modes of research, including transdisciplinary collaborations, participatory (action) research, and citizen science.
- Research on and with SD to elaborate practical solutions.
- Introducing incentive systems, such as research challenges on sustainability, awards



Possible Groups of
Measures in Research



Checklist SD Activities in Research

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
Research for practical solutions						
Example WH: Research Challenge Sustainability	+	++	+++	+	No	SDG 13.3 Building knowledge and capacity to meet climate change. A (Special and Differential Treatment for Developing Countries)
Responsible Research and Innovation (RRI) / Research with SD						
Transdisciplinary Collaborations						
Participatory Research						

strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

TOOL 8

SD IN CAMPUS OPERATIONS



Question

What SD activities are already being conducted in Campus Operations?

Complexity

medium

Completion time

1 day

Materials

Pen & template

Note

Attempt to involve a diverse group of internal stakeholders and convene discussions on the topic.

What is it for?

The checklist assists you in getting an overview of the SD activities already conducted in the impact area 'Campus Operations'. By implementing measures that, for example, make the campus more accessible (social) or reduce energy consumption (ecological), HEIs have an immediate effect on the dimensions of sustainability and can 'lead by example'.

As institutional change mostly depends on establishing new routines, cultivating a culture of sustainability within the campus community has to become a cornerstone of the HEIs' efforts.

How to use it?

First, collect information on the activities conducted in 'Campus Operations' that target SD or, more specifically, the SDGs. You might need to talk to different stakeholders,

including your 'sustainability office'. Then, try to logically categorise the found activities and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they choose against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Campus Operations

- Sustainable campus design, such as green buildings, food/book donation and recycling stations, accessibility for all
- Resource management (e.g., greenhouse gas emissions, re-/upcycling, water usage, vegetarian food in the cafeteria)
- Energy consumption and renewable energy
- Waste management (e.g., composting)
- Alternative modes of transport
- Learning and awareness-raising activities (e.g., community garden, experiments)
- Implementing SD through campus experiences through a 'hidden curriculum' (e.g., green spaces, encouraging social interaction)



Possible Groups of Measures in 'Campus Operations'



Checklist SD Activities in Campus Operations

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
Resource Management						
Example BUU: Waste management centre	0	0	+++	++	Yes	SDG 12.4 Responsible Management of Chemicals and Waste)
Mobility						
Campus Design						
Economics & Finances						
Campus Practices						

strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

TOOL 9

SD IN OUTREACH & PARTNERING



Question

What SD activities are already being conducted in Outreach & Partnering?

Complexity

medium

Completion time

1 day

Materials

Pen & template

Note

Enhanced collaboration with external stakeholders regarding SD could address methods for motivating companies and organisations to participate in the initiative.

What is it for?

The checklist 'SD in Outreach & Partnering' assists you in getting an overview of the SD activities already conducted in the impact area 'Outreach & Partnering'. As part of their Third Mission, HEIs intensified internal stakeholder engagement, including students, staff, and leadership, and the engagement with public actors, such as governments, NGOs, schools, community organisations, and the private sector (e.g. companies).

Through strengthening different formats of transdisciplinary collaboration, HEIs can meaningfully connect their SD activities to the regional ecosystem.

How to use it?

First, collect information on the activities conducted in 'Outreach and Partnering' that target SD or, more specifically, the SDGs. You might need to talk to different internal and external stakeholders and research your institution's website. Then, try to logically categorise the found activities and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they choose against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Outreach & Partnering

- Fostering a collaborative culture with quadruple helix actors and active engagement of external stakeholders increases motivation.
- Implementing a system of recognition and incentives for collaborations
- Introducing new formats and communication channels such as living labs, exhibitions, position papers and lectures
- Reporting on SD activities through science communication to facilitate visibility, reputation building and the establishment of a culture of sustainability within a region.



Possible Groups of Measures in 'Outreach & Partnering'



Checklist SD Activities in Outreach & Partnering

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
Transdisciplinary Collaborations						
Project with local businesses on how to reduce water waste in car washes	0	+++	+++	+	Yes	SDG 6.3. By 2030, improve water quality by reducing pollution, eliminating dumping, minimising the release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally.
Citizen Science Formats						
Public Welfare						
Qualification Offerings						
Network Activities						

strong positive (+++), medium positive (++), low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

TOOL 10

SD IN ENTREPRENEURIAL ACTIVITIES



Question

What SD activities are already being conducted in Entrepreneurial Activities?

Complexity

medium

Completion time

1 day

Materials

Pen & template

Note

Attempt to assemble a diverse group of internal stakeholders and engage in discussions on the topic.

What is it for?

The checklist assists you in getting an overview of the SD activities already conducted in the impact area of 'Entrepreneurial Activities'. This helps your HEI better align its entrepreneurial support with sustainability, creating new perspectives on green business practices and professions.

How to use it?

First, collect information on the activities conducted in 'Entrepreneurial Activities' that target SD or, more specifically, the SDGs. For this, you might need to talk to different

internal and external stakeholders, your start-up centre, and spin-offs, as well as re-search your institution's website. Then, try to logically categorise the found activities and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they choose against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Entrepreneurial Activities

- Entrepreneurial support programmes with a focus on SD
- Entrepreneurial consulting oriented towards SD
- Raising awareness through training and workshops
- Non-university partnerships (e.g., Impact Hubs)
- Awards, competitions for solutions for societal challenges
- Recognising the potential for promoting a regional ecosystem



Possible Groups of Measures in 'Entrepreneurial Activities'



Checklist SD Activities in Entrepreneurial Activities

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
Entrepreneurial Support						
Impact Start-up Hub	++	+++	+++	++	Yes	SDG Target 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services
Equal Opportunities						
Incentive Systems						
Regional Cooperation						

strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

TOOL 11

SD IN GOVERNING



Question

What SD activities are already being conducted in Governing?

Complexity

medium

Completion time

1 day

Materials

Pen & template

Note

Seek to emphasise participatory governance structures specifically focused on SD, which can serve as an interface to the regional ecosystem.

What is it for?

The checklist assists you in getting an overview of the SD activities already conducted in the impact area 'Governing'. Participatory governance structures and dedicated staff, such as sustainability officers or green offices, are essential to making SD visible, communicating actions, and motivating stakeholders to participate.

Still, SD needs to be integrated into everyday practices within HEIs and become part of the wider organisational culture. Therefore, it is essential to recognise and give leeway for SD efforts, for example, through financial incentives.

How to use it?

First, collect information on the activities conducted in 'Governing' that target SD or, more specifically, the SDGs. You might need to talk to different stakeholders and re-search your institution's website. Then, try to logically categorise the found activities and briefly describe them, following the example given in the checklist. The provided categories are illustrative focal points for potential sustainable development measures, which can be supplemented by the focus areas specific to your HEI.

HEIs can use the 'comply-or-explain-principle' to discuss why they choose to implement certain SD actions (comply) or plausibly explain why they choose against them (explain). This method might be chosen to account for the different types of HEIs.

After that, you can assign a certain value to the specific activities, showing how strongly the activity influences the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong positive (+++), medium positive (++) , low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---). Additionally, the activity can either relate or not relate to the shared institutional vision (yes/no) and contribute to particular SDG targets. The SD activities are most likely aimed at several different targets.



MEASURES

Measures in Governance

- Rethinking structures and power relations
- Governing by participation: Enabling participation, including stakeholders' involvement in decision-making processes
- Establishing SD-related governance structures such as green offices
- Implementing incentive systems, policies and regulations
- Raising awareness and offering training opportunities



Possible Groups of
Measures in 'Governing'



Checklist SD Activities in Governing

Our Activities	Social	Economic	Ecological	Cultural	In line with vision	SDG targets addressed
Participatory Structures						
New Governance Structures						
Hiring sustainability manager	++	0	++	+++		SDG target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
New Modes of Governing						
Incentive Systems (internal/external)						
Rules, Regulations & Policy						

strong positive (+++), medium positive (++), low positive impact (+) to no impact (0) and on the other side of the scale from low negative (-), medium negative (--) and strong negative impact (---)

PART III

// Exploring Regional Ecosystems

TOOL 12

CHECKLIST

REGIONAL CHALLENGES



Question

What SD activities are already being conducted in Governing?

Complexity

high

Completion time

1-2 days

Materials

Pen & template

Note

Engage key actors from regional ecosystems by initiating knowledge exchange formats that facilitate transdisciplinary collaborations to achieve long-term effects.

What is it for?

The 'Regional Challenges' checklist is a great tool for identifying the most important sustainability challenges within your region, assigning dimensions, and linking them to relevant SDG targets. By better understanding the distinct regional challenges, your HEI can align its SD activities with regional demands to take on social responsibility.

How to use it?

Initially, you or your HEI need to examine national and local sustainability strategies in policy and business and initiate discussions with regional stakeholders, including companies, residents, town officials, and politicians. Employ scenario planning to construct sustainable futures, analyse trends and societal climate, and establish meaningful indicators across the four dimensions of sustainability: economic, ecological,

social, and cultural. Instead of attempting to map all challenges, focus on the most pressing ones that require immediate action to drive future sustainable development. Additionally, try to identify meaningful categories for the different challenges.

Then, determine how strongly the identified regional challenges affect the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong (+++), medium (++) , and low impact (+) to no impact (0).

Finally, link the identified challenges to specific SDG targets and either formulate new measures that your HEI could take to overcome the challenges or find activities already being conducted.



Checklist Regional Challenges

Regional Challenges	Social	Economic	Ecological	Cultural	SDG targets addressed	Possible Measures
Resource Management						
Example: Insufficient social cohesion	+++	+	+	+	SDG target 16.1 (Reduce Violence Everywhere); Target 5.4 (Value Unpaid Care and Promote Shared Domestic Responsibility)	
Resource-intensive industries	+	+++	+++	+	SDG target 8.4 (Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation)	
Health & Well-Being						
Poverty						
Renewable Energy						

strong (+++), medium (++), low impact (+), no impact (0)

TOOL 13

CHECKLIST

ECONOMIC POTENTIALS



Question

What is the baseline within your regional ecosystem?

Complexity

high

Completion time

1-2 days

Materials

Pen & template

Note

Engage key actors from regional ecosystems by initiating knowledge exchange formats that facilitate transdisciplinary collaborations to achieve long-term effects.

What is it for?

The 'Economic Potentials' checklist will help you identify economic potentials within your region, assign dimensions, and link them to relevant SDG targets. By mapping the distinct potentials, your HEI can use its SD activities to strengthen sustainable regional development and support a green and just economy and a good quality of life.

How to use it?

In a first step, you or your HEI initiate discussions with regional stakeholders, including companies, residents, town officials, and politicians, to explore the following questions. Guiding questions comprise:

- How is your regional ecosystem organised (production/consumption, value chains, employment patterns)?
- Which actors (spin-offs, entrepreneurs, NGOs, etc.) generate social or environmental value?
- Is your region specialising or has specialised in a certain sector or field?
- Do sustainable 'cross-innovations' exist in your region?

You should also analyse trends and societal climate and establish meaningful indicators across the four dimensions of sustainability: economic, ecological, social, and cultural. Additionally, try to find meaningful categories for the different potentials.

Then, determine how strongly the identified economic potentials affect the four sustainability dimensions (social, economic, ecological, and cultural), ranging from strong (+++), medium (++) , and low impact (+) to no impact (0).

Finally, link the identified challenges to specific SDG targets and either formulate new measures that your HEI could take to overcome the challenges or find activities already being conducted.



Checklist Economic Potentials

Regional Potentials	Social	Economic	Ecological	Cultural	SDG targets addressed	Possible Measures
Division of Labour						
			+	+		
				+		
Regional Specialisation						
Transdisciplinary Collaborations						
Green/Social Start-ups						

strong (+++), medium (++), low impact (+), no impact (0)

TOOL 14

LINKING ACTIVITIES TO SDG TARGETS



Question

Which of your ongoing SD activities contribute to what SDG target(s)?

Complexity

high

Completion time

120 minutes

Materials

Pen & template

Note

-

What is it for?

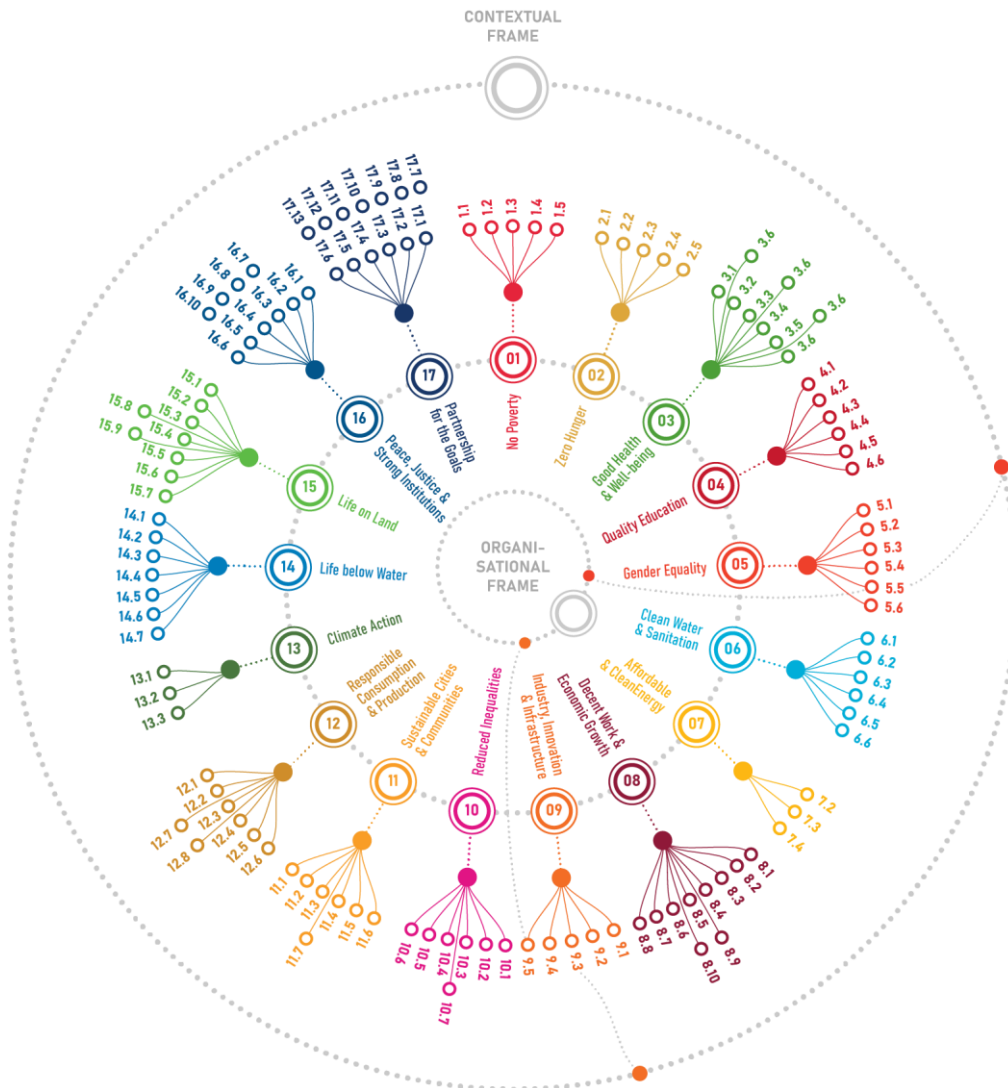
Linking activities to SDG targets is useful for illustrating the connection between your HEI's efforts and broader sustainability objectives, ultimately contributing to more effective and impactful sustainable development initiatives. In particular, by mapping activities to specific SDG targets, you gain clarity on your objectives and focus areas. This linkage helps prioritise initiatives and resources towards areas where your HEI can make the most significant impact in advancing sustainable development.

How to use it?

In the figure below, the inner circle represents the organisational framework, while the outer one represents the regional ecosystem. Between these two circles, the SDGs and their associated targets are displayed.

For instance, your organisation's SD activities are depicted as an orange dot and connected to SDG 5, target 5.5, to 'Ensure full participation in leadership and decision-making' (shown as a grey dotted line between the orange dot and the SDG target).

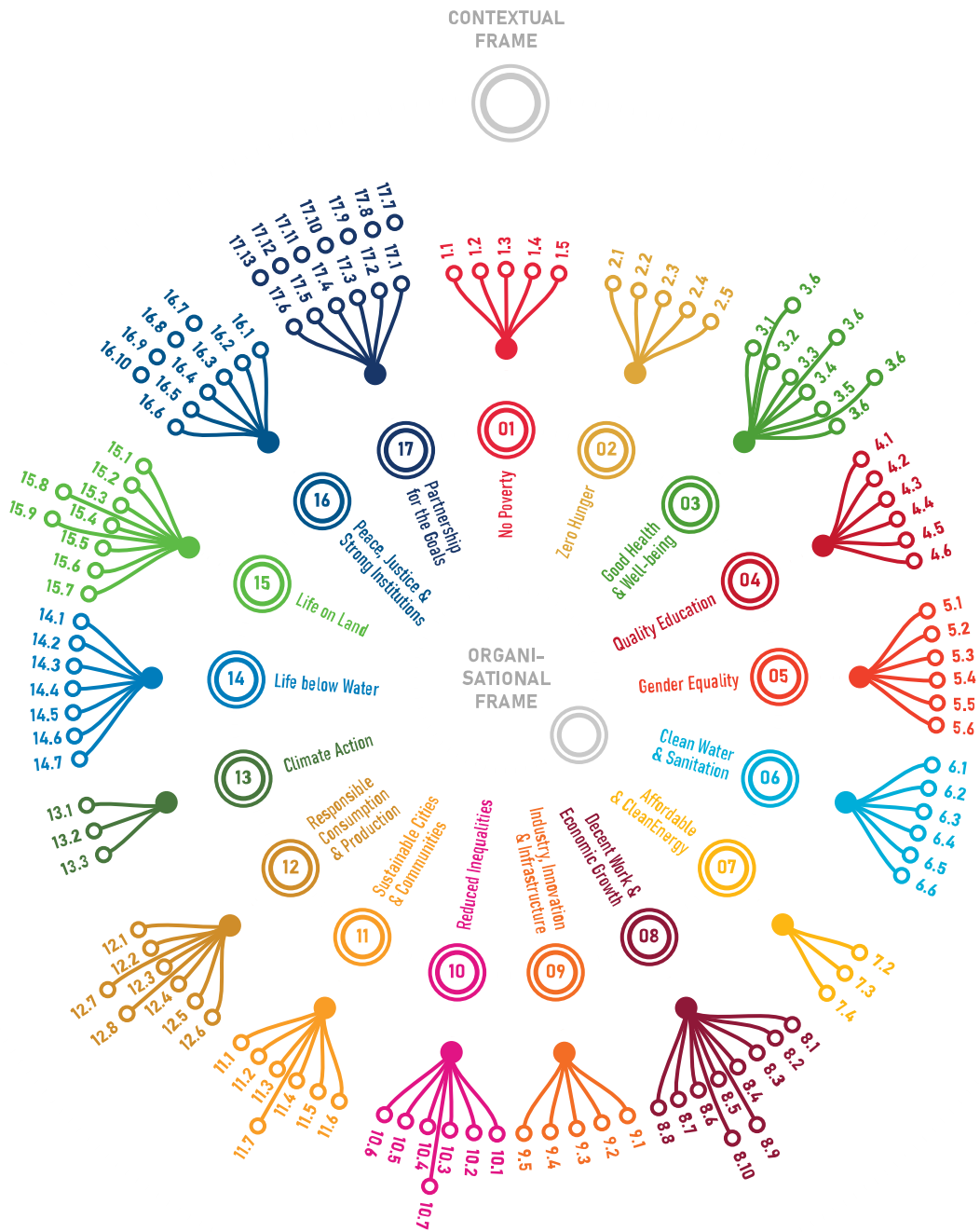
A similar approach is taken concerning regional challenges, represented by orange dots in the contextual framework. While your SD activities and regional challenges may align, they can also diverge, as illustrated in the second example. Which SDG target(s) are reoccurring and thus could function as focal areas?



Linking Activities to SDG target(s)



SDG target(s) Linking Wheel





Overview SDG Targets

SDG 1. No Poverty		SDG 2. Zero Hunger		SDG 3. Good Health & Well-being	
1.1	Eradicate extreme poverty	2.1	Universal access to safe & nutritious food	3.1	Reduce maternal mortality
1.2	Reduce poverty by at least 50%	2.2	End all forms of malnutrition	3.2	End all preventable deaths under 5 years age
1.3	Implement social protection systems	2.3	Double the production of productivity & income of small farmers	3.3	Fight communicable diseases
1.4	Equal rights to ownership, basic services, technology and economic resources	2.4	Sustainable food production & resilient agricultural practices	3.4	Reduce mortality from non-communicable diseases and promote mental health
1.5	Build resilience ecological, economic, social disasters	2.5	Maintain the genetic diversity	3.5	Reduce and prevent substance abuse
SDG 4. Quality Education		SDG 5. Gender Equality		3.6 Reduce road injuries and death	
4.1	Free primary and secondary education	5.1	End discrimination against women and girls (w/g)	3.7 Universal access to sexual and reproductive care, family planning and education	
4.2	Equal access to pre-primary quality education	5.2	End all violence against and exploitation of w/g	3.8 Achieve universal health coverage	
4.3	Equal access to affordable, technical, vocational & higher education	5.3	Eliminate forced marriage and genital mutilation	3.9 Reduce illnesses and deaths from hazardous chemicals and pollution	
4.4	Increase the number of people with skills for financial success	5.4	Value unpaid care and promote shared domestic responsibilities		
SDG 4. Quality Education		SDG 5. Gender Equality		SDG 6. Clean Water and Sanitation	
4.5	Universal literacy & numeracy	5.5	Ensure full participation in leadership & decision-making	6.1 Safe and affordable drinking water	
4.6	Education for SD and global citizenship	5.6	Universal access to reproductive health & rights	6.2 Open defecation and provide access to sanitation ...	
SDG 7. Affordable & Clean Energy		SDG 8. Decent Work & Economic Growth		6.3 Improve your water quality, wastewater treatment and safe reuse	
7.1	Universal access to modern energy	8.1	Sustainable economic growth	6.4 Increase water-use efficiency and ensure freshwater supplies	
7.2	Increase global percentage of renewable energy	8.2	Diversify, innovate and upgrade for economic productivity	6.5 Implement integrated water resources management	
7.3	Double improvement in energy efficiency	8.3	Promote policies to support job creation & growth enterprises	6.6 Protect & restore water-related ecosystems	
SDG 9. Industry, Innovation & Infrastructure		8.4	Improve resource efficiency in production & consumption	SDG 10. Reduce Inequalities	
9.1	Develop sustainable, resilient & inclusive infrastructure	8.5	Full employment and decent work with equal pay	10.1 Reduce income inequalities	
9.2	Promote inclusive and sustainable industrialisation	8.6	Improve youth employment, education & training	10.2 Promote universal social, economic & political inclusion	
9.3	Increase access to financial services & markets	8.7	End modern slavery, trafficking & child labour	10.3 Ensure equal opportunities and end discrimination	
9.4	Upgrade all industries & infrastructure for sustainability	8.8	Protect labour rights & promote safe working enviro.	10.4 Adopt fiscal and social policies that promote equality	
9.5	Enhance research and upgrade industrial technologies	8.9	Promote beneficial and sustainable tourism	10.5 Improve regulation of global financial markets & instruments	
SDG 11. Sustainable Cities & Communities		8.10	Universal access to banking, insurance, financial services	10.6 Enhance representation for developing countries in financial institutions	
11.1	Safe and affordable housing			10.7 Responsible & well-managed migration policies	
11.2	Affordable and sustainable transportation systems			SDG 13. Climate Action	
11.3	Inclusive and sustainable urbanisation			13.1 Strengthen resilience and adaptive capacity to climate-related disasters	
11.4	Protect the world's cultural and natural heritage			13.2 Integrate climate change measures into policies and planning	
11.5	Reduce adverse effects of natural disaster			13.3 Build knowledge & capacity to meet climate change	
11.6	Reduce the environmental impact of cities			SDG 15. Life on Land	
11.7	Provide Access to safe & inclusive green public spaces			15.1 Conserve and restore terrestrial & freshwater ecosystems	

SDG 12. Responsible Consumption & Production		SDG 14. Life below Water		SDG 15. Life on Land	
12.1	Implement the 10-year sustainable consumption & production framework	14.1	Reduce marine pollution	15.2	End deforestation & restore degraded forests
12.2	Sustainable management & use of resources	14.2	Protect and restore ecosystems	15.3	End desertification & restore degraded land
12.3	Have global per capita food waste	14.3	Reduce ocean acidification	15.4	Ensure conservation of mountain ecosystems
12.4	Responsible management of chemicals & waste	14.4	Sustainable fishing	15.5	Protect biodiversity & natural habitats
12.5	Substantially reduce waste generation	14.5	Preserve coastal and marine areas	15.6	Promote access to genetic resources and fair sharing of the benefits
12.6	Encourage companies to adopt sustainable practices and sustainability reporting	14.6	End subsidies contributing to overfishing	15.7	Eliminate poaching & trafficking of protected species
12.7	Promote sustainable public procurement practices	14.7	Increase the economic benefits from sustainable use of maritime resources	15.8	Prevent invasive alien species on land and in water
12.8	Promote a universal understanding of sustainable lifestyles			15.9	Integrate ecosystem and biodiversity in governmental planning

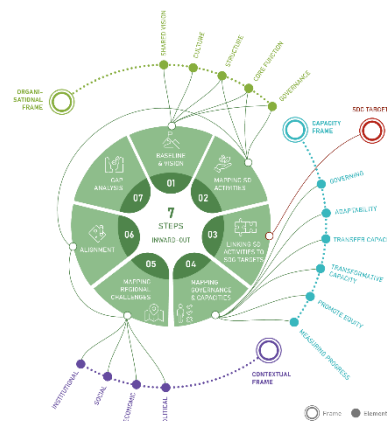
SDG 16. Peace, Justice & Strong Institutions		SDG 17. Partnership for the Goals	
16.1	Reduce violence everywhere	17.1	Mobilise resources to improve domestic revenue collection
16.2	Protect children from abuse, exploitation, trafficking & violence	17.2	Implement all development assistance commitments
16.3	Promote the rule of law & ensure equal access to justice	17.3	Mobilise financial resources for developing countries
16.4	Combat organised crime and illicit financial & arms flows	17.4	Assist development countries in attaining debt sustainability
16.5	Substantially reduce corruption & bribery	17.5	Invest in least developed countries
16.6	Develop effective, accountable & transparent institutions	17.6	Knowledge sharing & cooperation for access to science, technology and innovation
16.7	Ensure responsive, inclusive & representative decision-making	17.7	Promote sustainable technologies to developing countries
16.8	Strengthen the participation in global governance	17.8	Strengthen the science, technology and innovation capacity of least-developed countries
16.9	Provide universal legal identity	17.9	Enhance SDG capacity in developing countries
16.10	Ensure public access to information & protect fundamental freedoms	17.10	Promote a universal trading system under the WTO
		17.11	Increase the export of developing countries
		17.12	Remove trade barriers for least developed countries
		17.13	Enhance global macroeconomic stability

PART IV

// Self-assessment

TOOL 15

SELF-ASSESSMENT PATHWAY I



Question

Where are you on your journey towards sustainable development?

Complexity

high

Completion time

2 days

Materials

Pen & template

Note

Attempt to involve a diverse group of internal stakeholders and convene discussions on the topic.

What is it for?

This tool is designed to aid you, as a HEI stakeholder, in your **1) Strategic, 2) Operational, or 3) Educational role** in examining how activities within your organisation can be integrated into a proactive Sustainable Development Strategy that contributes to the UN Sustainable Development Goals (SDGs). You can answer the questions on behalf of your department/faculty/school (**working group**), or as an individual with selected or all SDGs in mind. The “Self-Assessment Tool Pathway I” especially targets organisations that have already begun the journey to sustainable development.

How to use it?

The guiding questions within the Self-Assessment Tool reflect the seven steps of the [SDS4HEI Framework’s Pathway I](#), starting with assessing the institutional baseline and

moving towards analysing the regional ecosystem. There are four tiers of responses, similar to a Likert Scale (Yes, Somewhat, No, Not Sure).

By answering the questions, you will be led through the following steps of the implementation process:

1. Baseline & Vision
2. Mapping Sustainable Development Activities
3. Linking Activities to SDG Targets
4. Mapping Governance & Capacities
5. Mapping Regional Challenges
6. Alignment & Visualisation
7. Gap Analysis

If you wish to receive a digital feedback report on your or your HEI's performance, you can also complete an [online version of the self-assessment tool](#).



STEP 1

Shared Vision & Baseline

Description

The self-assessment begins with analysing the status quo at your HEI, resulting in the baseline and formulation of a shared vision of sustainability – the ideal goal to reach. A shared vision gives meaning to actions and motivates stakeholders to become active.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. We have analysed the baseline for the SDG(s) within our working group. Establishing a baseline refers to examining the status quo of your group's structure, inherent culture, and how they relate to SDGs.

A2. For strategic roles: We have analysed the baseline for the SDG(s) at our institution.

a. Our working group's vision (a concrete image) of a sustainable HEI, including specific SDGs, looks like:

Empty text box for answer a.

b. Our working group's trailblazers for specific SDGs are:

Empty text box for answer b.

c. Our important subsystems, such as administration and different faculties, can be assigned to the following transformation modes:

Empty text box for answer c.

d. Our most important SDGs, according to our strategic plans, our vision and ongoing stakeholder discussions, are:

Empty text box for answer d.

B. Contributing to these SDGs is considered part of our strategic orientation and value statements of our working group/institution.

C1. The SDG(s) remain relevant to our working group.

C2. For educators: The SDG(s) remain relevant to educational staff.

C3. For strategic roles: The SDG(s) remain relevant to internal stakeholders.	
D. The SDG(s) remain an element of participatory actions conducted by our organisation.	
Subtotal	/ 8



STEP 2
Mapping SD Activities

Description

By mapping SD activities in the core areas and choosing and striving towards meeting selected targets, immediate and feasible actions can be realised, progress can be measured, and long-term SD is given shape.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. We have mapped activities within our working group that contribute to SDG(s). For example, if your working group (or organisation) conducts activities to reduce waste, then these activities may be mapped to SDG12, SDG13 or SDG15.

- a. What impactful SD activities are we already conducting in our core areas (education, research, outreach & partnering, entrepreneurial activities, governance and campus operations)?

- b. These activities can be grouped into the following thematic focus areas:

	B. For educators: We have integrated learning resources that support sustainable development into our pedagogy.	
	C. These activities are in line with our working group's (or organisation's) vision for sustainability.	
	D1. We have considered the impact of each activity from an environmental, economic, social, and cultural perspective.	
	D2. For educators: Within our pedagogy, we have considered all aspects of actions that support sustainable development (including environmental, economic, social & cultural).	
	Subtotal	/ 6
	Subtotal for Educators	/ 8



STEP 3

Linking SD Activities to SDG Target(s)

Description

Linking the identified SD activities to specific SDG targets will help you to draw meaningful connections to regional challenges and potentials. The sub-targets of the SDGs are useful as they are more concrete and feasible.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. We have linked ongoing (teaching/operational) activities for the SDG(s) with defined individual United Nations SDG target(s). The targets under each SDG can be reviewed by clicking on the SDGs at <https://sdgs.un.org/goals>.

- a. Our ongoing SD activities contribute to the following SDG target(s) (list the most important reoccurring targets:

--	--

B. We have examined the impact of each target.

Subtotal

/ 4



STEP 4

Mapping Governance & Skills

Description

To reach a certain SDG target, you need to identify, strengthen or develop the most relevant capacities and governance arrangements. We have identified six main capacities of transformative HEIs. By analysing the different variables that make up a capacity, you can determine what your HEI needs to work on to strengthen needed capacities. The variables are described in the SDS4HEI Framework.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. We have examined the most relevant capacities for achieving our institution's defined SDG target(s).

A2. For educators: We have examined the most relevant capacities for achieving our institution's most important SDG target(s). For example, "transformation learning" for educators.

a. What important capacities do we already possess?

b. The following capacities are necessary to move forward with our institutional vision:

B. Our working group (or organisation) already possesses the required capacities to promote the SDGs.

C. If the capacities need further development: Our working group (or organisation) has a plan to achieve this.

D The prioritising of capacities aligns with our working group's shared vision.

E. We have identified relevant governing structures and know who participates in decision-making processes.

a. These are our current governing structures (offices, networks, etc.) that are important for SDGs:

b. The following people/groups are able to participate in decision-making processes regarding SDGs.

	F1. The SDG(s) are embedded into procedures within our working group. F2. For strategic roles: The SDG(s) are embedded into policies and regulations within our institutions.	
	G. Our current governance structures impede/facilitate activities toward the SDG(s)	
	H. We have incentive systems established within our working group (or organisation). a. We have the following SDG-related incentive systems in place: 	
		Subtotal / 16



STEP 5 Mapping Regional Challenges

Description

The combination of sustainability and regional development can facilitate sustainable ecosystems. The following questions are best discussed and analysed together with regional stakeholders.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. We have identified current and future (next 20 years) challenges within our region.

A2. For educators: Within our teaching activities, we have identified current and future (next 20 years) challenges within our region.

a. Our region is facing the following important SD-related challenges:

B1. Internal / external stakeholders are aware of these regional challenges.

B2. For educators: Our students are aware of these regional challenges.

a. We are working together with regional stakeholders in the following transdisciplinary collaborations:

C. Internal / external stakeholders and/or students are willing to act upon the challenges.

D. We have identified specific SDG targets that are relevant and can minimise risks and challenges in our region.

a. These are our the most relevant SDG targets for our region:

Subtotal

/ 8



STEP 6

Alignment & Visualisation

Description

Visualise your key findings. The process of getting there is more important than the visualisation itself, as it entails thoughtful reflection on the insights gained. Nevertheless, visualisations facilitate internal and external communication.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. Our working group (or organisation) has evaluated the findings from activity mapping, target linking, governance & capacity mapping, and regional challenge mapping.

B. We have categorised and presented them visually to stakeholders.

Subtotal

/ 4



STEP 7 Gap Analysis

Description

The Gap Analysis helps to identify relevant regional SDG targets not yet addressed by current activities, as well as areas of improvement. Forasmuch, it should cover all core functions of your HEI while accounting for the regional context.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. Within our teaching / operational activities, our focus areas for the SDG(s) align with the main regional challenges.

B. There are important SDG targets for the region that are not being addressed by our working group (or organisation).

C. If so, they have been documented by our working group (or organisation).

a. We need to address the following SDG targets with our SD activities:

b. Possible new/modified actions/measures in our core areas addressing or contributing to important SDG targets are:

D. Our working group (or organisation) has the capacity to address the gaps identified.

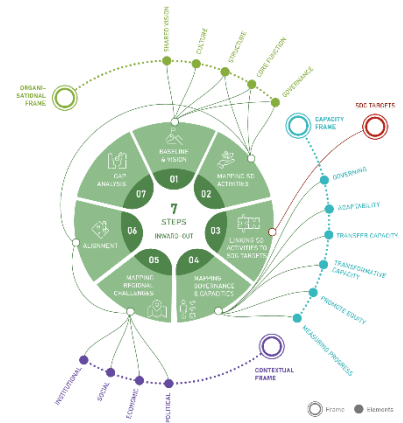
Subtotal / 8

YOUR TOTAL SCORE FOR SD IMPLEMENTATION / 54

YOUR TOTAL SCORE FOR SD IMPLEMENTATION (EDUCATORS) / 56

TOOL 16

SELF-ASSESSMENT PATHWAY II



Question

Where are you on your journey towards sustainable development?

Complexity

high

Completion time

2 days

Materials

Pen & template

Note

Attempt to involve a diverse group of internal stakeholders and convene discussions on the topic.

What is it for?

This tool is designed to aid you, as a HEI stakeholder, in your **1) Strategic, 2) Operational, or 3) Educational role** in examining how activities within your organisation can be integrated into a proactive Sustainable Development Strategy that contributes to the UN Sustainable Development Goals (SDGs). You can answer the questions on behalf of your department/faculty/school (**working group**), or as an individual with selected or all SDGs in mind.

Pathway II is especially beneficial for HEIs emphasising their Third Mission, entrepreneurial activities and those that have not yet established a unified sustainability vision but seek to promote transdisciplinary collaborations, encourage participation, and align their SD initiatives with regional development goals.

How to use it?

The guiding questions within the Self-Assessment Tool reflect the seven steps of the [SDS4HEI Framework's Pathway II](#), starting with an analysis of challenges or potentials found within your regional ecosystem and moving towards establishing an institutional vision. By answering the questions, you will be led through the following steps of the implementation process:

1. Mapping Regional Challenges / Economic Potentials
2. Linking Challenges / Potentials to SDG Targets
3. Baseline & Vision
4. Mapping Sustainable Development Activities
5. Mapping Governance & Capacities
6. Alignment & Visualisation
7. Gap Analysis



STEP 1A
Mapping Regional Challenges

Description

The combination of sustainability and regional development can facilitate sustainable ecosystems. The following questions are best discussed and analysed together with regional stakeholders.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. We have identified current and future (next 20 years) challenges within our region.

A2. For educators: Within our teaching activities, we have identified current and future (next 20 years) challenges within our region.

a. Our region is facing the following important SD-related challenges:

B1. Internal/external stakeholders are aware of these regional challenges.

B2. For educators: Our students are aware of these regional challenges.

a. We are working together with regional stakeholders in the following transdisciplinary collaborations:

C. Internal / external stakeholders and/or students are willing to act upon the challenges.

D. We have identified specific SDG targets that are relevant and can minimise risks and challenges in our region.

a. These are our the most relevant SDG targets for our region and described in other regional / national strategies:

E. Incentive systems driving SDGs exist in our region.

a. The following incentive systems exist:

		Subtotal
		/ 10



STEP 1B (alternative to 1A) Mapping Regional Challenges

Description

Instead of analysing regional challenges, you can also put an emphasis on economic potentials within your region, following a potential rather than a challenge-driven approach. Potentials include sustainability-oriented start-ups, understood as entrepreneurs emphasising generating social value over economic value and those that generate social or environmental benefits regardless of their economic objectives

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. We know how our regional ecosystem is organised (production/consumption, value chains, employment patterns, etc.).

a. Our region is specialised in the following sector(s) or field(s):

b. Sustainable 'cross-innovations' exist in our region, i.e. new solutions that cross the boundaries of single sectors and [or] knowledge domains (e.g. Bitcoin as cryptocurrency):

B. There are successful sustainability-oriented spin-offs/start-ups (including not-for-profit).

a. We are working together with regional stakeholders in the following transdisciplinary collaborations:

C. We have identified specific SDG targets that are relevant and can minimise risks and challenges in our region.

a. These are our governing structures (offices, networks, etc.) that are important for SD:

Subtotal

/ 6



STEP 2

Linking Challenges/Potentials to SDG Target(s)

Description

By linking the identified challenges or potentials to specific SGD targets, important focus areas become apparent. This will help you identify, develop, and expand meaningful SD activities in your institution that support the regional ecosystem.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. We know which SDG targets are pivotal in addressing the challenges/ potentials encountered in our region.

a. The following SDG target(s) are pivotal in addressing the challenges encountered in our region:

b. The following SDG target(s) can bolster the region's resilience:

c. The following SDG targets are pivotal in strengthening our region's economic potential in due consideration of social and ecological aspects:

B. Spin-offs and start-ups consider or aim to align with specific SDGs.

a. These are:

Subtotal

/ 4



STEP 3
Elaborating a Shared Vision

Description

Clear goals and a vision (the 'what') are more important than exact measures (the 'how'). By aligning the institutional vision with the demands of the region, your vision will have a strong Third Mission focus.

Assessing current practices

SCORE

0 = no / not sure, 1 = somewhat, 2 = yes

A. Our working group has an idea of how SD is understood in our region

a. SD is understood as:

B. Our working group engages with regional supporters and opponents to formulate a vision.

a. The actors we engage with are:

C. Our working group has formulated a shared vision (concrete image) of what we want to sustain.

a. Our working group's vision (a concrete image) of a sustainable HEI, including specific SDGs, looks like:

Subtotal

/ 6



STEP 4A Mapping SD Activities

Description

By mapping SD activities in the core areas and choosing and striving towards meeting selected targets, immediate and feasible actions can be realised, progress can be measured, and long-term SD is given shape.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. Within our working group (or organisation) we have mapped activities contributing to the SDG(s). For example, if one priority within your region is SDG 12 (Responsible Consumption and Production) your working group (or organisation) may map all activities contributing to this goal.

- a. What impactful SD activities are we already conducting in our working group or core areas (education, research, outreach & partnering, entrepreneurial activities, governance and campus operations)?

A2. For educators: We have integrated learning resources that support sustainable development within our region (for example challenge-based learning, transdisciplinary collaborations).


B1. We have considered the impact of each activity from an environmental, economic, social, and cultural perspective.

B2. For educators: Within our pedagogy, we have considered all aspects of actions that support sustainable development (including environmental, economic, social & cultural).

- a. What positive/negative, intended/unintended impacts can our working group's actions have on our community (four dimensions of sustainability)?

- b. How can our actions surpass our region and positively affect the global level (e.g., knowledge transfer)?

	<p>c. How do these activities contribute to meeting regional challenges or potentials?</p>	
	<p>d. What positive/negative, intended/unintended impacts can our actions have on our community?</p>	
	<p>e. How can our actions go beyond our region and positively affect a global level?</p>	
	<p>C. These activities are in line with our working group's (or organisation's) vision for sustainability.</p>	
	Subtotal	/ 6

	<p>STEP 4B (alternative to 4A) Mapping Green Entrepreneurial Education</p>
	<p>Description</p> <p>By mapping activities related to green entrepreneurship within the region, HEIs can join forces with regional stakeholders to tackle the most pressing regional SDG challenges and better support existing potentials through their core functions, including education, research, and outreach.</p>
	<p>Assessing current practices</p>
	SCORE

0 = no / not sure, 1 = somewhat, 2 = yes

A1. We have mapped our entrepreneurial activities.

A2. For educators: We have mapped our activities in entrepreneurial education.

a. What SD-related entrepreneurial activities are we already undertaking?

B. We have built or plan to build strong partnerships with actors in our regional ecosystem (e.g. startups).

C. Our entrepreneurial activities (or entrepreneurial education) relate to the SDGs.

a. How do these activities contribute to meeting regional challenges or potentials?

D. We have considered the impact of each activity from an environmental, economic, social, and cultural perspective.

a. What positive/negative, intended/unintended impacts can our actions have on our community?

b. How can our actions go beyond our region and positively affect a global level?

E. These activities are in line with our working group's (or organisation's) vision for sustainability.

Subtotal

/ 10



STEP 5

Mapping Governance & Skills

Description

To reach a certain SDG target, you need to identify, strengthen or develop the most relevant capacities and governance arrangements. We have identified six main capacities of transformative HEIs. By analysing the different variables that make up a capacity, you can figure out what your HEI needs to work on to strengthen needed capacities. The variables are described in the SDS4HEI Framework.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. Our working group (or organisation) has examined which capacities are most relevant for achieving our most important SDG target(s)

A2. For educators: We have examined the most relevant capacities for achieving our institution's most important SDG target(s). For example, "transformation learning" for educators.

a. What important capacities do we already possess?

b. The following capacities are necessary to move forward with our institutional vision:

B. Our working group (or organisation) already possesses the required capacities to promote the SDGs.

C. If the capacities need further development: Our working group (or organisation) has a plan to achieve this.

D. The prioritising of capacities aligns with our working group's shared vision.

E. We have identified relevant governing structures and know who participates in decision-making processes.

a. These are our current governing structures (offices, networks, etc.) that are important for SD:

b. The following people/groups are able to participate in decision-making processes regarding SD:

	F. The most relevant SDG(s) are embedded into policies and regulations at our institutions.	
	G1. The SDG(s) are embedded into procedures within our working group. G2. For strategic roles: The SDG(s) are embedded into policies and regulations within our institutions	
	H. Our current governance structures impede/facilitate activities toward the SDG(s).	
	I. We have established incentive systems in our working group / organisation. a. We have the following SD-related incentive systems in place: <div style="background-color: #e0e0e0; height: 100px; width: 100%;"></div>	
	Subtotal	/ 18



STEP 6

Alignment & Visualisation

Description

Visualise your key findings. The process of getting there is more important than the visualisation itself, as it entails thoughtful reflection on the insights gained. Nevertheless, visualisations facilitate internal and external communication.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A. Our working group (or organisation) has evaluated the findings from activity mapping, target linking, governance & capacity mapping, and regional challenge mapping.

B. We can categorise, visualise, and present them to stakeholders.

Subtotal

/ 4



STEP 7
Gap Analysis

Description

The Gap Analysis helps to identify relevant regional SDG targets not yet addressed by current activities, as well as areas of improvement. Forasmuch, it should cover all core functions of your HEI while accounting for the regional context.

Assessing current practices

0 = no / not sure, 1 = somewhat, 2 = yes

SCORE

A1. Our institutional focus areas for the SDG(s) align with the main regional challenges / economic potentials.

A2. Within our teaching or operational activities, our focus areas for the SDG(s) align with the main regional challenges.

B. There are important SDG targets for the region that are not being addressed by our working group (or organisation). C.

C. If so, they have been documented by our working group (or organisation).

a. We need to address the following SDG targets with our SD activities:

b. Possible new/modified actions/measures in our core areas addressing or contributing to important SDG targets are:

D. We have the capacity to address these challenges.

Subtotal / 8

YOUR TOTAL SCORE FOR SD IMPLEMENTATION WITH 1A / 62

YOUR TOTAL SCORE FOR SD IMPLEMENTATION WITH 1B / 66

PART V

// Further Tools for SD

FURTHER TOOLS

Guide to Sustainable Higher Education Development

- » The Sustainability Code for HEIs (whole-institution approach)
<https://www.deutscher-nachhaltigkeitskodex.de/en-gb/>

Tools for Finding a Vision

- » Discussion Tool 'Mentimeter'
<https://www.mentimeter.com>
- » Miro collaborative whiteboard platform
<https://miro.com>

Tools for Identifying Meaningful SD Activities

- » Interactive Mapping Tool for the SDGs (UCC)
<https://www.ucc.ie/en/sdg-toolkit/teaching/tool/interactive-mapping/module/>
- » SLS - Sustainable Leadership Scoreboard (EAUC)
https://www.eauc.org.uk/sustainability_leadership_scorecard
- » SDG Actions Platform (United Nations)
<https://sdgs.un.org/partnerships>
- » RSP - Rounder Sense of Purpose (Erasmus+)
<https://arounderseofpurpose.eu/sdgs>

Tools for Integrating SD in Education

- » 7 Steps Series (Plymouth University)
<https://www.plymouth.ac.uk/about-us/teaching-and-learning/guidance-and-resources/7-step-series>
- » 17 Rooms (The Brookings Institute)
<https://www.brookings.edu/projects/17-rooms/>
- » Education for SD Goals - Learning Objectives (UNESCO)
<https://unesdoc.unesco.org/ark:/48223/pf0000247444.locale=en>
- » The ESD for 2030 toolbox (UNSECO)
<https://en.unesco.org/themes/education-sustainable-development/toolbox/implementation-esd-impl-42>
- » ISSUE - Innovative Solutions for Sustainability in Education (Erasmus+ / Cologne Business School)
<https://www.issue-project.eu/sdg-toolbox>

Tools for Campus Operations

- » University's ecological footprint (Erasmus+)
<https://www.eusteps.eu/>

Tools for Linking SD Activities to SDG Targets

- » 17 SDGs and their 169 Targets (United Nations)
<https://sdgs.un.org/goals>
- » Interactive Map of SDG Performance (SD Report)
<https://dashboards.sdgindex.org/map>

Ranking Systems Assisting Formulation of KPIs

- » THE University Impact Ranking (THE - The Times Higher Education)
<https://www.timeshighereducation.com/>
- » QS World Sustainability Ranking
<https://www.topuniversities.com/qs-world-university-rankings>
- » STARS - Sustainable Tracking, Assessment and Rating Systems
<https://stars.aashe.org>

—» UI GreenMetric Ranking

<https://greenmetric.ui.ac.id/about/welcome>

Tools relating to Crafting of a Theory of Change/Logic Model

—» Social Impact Navigator (Phineo)

https://www.phineo.org/uploads/Downloads/PHINEO_Social_Impact_Navigator.pdf

—» Resonance

<https://www.resonanceglobal.com/blog/what-is-theory-of-change-and-why-it-is-important-to-sustainability-and-impact-initiatives>

—» List of software assisting you in crafting your ToC/Logic Model (Better Evaluation)

<https://www.betterevaluation.org/tools-resources/theory-change-software>

REFERENCES

- Clark, William C. & Harley G. A. (2020). Sustainability Science: Toward a Synthesis. *Annual Review of Environment and Resources*, 45, 331-386. <https://doi.org/10.1146/annurev-environ-012420-043621>
- European Union (2023). New European Bauhaus. https://new-european-bauhaus.europa.eu/index_en (accessed 21 July 2023).
- Giesenbauer, B. & Müller-Christ, G. (2020). University 4.0: Promoting the Transformation of Higher Education Institutions toward Sustainable Development. *Sustainability*, 12(8), 3371. <https://doi.org/10.3390/su12083371>
- Rat für Nachhaltige Entwicklung (2023). Der hochschulspezifische Nachhaltigkeitskodex.. HOCH-N, 2023. <https://www.deutscher-nachhaltigkeitskodex.de> (accessed 7 July 2023).
- Sustainable Development Report (2023). Interactive Map. Based on Sachs, J.D. et al. Implementing the SDG Stimulus. Sustainable Development Report 2023. Dublin University Press, <https://dashboards.sdgindex.org/map/goals/sdg4> (accessed 20 July 2023).



Contact

Dr Judith Terstriep
Westphalian University of Applied Sciences Gelsenkirchen
Institute for Work and Technology
Munsteidstr. 14
D-45886 Gelsenkirchen

M: terstriep@iat.eu
W: <https://sds4hei.eu/>