SELF SDG: A mobile application for self– assessment and increasing commitment to sustainable development goals

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Project with several beneficiaries within the framework of the ERASMUS+1 program

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Content

Chapter 1

Introduction

In a world marked by growing concerns for sustainability and social justice, the **2030 Agenda** and its **17 Sustainable Development Goals (SDGs)** represent an essential roadmap for global action. However, achieving significant progress towards these goals requires not only government policies and commitments, but also the active participation of citizens. In this context, this research study is part of an innovative project whose objective is to develop a mobile application that allows users to self-assess their level of commitment to the SDGs and encourage real behavioral change by completing challenges at home, school, and in the community.

This project is taking place at a time of post-COVID-19 pandemic recovery and within the framework of a dual transition: ecological and digital. In the European Union, initiatives such as the **European Green Deal**, the European Education Strategy, and the European Pillar of Social Rights underscore the **need to educate and empower citizens to achieve more sustainable, resilient, and engaged societies**. In this sense, education plays a key role in raising awareness about environmental and social issues, as well as in promoting concrete actions that contribute to achieving the SDGs.

Through extensive research into best practices in teaching and learning methodologies for sustainability, several international initiatives have been identified that have served as a reference for the design and development of the mobile application. Successful models that have proven effective in promoting citizen participation and the acquisition of knowledge about sustainability have been sought and analyzed.

The project includes the **creation of a mobile application in several languages, based on gamification and interactive learning**. This allows users to assess their current level of commitment to the SDGs and, through a system of challenges and rewards, encourage individual and collective actions to increase this commitment. The application architecture will be developed based on existing assessment models, such as the Common European Framework of Reference for Languages, and adapted to measure sustainable commitment.

The potential impact of this initiative is significant, as it targets both the educational field and the general public, seeking to maximize awareness and sustainable action in different contexts. Furthermore, its gamified and digital approach will respond to the priorities of the Erasmus+ program regarding digital transformation and the promotion of civic engagement and active participation. Through this research, it is hoped to contribute to the understanding of the learning and motivational processes that can enhance citizen involvement in achieving the SDGs, offering an innovative and accessible tool that facilitates the transition to a more just and sustainable world.

Project Participants and Partners

This project is the result of a collaboration of several institutions and organizations with extensive experience in education, technology, and sustainability. Participating partners include:

- **IES Cristóbal de Monroy (Spain)**: An educational institution with a strong commitment to global awareness and sustainability education. It has developed numerous international projects in the fields of School Education, Vocational Training, and Adult Education, including Erasmus+ mobility and environmental programs.

- **Avantia Foundation (Spain)**: An organization with experience integrating sustainability education among adults. Its "Global Education for Adults" project has explored innovative ways to promote the 2030 Agenda and the 17 SDGs.

- **RCE Oldenburger Münsterland (Germany)**: In collaboration with the University of Vechta, it has worked on the implementation of Education for Sustainable Development (ESD), highlighting its "Methods for ESD Competencies and Curricula" project.

- **Bratislavsky Institute (Slovakia)**: Led the RAYUELA project (H2020-SU-SEC-2019), which brings together experts in technology, psychology, sociology, and digital security to develop innovative methodologies in the field of cybersecurity.

- **ASSIST (Romania)**: A company specializing in the development of mobile applications with a gamified approach, contributing its technical expertise to the creation of interactive and educational platforms.

- **Gluk Advice (Netherlands)**: A company with a solid track record in quality management of international projects and outreach activities, ensuring project impact and sustainability.

Thanks to the synergy of these partners, the project has the ability to combine multidisciplinary expertise in technology, education, and sustainability, ensuring a comprehensive approach that maximizes its impact. The combination of academic, business, and technological expertise will allow the development of an effective tool that fosters citizen participation and sustainable transformation at a global level.

Needs Analysis

The implementation of this project will allow the consolidation of a consortium made up of partners from different countries, educational levels, and professional profiles. This multidisciplinary approach facilitates teamwork and the exchange of perspectives, contributing to the achievement of common challenges around the Sustainable Development Goals (SDGs).

The main needs addressed by the project are:

- Contribute to the objectives of the European Green Deal, the European Climate Pact, and the European Biodiversity Strategy 2030, promoting citizen participation in the fight against climate change and sustainability. The aim is to develop educational tools that allow the assessment and improvement of the knowledge, skills, and attitudes of citizens, especially young people, towards sustainable development.

- Support the Climate Education Coalition, promoting the green and digital transition in education and training throughout the European Union.

- Align the project with the guidelines of the 2030 Agenda and Education for Sustainable Development (ESD), strengthening social awareness of the need to address climate change and fostering sustainable behaviors from an early age.

– Overcome natural resistance to change through innovative methodologies, such as gamification and digital tools, that facilitate learning in an interactive and motivating way.

Therefore, this project responds to a global need to advance toward sustainable development, ensuring present well-being without compromising the future. Education is positioned as the key driver for achieving social behavior change, especially among young people, and building a more just, healthy, and sustainable world.

Target Groups

The project is designed to achieve a significant impact on education and society in general. Its focus encompasses various target groups, both within the educational field and in the broader community.

1. Target groups in the educational field

Given that education plays a key role in raising awareness and taking action against global challenges, the project is aimed at the following groups:

– Students at all educational levels, including primary, secondary, vocational training, higher education, and adult education. The mobile application will be adapted to different learning levels to facilitate its use in various educational contexts.

– Teachers at all levels, promoting the use of the application as a teaching tool within the framework of Education for Sustainable Development (ESD).

– Management teams, educational inspectorates, and educational authorities, who will play a fundamental role in disseminating the project within their respective educational systems and integrating the tool into training strategies.

– Families, promoting the participation of parents and guardians in the activities proposed by the application, fostering intergenerational dialogue on sustainability and climate change.

2. Target groups outside the education system

The project also aims to involve key sectors outside the school environment, as the transition to a more sustainable society requires a collective effort:

- Local and regional governments, as key stakeholders in the implementation of public policies aligned with the SDGs. Through outreach campaigns, their involvement in the use and promotion of the tool will be encouraged.

- Civil society, including NGOs, associations, and entities committed to sustainability, will be able to use the application to raise awareness and encourage active participation.

This inclusive approach ensures that the mobile application is not only a learning tool but also a catalyst for collective action in achieving the Sustainable Development Goals.

Research methodology

This research consists of the joint drafting of a coordinated research paper, which frames the pedagogical approach that should govern the creation of the mobile application to be developed and the architecture on which it is based.

This research work has been carried out by each partner in a coordinated manner, and its result includes the analysis of previous actions already developed, both nationally and internationally; and above all, a theoretical and practical approach, from the perspective of each partner, to achieve our common goal. It is a scientific investigation, in terms of hypothesis validation, experimentation, validation, peer review, and bibliographic research, although surveys and interviews with experts have also been included.

Thus, the objectives of this research project were:

- To compile related actions previously undertaken.

- To identify characteristics that need improvement.

- To conduct an in-depth analysis of the 17 UN SDGs and their targets and indicators.

- To learn more about human behavior and neurological patterns toward engagement and participation.

- To relate climate change and sustainability issues to learning processes.

- To create a self-assessment matrix for the SDGs, following the MCREL model.

The overall objective of the project is to develop a tool in the form of a mobile application that allows users to self-determine their level of engagement with the 17 UN Sustainable Development Goals, as well as a greater and growing engagement with them, in an educational and home context that allows for the development of individual and community actions to increase this engagement. The connection between this research and the overall objective is, therefore, to provide scientific and theoretical support for the format and content of the application to be created.

To carry out our research and according to the methodological approaches we followed, we considered:

- The main objective of this project.

- The definition of the 17 Sustainable Development Goals established by the United Nations.

- The list of targets and indicators established for each SDG.

- The most desirable theoretical and practical approach to achieving maximum civic engage-

ment with the SDGs, especially for young citizens (ages 14 and older); from the perspective of each partner.

The research process for preparing this document was arduous, as not all entities had experience in research, and it was necessary to unify formats and quality criteria. Despite the difficulties and challenges faced, the consortium believes we have produced a valuable and relevant document for achieving the goals.

We hope that readers will also find useful information and inspiration for developing Education for Sustainable Development and motivating them to use the mobile application that will be created within the project. Thank you for reading this far and for your commitment to Education for Sustainable Development!

You can find more information about our project on this website:

https://selfsdg.eu/

Chapter 2

Youth and sustainability - What the Next Generation associates with sustainable development

2.1. Introduction

This chapter sheds light on the perspectives and challenges of young people in relation to sustainability and sustainable development in various European countries. It analyses how young people in Germany, the Netherlands, Romania, Spain and Slovakia understand sustainability and engage in environmental issues. Through a combination of surveys and studies, the attitudes, knowledge and activities of young people in relation to ecological, social and economic sustainability are presented. Particular attention is paid to the educational systems and policy frameworks that act either as facilitators or barriers to sustainable engagement and education.

2.2. Youth and Sustainability in Germany

Greenpeace Youth Study Sustainability Barometer 2021

Almost 70 percent of young people are afraid

Sustainable development - not with this politics! This is what most young people in Germany think. This is shown by the "Greenpeace Sustainability Barometer 2021".

"We are afraid. We don't want to have to clean up your mistakes." The majority of young people in Germany feel abandoned when it comes to the environment - especially by politics. They fear environmental destruction, species extinction, and the climate crisis, and feel like they are now having to clean up the mistakes of the older generation in dealing with the environment. Additionally, they feel that schools are not adequately preparing them for the future.

These are the findings of the third "Greenpeace Sustainability Barometer 2021".

For the study, conducted in July 2021 in cooperation with Leuphana University Lüneburg and study director Prof. Matthias Barth from the Faculty of Sustainability, 1508 young people between

the ages of 15 and 24 were surveyed by phone, representative of Germany, by Aris Umfrage-forschung GmbH.

Lack of trust in politics

The Sustainability Barometer shows: Young people lack trust in politics regarding a sustainable future. 71 percent of the surveyed youth agreed with the statement: "I feel abandoned by politics when it comes to dealing with the environment." However, there is significant trust in science and non-governmental organisations (NGOs). When asked "How much do you trust the respective groups to contribute to a sustainable future development?", 80 percent expressed trust in NGOs like Greenpeace, 79 percent in science and research institutions, and 76 percent in initiatives by citizens like Fridays for Future, to work towards a sustainable future.

However, young people see shortcomings in the education system when it comes to teaching sustainability topics. 60 percent of the surveyed students responded to the question "How well do you feel prepared for the challenges of the future through your school education?" indicating that they do not feel well-prepared.

Curricula need to be changed

For Greenpeace education expert Dietmar Kress, the results of the Sustainability Barometer are a wake-up call for politics. They demand solutions for achieving sustainable development in Germany. "Sustainability must be taught in the curriculum beyond mere text-based learning, with a focus on the present and practical application."

Sustainability concerns young people in Germany. Compared to previous studies in 2012 and 2015, awareness of sustainability has even increased.

Alleviating fears about the future

However, the majority of students feel less or not at all prepared for the challenges of the future. This is confirmed by numerous education researchers and practitioners: Sustainability or sustainable development still does not adequately reflect in curricula. Urgent action is needed here! Education policy has the responsibility to alleviate students' fears about the future and instead offer them solutions. "Merely knowing about environmental problems without solutions leads to resignation. What we need now are positive scenarios for a sustainable future, developed and practised widely in schools and businesses," says Dietmar Kress.

Approaches like these can be found, for example, in the nationwide Greenpeace school project "Schools for Earth".

Source: Greenpeace Youth Study Sustainability Barometer 2021

Bertelsmann Foundation: Youth and Sustainability Study

Results

- – Young people have a holistic understanding of sustainability. Those aged 16 to 30 understand it to encompass ecological, social, and economic sustainability.

- – Three-quarters of all young people value sustainable behaviour. They do a lot in their daily lives for sustainable living and are willing to make sacrifices for it.

- Young people who prioritise sustainable behaviour often have friends and parents who share similar values. Peer groups play an important role in influencing young people regarding sustainability – politics barely plays a role. On the other hand, young people who do not prioritise sustainability often lack such role models.

- 5 percent of respondents are actively engaged in volunteering for sustainability. Besides activists, teachers, supervisors, and individuals from their close environment also play an important role in this engagement. Young women are more willing to engage in societal issues related to sustainability.

- Young people can imagine engaging collectively with others. Participation options organised in everyday local settings are attractive. Projects organised with friends or like-minded individuals are also very attractive. Political participation formats are currently unattractive to young people.

- Economic actions are also seen as contributing to sustainability. Half of the respondents would like to work for a company that contributes to society. Four out of five respondents emphasise the importance of innovative companies for sustainable development.

- One-third of young people can even imagine starting a sustainable business. Young people with a lower level of education are most likely to consider starting a sustainable business. The main motivation for starting one is to contribute to sustainable development.

Methodology

- Sample: 1,023 individuals aged 16 to 30, weighted by gender, age, education level, employment status, federal state, and region

- Survey: Representative online survey in Germany using a standardised questionnaire

- Survey period: April 5th to April 12th, 2022

17 Sustainable Development Goals (SDGs): Germany (Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection)

Protecting ecological foundations is a prerequisite for social stability and economic prosperity. Without intact ecosystems, there can be no societal participation in economic prosperity, social progress, and cultural development. To find a new, long-term sustainable, and globally responsible understanding of prosperity and social cohesion, we, both as a global community and as national societies, must clarify how and on what basis we want and can live in the future. In view of a globally growing population with increasing prosperity aspirations, we must align our technological, economic, and social capabilities to enable everyone in the world to have a good life – without exceeding the Earth's limits.

The 2030 Agenda of the United Nations (UN) with its 17 Sustainable Development Goals (SDGs) and the associated 169 targets is a comprehensive programmatic framework for realising a globally sustainable society – it is the world community's contract for the 21st century.

For Germany, the path to achieving the SDGs is described in the German Sustainability Strategy (DNS). It lays out the principles for managing sustainability challenges, specifies concrete sub-goals and measures for each of the 17 goals, and defines indicators for monitoring progress. The sustainability goals are not prioritised, they are indivisible and universally applicable. The goals

are interconnected in multiple ways and cannot be viewed or implemented in isolation. However, these interrelationships and dependencies also reveal conflicts between the individual SDGs.

Source: Bertelsmann Foundation: Youth and Sustainability Study

2.3. Youth and Sustainability in The Netherlands

The SDGs are important for young people. Not only because they will shape the world of 2030, but also because young people are specifically involved in SDG implementation. The government of the Netherlands pays special attention to young people's role in achieving the SDGs, and has appointed youth representatives. These youth representatives and the National Youth Council (NJR) of the Netherlands organise workshops and events that reach about 30,000 young people each year and raise awareness of the SDGs. SDGs which young people in the Netherlands feel are especially relevant to them include:

- **Quality education**, which they see as a top priority. This includes quality education for young people with disabilities.

- **Climate action and sustainable development.** Political youth organisations have issued a manifesto calling on political parties to step up their efforts on sustainable development and sustainable education. Climate change is one of young people's main concerns, and they believe this challenge is linked to other SDGs like poverty, hunger and peace and security.

- **Health, wellbeing and healthy cities.** Most young people are satisfied with healthcare in the Netherlands, but consider mental health a major concern. One example of youth involvement in health issues is the NJR-initiated project 'I Am Great', which focuses on healthy cities and communities.

- **Equality.** Young people in the Netherlands believe that equal opportunities cannot be taken for granted. Specific concerns include the rights of LGBT people, abused children, young people with disabilities, young people in need of special care (including mental healthcare), ethnic minority young people and gender equality.

- **The labour market,** especially job opportunities for young people.

Young people believe that the Netherlands could step up involvement in SDG implementation. They emphasise that all stakeholders can and should contribute: CSOs, the private sector and government. It would be a missed opportunity not to take full advantage of young people's growing sense of commitment.

Current Update

Young people have successfully gained a place at the table for several important decision-making processes, such as on coronavirus policy. They also gave input for the negotiations for a new coalition and for COP26 in Glasgow, where they had talks with Prime Minister Mark Rutte. The number of ministries with youth advisory bodies is also on the rise, in the wake of the Social and Economic Council (SER) setting up a youth platform. This is helped by the fact that young people's concerns about their future, about climate change and about their mental health are now being recognised. The appointment of a Minister for Climate and Energy Policy and a State Secretary for Youth in the newly formed government are significant successes for the youth lobby. Despite

these achievements, it is still a challenge to ensure that having a place at the table also means that young people have a say in decisions and receive feedback on how their input has been used. Young people are deeply concerned that they and future generations will suffer the consequences of current policies on global warming, demographic ageing and so on. 2022 is the European Year of Youth, providing the perfect opportunity to address these concerns. Collaboration between young people from different countries leads to joint initiatives, such as the campaign to seek an Advisory Opinion from the International Court of Justice, which involved Dutch UN youth representatives and their partners from small island states and elsewhere. In its Youth at Heart strategy, the Netherlands places young people at the centre of development cooperation policy. The recently launched Youth Advisory Committee is facilitating dialogue and cooperation between young people from development cooperation partner countries and the Ministry of Foreign Affairs. The Minister for Foreign Trade and Development Cooperation seeks advice from young people through this committee, and committee members can also offer advice on their own initiative.

Young people in The Netherlands can get involved in the field of sustainable development, particularly in relation to the 17 Sustainable Development Goals (SDGs) of the United Nations, through various avenues. Existing studies and initiatives provide insights into how this can be effectively achieved. Here are some key ways:

1. Education and Awareness Programs

- **University Courses and Programs:** Many Dutch universities offer courses and degree programs focused on sustainable development, environmental science, and related fields. Engaging in these programs can provide young people with the necessary knowledge and skills.

- **Workshops and Seminars:** Organizations such as the SDG Nederland platform frequently organize workshops and seminars to raise awareness and educate young people about the SDGs.

2. Volunteering and Internships

- **Non-Governmental Organizations (NGOs)**: There are numerous NGOs in The Netherlands that work on various aspects of sustainable development. Volunteering or interning with these organizations can provide practical experience.

- **Local Government Initiatives:** Some municipalities have sustainability programs that encourage youth participation. Volunteering with local government projects can also be beneficial.

3. Youth Networks and Organizations

- **National Youth Council (NJR):** NJR represents Dutch youth at the national and international levels, working on SDG-related projects. Joining such organizations can provide opportunities to contribute to policy discussions and advocacy efforts.

- **Young Sustainable Impact (YSI):** YSI Netherlands is part of a global initiative that empowers youth to create startups addressing the SDGs. Participating in YSI programs can help young people develop innovative solutions.

4. Competitions and Grants

- **SDG Challenge:** Various institutions in The Netherlands, including universities, host SDG Challenges where students can propose and develop projects addressing specific SDGs.
- **Funding Opportunities:** Grants and funding opportunities from organizations like the Dutch Ministry of Foreign Affairs and European Union programs can support youth-led projects focused on sustainable development.

5. Entrepreneurship and Innovation

- **Sustainable Startups:** Initiatives like the Dutch Impact Hub support young entrepreneurs in developing sustainable businesses. Engaging in startup incubators and accelerators can help turn ideas into impactful enterprises.
- **Tech and Innovation Hubs:** Institutions like the Technical University of Delft and Wageningen University have innovation hubs that focus on sustainability, offering support for youth-led tech solutions.

6. Advocacy and Policy Engagement

- **Youth Delegates:** The Netherlands often includes youth delegates in its official delegations to international conferences on sustainability, such as the UN Climate Change Conferences. Becoming a youth delegate is a way to influence policy.
- **Public Consultations:** Participating in public consultations and forums organized by the government can help young people voice their opinions and contribute to policy-making processes.

7. Online Platforms and Social Media

- **Social Media Campaigns:** Utilizing social media to raise awareness and advocate for sustainable development can mobilize a wider audience and encourage community action.
- **Online Communities:** Joining online platforms and communities focused on the SDGs can provide support and collaboration opportunities with like-minded peers.

Research Findings and Case Studies

Existing studies highlight the importance of integrating sustainable development into educational curricula, fostering youth engagement through participatory governance, and supporting youth entrepreneurship as key strategies. For instance, research conducted by Wageningen University emphasizes the role of experiential learning and real-world problem-solving in empowering youth. Another study by the University of Amsterdam discusses the impact of youth-led initiatives in advancing local sustainability efforts.

By leveraging these opportunities, young people in The Netherlands can actively contribute to achieving the SDGs, driving progress towards a more sustainable future.

Some results from some of the key empirical studies that examine the involvement of young people in sustainable development in The Netherlands, focusing on their education, participation, awareness, and policy engagement are presented below.

1. Wageningen University & Research (WUR)

Study: "Education for Sustainable Development: The Impact of Schools on Environmental Behaviors of Young People"

- **Methodology:** This study employed a mixed-methods approach, including surveys of students and teachers, classroom observations, and interviews.
- **Key Findings:**
    - **Curriculum Integration:** Schools that integrate sustainability topics across multiple subjects tend to have students with higher levels of environmental awareness and pro-environmental behaviors.
    - **Project-Based Learning:** Hands-on projects and experiential learning opportunities, such as gardening or energy-saving initiatives, significantly enhance students' understanding and commitment to sustainability.
    - **Teacher Influence:** Teachers play a crucial role in fostering a sustainability mindset. Their enthusiasm and knowledge can greatly impact students' attitudes toward the SDGs.

2. University of Amsterdam

Study: "Experiential Learning and Youth Engagement in Sustainable Development"

- **Methodology:** The research involved longitudinal studies tracking student engagement over time, complemented by qualitative interviews with students and educators.
- **Key Findings:**
    - **Real-World Problem Solving:** Students involved in projects addressing real-world problems, such as local pollution or community recycling programs, develop a deeper understanding of sustainability issues.
    - **Peer Learning:** Collaborative projects where students work in teams are particularly effective in building communication and problem-solving skills relevant to sustainable development.
    - **Sustained Engagement:** Continuous involvement in sustainability projects, rather than one-off activities, is necessary to maintain high levels of student engagement and impact.

3. National Youth Council (NJR) Reports

Report: "Youth and Sustainable Development in The Netherlands"

- **Methodology:** The NJR conducts annual surveys and focus groups with young people across the country, analyzing their participation in and attitudes toward sustainability initiatives.
- **Key Findings:**

- **High Awareness:** Over 70% of surveyed youth are aware of the SDGs, with climate action (SDG 13) and quality education (SDG 4) being the most recognized goals.
- **Barriers to Participation:** Common barriers include lack of time, insufficient information about how to get involved, and limited opportunities in certain regions.
- **Role of Social Media:** Social media platforms are crucial for spreading awareness and mobilizing youth. Campaigns that leverage these platforms see higher engagement rates.

4. Plan International Netherlands

Report: "Youth Perspectives on Sustainability"

– **Methodology:** The report is based on a combination of surveys, focus groups, and case studies involving young people aged 14-18.

– **Key Findings:**

- **Diverse Motivations:** Youth are motivated by a variety of factors, including personal interest in the environment, desire to make a difference, and educational incentives.
- **Effective Programs:** Programs that are youth-led or involve significant youth input are more successful in maintaining engagement and achieving tangible outcomes.
- **Gender Differences:** There are notable differences in engagement levels, with young women showing higher participation in sustainability initiatives compared to young men.

5. Municipality Case Studies

Case Study: "Rotterdam Youth and Urban Greening Projects"

– **Methodology:** This study used participant observation, interviews with project coordinators and youth participants, and surveys to assess the impact of urban greening projects.

– **Key Findings:**

- **Community Impact:** Projects led by youth, such as community gardens and park clean-ups, not only improve local environments but also foster a sense of community and civic responsibility among participants.
- **Skills Development:** Participants reported gaining valuable skills, including project management, teamwork, and public speaking.
- **Sustained Interest:** Continued support and mentorship are critical for sustaining youth interest and involvement in long-term projects.

6. Dutch Ministry of Infrastructure and Water Management

Study: "Youth Participation in Environmental Policy-Making"

- **Methodology:** The study utilized surveys of youth participants in policy-making processes, interviews with policy makers, and analysis of policy documents.
- **Key Findings:**
  - **Influence on Policy:** Youth councils and delegates have a measurable impact on policy decisions, particularly in areas related to climate change and urban development.
  - **Challenges:** Despite their impact, young participants often feel that their voices are not taken as seriously as those of adults. Efforts to better integrate youth input into formal decision-making processes are needed.
  - **Successful Models:** Policies developed with significant youth input are generally more innovative and better received by the broader public.

Source: Kingdom of The Netherlands (Rijksoverheid)

2.4. Youth and Sustainability in Romania

The European Union Youth Strategy recognizes the importance of actively involving young people in sustainability efforts and societal decision-making processes. This is evident in goals such as "Connecting EU with Youth" and "Sustainable Green Europe," which aim to foster youth participation, trust, and understanding in EU processes while empowering young people to take responsibility for environmental sustainability. Additionally, goals like "Inclusive Societies," "Information and Constructive Dialogue," and "Space and Participation for All" emphasise the need to ensure the inclusion of all young people, provide access to reliable information, and strengthen their democratic participation. Overall, the strategy highlights the vital role of youth in building inclusive, sustainable societies and emphasises the importance of providing them with opportunities to actively engage and contribute.

For sustainable development to thrive in Romania and align with the 2030 Agenda featuring the 17 Sustainable Development Goals (SDGs), alongside the commitments of the European Union, it is imperative that this strategy revolves around the citizen and caters to the needs of future generations.

It can be argued that Romania's youth has had limited exposure to sustainable practices and volunteering within their familial context, partly due to the historical context of compulsory participation in agricultural work or other community projects during the communist era. Furthermore, the ongoing economic challenges during the transition period, exacerbated by the COVID-19 pandemic, followed closely by the war in Ukraine, have led to a prioritisation of immediate economic concerns over sustainability, among the general population.

According to a Barometer conducted by Reveal Marketing Research, while there is increasing awareness among consumers about the need to save the planet's resources, only 28% of Romanians actively dedicate themselves to sustainable consumption. Additionally, 85% of respondents display a passive attitude towards supporting sustainability initiatives. Nonetheless, 48% of Romanians claim occasional involvement in sustainable activities, with the most common behaviour being selective waste collection. Only 15% are actively engaged in various sustainability efforts. The National Youth Strategy 2023-2027 states that civic engagement among young people is low, with many displaying a disinterest in non-formal participatory activities. Consequently, several

specific objectives in the strategy envisage increasing young people's capacity to act as agents of change for ecological and sustainable development.

Therefore, it is imperative that the younger generations are actively engaged in sustainable development efforts, to achieve a sustainable, inclusive, and stable society. National and local initiatives are working towards this goal, reaching out to young audiences, and co opting them to actively participate in society. In terms of formal education for sustainability, while sustainable development subjects may be included in higher education curricula, they are only sporadically discussed in pre-university education classes and are not introduced as a separate discipline within the curriculum. Due to the sustained efforts of NGOs, education for sustainability is, however, listed among the optional courses. A manual titled Respect for Resources – An Alternative Manual of Education for Sustainability has been approved by the Ministry of Education for this class. However, the adoption of this optional course remains limited. On the other hand, official mandatory programs like "School Otherwise" and "The Green Week," along with various sustainability projects schools may participate in (such as the Green Schools project coordinated by WWF), help partially address this gap and instill sustainability principles from an early age. Local initiatives promote education for sustainability in schools with the help of national and international volunteers. Once such example is the Eco Echo Clubs founded under the umbrella of GEYC, one of the Salto Awards winners.

Furthermore, the Romania Youth Council act as a prominent voice in shaping public policies that directly or indirectly affect youth, particularly in areas such as employment, education, health, civic engagement, politics, and volunteering. Social Innovation Solutions offers educational programs like Sustainability Academy and Transformator, conversation platforms such as Climate Change Summit and Future Summit and conducts foresight and sustainability research to support solutions for a sustainable future. The Mai Bine Association (Better Association, in translation), contributes to the sustainable development of the local community through the implementation of projects using a comprehensive approach that considers all three dimensions of sustainability: the natural, social, and economic environments. The Romanian Scouts are dedicated to advancing the SDGs, promoting practical learning experiences that foster engagement as global citizens. Scouts have historically played a significant role in promoting environmental sustainability, peace, and equality. A Romanian young Scout has received international recognition for her commitment to sustainability: Bianca Iloaia took the lead in raising awareness about climate change and sustainability within her Scout group and local communities. In recognition of her exemplary efforts, she was honoured as a Messenger of Peace Hero in 2021 by both the National Scout Organisation and the World Scouting.

Young people in Romania are eager to join environmental campaigns that involve planting trees or cleaning nature, such as the ones organised by Let's Do It, Romania! a social movement part of the World Clean Up Day international community. Local schools being an invaluable partner in this endeavour. However, the significant amount of litter collected during these campaigns is indicative of the general population's lack of commitment to the protection of the environment and of the need for a shift in societal mindset, which can be achieved through education for sustainability.

An important aspect related to youth in Romania is the gap between rural and urban areas in terms of opportunities. There is a growing trend of young population in rural areas, due to both migration from urban to rural areas and higher birth rates in rural areas. Thus, the question arises

about what opportunities, ^1^^, facilities, and services are available in rural areas to meet the personal, professional, and social development needs of these young people. In recent years, children and young people in rural areas have been constituted the focus of a range of regional and local initiatives aimed at increasing awareness and narrowing the gap in opportunities between rural and urban areas, which can be considered a major shortcoming in the country's endeavours to ensure sustainability, inclusion, and equality. ADA – the Active Development Association and Go Free – the Association for the Support of Civil Society, governing the European Youth Village initiative drafted the White Paper of the Young People from Rural Areas. This is a strategic document, created with the contribution of a series of NGOs and young people from rural areas, that outlines their priorities not only for their local rural communities, but also at a national and European level. The European Youth Village program prioritises youth policies and dialogue between young people and decision-makers. It focuses on community organising and equipping young people from rural areas with skills and tools to enhance their participation in their communities.

Romania's journey towards achieving SDG4 encompasses the objective of equipping all pupils with the necessary skills and knowledge to actively promote sustainable development, which includes education for sustainable development, sustainable lifestyles, human rights, and gender equality. Through participation in sustainability projects and access to educational opportunities, young people acquire practical experience and knowledge on sustainable practices and community contribution. Additionally, they cultivate awareness and address pressing environmental concerns, while becoming multipliers for sustainable practices in their families and local communities.

In conclusion, to effectively reach more young people and enhance their engagement, it is essential to prioritise inclusive strategies that resonate with their diverse needs and aspirations. Sustainability goes hand in hand with civic engagement and active participation. This entails fostering meaningful dialogue, providing accessible platforms for participation, and equipping them with the necessary skills and resources. By embracing innovative approaches and actively involving young people in decision-making processes, we can collectively work towards building a more inclusive and empowered youth community, ensuring that their voices are heard, and their contributions valued in shaping a sustainable future.

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2.5. Youth and Sustainability in Spain

Although it can be accepted that in Spain youth, understood as the group of people between the ages of 15 and 29, are not sufficiently trained in the concept of sustainability; The government and state and regional institutions are multiplying efforts to ensure that young people not only understand the concept, but are able to apply it in their lives.

In recent years, the issue of the environment has gained relevance among young people since 80% consider its protection a priority, and 64.2% believe that they can play a fundamental role in protecting the environment. Even so, eight in ten young people (83%) perceived that environmental problems directly affect their daily lives, with an almost identical percentage considering that their lifestyle is important for the conservation of the planet (81%). 15% of youth regularly demonstrate against climate change.

Thus, the government of Spain proposes a strategy that lays the foundations and methodology to make a qualitative leap towards the renewal of our fair and sustainable social contract, through the recovery of the rights of the Social State for all, but especially for young people and through real openness to youth participation in all areas of political and social transformation.

This new social contract aims to achieve two fundamental objectives:

1. Social justice. Recovery of civil, economic and social rights for adolescence, youth, women and other discriminated groups.

2. Democratic renewal and new sustainable and ecological socioeconomic model. A new social contract requires the participation of the classes most disadvantaged by the current socioeconomic structure, and therefore more committed to the progressive transformation of the system.

Youth Strategy 2030 (EJ2030) is proposed , which has 12 objectives, number 12 being:

O12. Give youth prominence in the development and implementation of the Green Agenda. Train and sensitise adolescents and young people on environmental and animal issues, encourage their organisation in associations, national and international projects and their public participation in this matter, actively incorporate them and recognize their voice as qualified in all processes of defining strategies and regulations. related to sustainability, climate change and the environment. Raise awareness about our consumption models, promote sustainable living habits and activate the local economy, promote green spaces, promote sustainable tourism, guarantee universal access to renewable and clean energy.

That objective number 12 translates into axis 12 of action of the Strategy.

Axis 12. Youth, environment and sustainability:

The goal of this axis is to achieve, through youth activism and leadership, a society in which all young people are environmentally active, educated, prepared to face environmental challenges and capable of applying climate-friendly and sustainable behaviours in their lives. daily lives.

This Axis 12 in turn is broken down into a series of specific objectives:

- Goal 12/1. Stake. Lead sustainability and environmental policies, from the activism of youth and adolescence.

- Objective 12/2. Education. Empower youth to provide them with a shared environmental awareness from which to act as an agent of change for environmental and sustainable development.

- Objective 12/3. Living place. Promote sustainable social rental, housing rehabilitation and rural repopulation.

- Objective 12/4. Rural world and environment. Bet on sustainability.

- Goal 12/5. Productive and mobility model. Stop the consumption of natural resources.

The challenges facing the world demand a response that generates shared, sustainable progress that guarantees the life and environment of children and young people. For this reason, the Sustainable Development Goals constitute a fundamental source of inspiration for this Strategy, integrating each of the objectives and goals of the 2030 Agenda into the different Axes of the EJ2030.

In the field of education, the Strategy coincides with and contributes to the development of Organic Law 3/2020, of December 29, which modifies Organic Law 2/2006 on Education, the purpose of which is to establish a renewed legal system that increases educational and training opportunities for the entire population, which contributes to the improvement of the educational results of students, and satisfies the widespread demand in Spanish society for quality education for all. This law expressly makes teacher training in sustainability mandatory by the end of 2025.

For the implementation of the Strategy, the coordination of the different administrations will be necessary, and especially the INJUVE (Youth Institute), which belongs to the Ministry of Social Rights and Agenda 2030; and the youth services of the autonomous communities; without prejudice to local powers. In addition, it must be provided with a budget that allows its execution with

effective measures, and according to the document, this budget falls within the Recovery, Transformation and Resilience Plan (PRTR) and the European Recovery Instrument (Next Generation EU).

2.6. Youth and Sustainability in Slovakia

SGD and Youth

Empowering Slovakia's Youth: Driving Sustainability and Advocating for Migration

In Slovakia, a burgeoning narrative unfolds, one where the younger generation assumes a pivotal role in shaping a sustainable future and advocating for compassion towards migrants and refugees. Against the backdrop of pressing environmental and social challenges, young Slovaks are emerging as leaders, actively driving transformative change.

Youth-Led Initiatives: Across Slovakia, dynamic young activists spearhead movements aimed at raising awareness and fostering sustainable behaviours. Organisations such as "Youth for Climate Slovakia" orchestrate climate protests and engage in community initiatives to amplify their voices. These grassroots efforts resonate locally and resonate on national and international platforms, underscoring the potency of youth-led advocacy in effecting substantial societal shifts.

Promoting Education for Sustainability: Educational institutions in Slovakia embrace sustainability principles, seamlessly integrating them into curricula and extracurricular activities. By nurturing critical thinking and instilling a sense of social responsibility among students, schools and universities equip the next generation with the requisite knowledge and skills to confront sustainability challenges adeptly. Through immersive learning experiences and interdisciplinary approaches, young Slovaks are empowered to become catalysts for positive change.

SLOVAK YOUTH AND THE SDG Education

From the lens of differences among various social and demographic groups we monitored in the survey, significant variations in the level of awareness emerge. It's intriguing to note that young individuals with experience in youth organisations and volunteering were more inclined to declare good knowledge of topics. Equally surprising was the higher representation of younger respondents aged 15-19 across most topics, except poverty and international conflicts. General knowledge of topics appears to be more diverse. Respondents who completed studies at grammar schools, women, and young people with experience in youth organisations or volunteering often provided responses like "I've heard about it but couldn't explain what it's actually about" or "I've never heard about it."

In urban areas, and among respondents aged 20-24, there was a higher frequency of those who only knew about the topics from hearing about them. Conversely, respondents from rural areas, with secondary vocational education, and lacking experience in youth organisations or volunteering, often stated knowledge solely from hearing about the topic.

Similarly, young people from the Banská Bystrica region more frequently mentioned knowing about the topic only from hearing about it. Regarding the subjective assessment of the ability to take on others' perspectives, respondents tended to give favourable evaluations. It seems

that the ability to take on others' perspectives isn't particularly problematic in these statements. Young people were more inclined to be willing to take on others' perspectives in specific assessments.

While the average values in the monitored statements tend to approach the average, it's evident that it's more difficult to admit to taking on the perspective of others, especially in emotionally challenging situations, such as criticising others or feeling disappointed by others. These responses also recorded the highest standardised deviation, indicating a greater dispersion of answers.

A deeper look into individual dimensions reveals a diverse distribution of answers. For instance, 21% of respondents completely identified with the statement "Sometimes I try to better understand my friends by looking at things from their perspective," while 41% mostly related to it. Conversely, 8% completely rejected the notion, leaning towards "not very much like me" or "not at all like me."

In essence, the survey provides rich insights into the nuanced perspectives and levels of awareness among young Slovaks, highlighting both areas of strength and opportunities for further education and engagement.

Innovation Through Entrepreneurship: The entrepreneurial ethos thrives among Slovakia's youth, who harness innovation to address global challenges. From developing cutting-edge technologies to founding socially conscious enterprises, young entrepreneurs drive progress while prioritising environmental preservation. Through platforms such as incubators and accelerators, they translate their ideas into impactful projects that foster both economic growth and sustainability.

Youth Participation in Policy-Making: Recognizing the significance of youth perspectives in shaping policies, Slovakia actively involves young people in discussions pertaining to sustainability. Through youth councils and advisory boards, they contribute fresh insights and expertise, ensuring that policies are inclusive and reflective of the needs of future generations. Collaborative initiatives and exchange programs further broaden horizons, nurturing cultural understanding and solidarity among young Slovaks on a global scale.

Championing Sustainable Development Goals (SDGs) and Migration Advocacy: Aligned with the United Nations' SDGs, young Slovaks emerge as advocates for sustainable development and champions for global migration issues. Despite the intricate nature of these challenges, their commitment remains steadfast. Through everyday practices such as recycling and initiatives addressing the root causes of climate change and migration, they embody the ethos of sustainable living and humanitarianism.

Humanising Migration: Migration, a multifaceted phenomenon intertwined with sustainable development, demands empathy and solidarity. Initiatives like the "Faces of Migration" campaign endeavour to humanise the issue, amplifying the voices of those compelled to flee their homes in search of safety and opportunity. Through research, advocacy, and awareness-raising endeavours, young Slovaks strive to cultivate a more inclusive society that upholds the dignity and rights of all individuals.

Slovakia's youth are the vanguards of progress in the nation's sustainability and migration advocacy journey. Their collective endeavours and unwavering dedication chart a course towards a brighter, more sustainable future for future generations.

SLOVAK YOUTH AND THE SDG Education

Young Slovaks declare interest in the presented global topics. At the same time, they are relatively cautious when it comes to assessing their own level of knowledge on these topics. Only a small portion of them state that they are well acquainted with the topics and could explain them. On the other hand, there is a notable awareness of these topics among the vast majority of respondents (90%). About 10% of respondents have not heard of any of the presented topics yet. These respondents are more often represented among men, respondents from the Trenčín region, and respondents with completed secondary vocational education. We recorded relatively the highest level of informed respondents regarding environmental issues (climate change, global warming), where up to 25% of respondents stated that they could explain this topic well. Another 50% of respondents said they could explain the topic at least in general terms, while 23% of respondents have heard about this topic but cannot explain what it is about. Approximately one-fifth of respondents feel well-informed about migration (19% of respondents), 55% of respondents have only general information, and a quarter of respondents (24%) have heard about this topic but cannot explain what it is about.

Similarly, 18% of respondents have enough information about gender equality issues in various parts of the world, 50% of respondents can only explain the topic in general terms. 28% of respondents have heard about this topic but cannot explain what it is about. Hunger or malnutrition in various parts of the world is well known to 13% of respondents, 55% of respondents only note general information, and 29% of respondents have only heard something about this topic.

The last two areas observed, namely global health and international conflicts, ranked at the bottom of this hypothetical ranking of knowledge about global topics. In both cases, only 11% of respondents declare a good knowledge of the issues, less than half declare general information, and approximately 40% of respondents declare knowledge of the topic only from hearing about it. The lowest knowledge of the subject is noted in the area of international conflicts, where almost half of the respondents declare that they have only heard about the topic or even less (a total of 48%).

2.7. Conclusion

The analysis of the different countries shows that young people have a strong awareness and a high willingness to commit themselves to sustainable development. Nevertheless, there are significant differences in the way education systems and political structures support this commitment. In some countries, such as Germany and the Netherlands, there is a critical examination of the role of politics and education in promoting sustainability. In others, such as Romania and Slovakia, young people face greater challenges due to gaps in education and less supportive policy frameworks. The need to improve educational curricula and focus policies more on youth engagement becomes clear. Ultimately, it is crucial that all stakeholders - from educational institutions to policy makers and young people themselves - work together to effectively shape and secure a sustainable future.

Chapter 3

Taking action for the 17 SDGs
with the Self-SDG-App

3.1. Description of the 17 goals and 169 sub-goals as well as the 240 associated indicators.

The structure of the 17 Sustainable Development Goals (SDGs), along with their 169 sub-goals and the 240 associated indicators, is established as a comprehensive framework to address global challenges and promote sustainable development worldwide. Adopted by the United Nations Member States in September 2015 as part of the 2030 Agenda for Sustainable Development, these goals represent a collective commitment to addressing a wide range of issues, from eradicating poverty to taking climate action.

Each of the 17 SDGs is designed to address a specific aspect of sustainable development, from health and education to gender equality and peace and justice. These goals provide a global vision of the challenges facing humanity and establish a series of common aspirations to improve people's quality of life and protect the planet.

To achieve these overarching goals, 169 sub-goals, also known as targets, have been defined, representing specific areas of action within each SDG. These targets provide a more detailed and concrete focus for addressing identified challenges and set measurable milestones for assessing progress towards the achievement of the broader goals.

Additionally, to monitor progress towards the attainment of these sub-goals, 240 global indicators have been developed. These indicators are quantitative and qualitative measures used to assess progress in specific areas and provide a solid basis for tracking and evaluating progress in implementing the SDGs.

Global indicators have been carefully designed to ensure they are relevant, measurable, and comparable worldwide. They are based on international methodologies and standards and are regularly updated to reflect advances in understanding the issues and challenges associated with sustainable development.

It is important to note that global indicators are complemented by national and regional indicators, which are tailored to the circumstances and priorities of each country or region. This allows for more precise and relevant monitoring of progress towards the SDGs at the local and national levels.

In summary, the structure of the SDGs, along with their sub-goals and associated indicators, provides a robust and comprehensive framework for addressing the challenges of sustainable development globally. By establishing clear, measurable, and achievable goals, this framework helps guide actions and policies at the global, national, and local levels to achieve a more prosperous and sustainable future for all.

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3.2. To emphasize the sub-goals and indicators that young people can contribute to achieving in their everyday lives.

Goal 1. End poverty in all its forms everywhere.	
Targets	**Indicators**
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.	1.1.1 Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural).
1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	1.2.1 Proportion of population living below the national poverty line, by sex and age.
	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable.

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.	1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population.
	1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP).
	1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030.
	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	
Targets	**Indicators**
2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.	2.1.1 Prevalence of undernourishment.
	2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).
2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.	2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.
	2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight).
	2.2.3 Prevalence of anaemia in women aged 15 to 49 years, by pregnancy status (percentage).
2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size
	2.3.2 Average income of small-scale food producers, by sex and indigenous status
2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.	2.4.1 Proportion of agricultural area under productive and sustainable agriculture.

| 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed. | 2.5.1 Number of (a) plant and (b) animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities. |
| | 2.5.2 Proportion of local breeds classified as being at risk of extinction. |

Goal 3. **Ensure healthy lives and promote well-being for all at all ages.**	
Targets	**Indicators**
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations.
	3.3.2 Tuberculosis incidence per 100,000 population.
	3.3.3 Malaria incidence per 1,000 population.
	3.3.4 Hepatitis B incidence per 100,000 population
	3.3.5 Number of people requiring interventions against neglected tropical diseases.
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.
	3.4.2 Suicide mortality rate.
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders.
	3.5.2 Alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol.
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.	3.7.1 Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods.
	3.7.2 Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group.
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older.

Goal 4.
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Targets	Indicators
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.	4.1.1 Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.
	4.1.2 Completion rate (primary education, lower secondary education, upper secondary education).
4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.	4.2.1 Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex.
	4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex.
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.	4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated.
4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.	4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex.
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment.

Goal 5.
Achieve gender equality and empower all women and girls.

Targets	Indicators
5.1 End all forms of discrimination against all women and girls everywhere.	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex.
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.	5.3.1 Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18.
	5.3.2 Proportion of girls and women aged 15–49 years who have undergone female genital mutilation, by age.

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location.
5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	5.b.1 Proportion of individuals who own a mobile telephone, by sex.

Goal 6.	
Ensure availability and sustainable management of water and sanitation for all.	
Targets	**Indicators**
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	6.3.1 Proportion of domestic and industrial wastewater flows safely treated.
	6.3.2 Proportion of bodies of water with good ambient water quality.
6.b Support and strengthen the participation of local communities in improving water and sanitation management.	6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management.

Goal 7.	
Ensure access to affordable, reliable, sustainable and modern energy for all.	
Targets	**Indicators**
7.3 By 2030, double the global rate of improvement in energy efficiency.	7.3.1 Energy intensity measured in terms of primary energy and GDP.

Goal 8.	
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	
Targets	**Indicators**
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP.
	8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP.
8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training.	8.6.1 Proportion of youth (aged 15–24 years) not in education, employment or training.

Goal 9.
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Targets	Indicators
9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.	9.b.1 Proportion of medium and high-tech industry value added in total value added.

Goal 10.
Reduce inequality within and among countries.

Targets	Indicators
10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.	10.2.1 Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities.
10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.	10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law.

Goal 11.
Make cities and human settlements inclusive, safe, resilient and sustainable.

Targets	Indicators
11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities.
	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted).
11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.	No suitable replacement indicator was proposed. The global statistical community is encouraged to work to develop an indicator that could be proposed for the 2025 comprehensive review. See E/CN.3/2020/2, paragraph 23

Goal 12.
Ensure sustainable consumption and production patterns.

Targets	Indicators
12.2 By 2030, achieve the sustainable management and efficient use of natural resources.	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP.
	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP.
12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.	12.3.1 (a) Food loss index and (b) food waste index.
12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.	12.5.1 National recycling rate, tons of material recycled.

Goal 13.
Take urgent action to combat climate change and its impacts.

Targets	Indicators
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	13.3.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment.

Goal 14.
Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Targets	Indicators
14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	14.1.1 (a) Index of coastal eutrophication; and (b) plastic debris density.

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Goal 15.
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Targets	Indicators
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.	15.1.1 Forest area as a proportion of total land area.
	15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type.
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	15.2.1 Progress towards sustainable forest management.
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation- neutral world.	15.3.1 Proportion of land that is degraded over total land area.
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.	15.4.1 Coverage by protected areas of important sites for mountain biodiversity.
	15.4.2 (a) Mountain Green Cover Index and (b) proportion of degraded mountain land.

Goal 16.
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Targets	Indicators
16.1 Significantly reduce all forms of violence and related death rates everywhere.	16.1.1 Number of victims of intentional homicide per 100,000 population, by sex and age.
	16.1.2 Conflict-related deaths per 100,000 population, by sex, age and cause.
	16.1.3 Proportion of population subjected to (a) physical violence, (b) psychological violence and (c) sexual violence in the previous 12 months.
	16.1.4 Proportion of population that feel safe walking alone around the area they live after dark.
16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children.	16.2.1 Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month.
	16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation.
	16.2.3 Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18.

16.b Promote and enforce non-discriminatory laws and policies for sustainable development	16.b.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law

Goal 17.
Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

Targets	Indicators
17.3 Mobilize additional financial resources for developing countries from multiple sources.	17.3.1 Recursos financieros adicionales movilizados para los países en desarrollo procedentes de múltiples fuentes 17.3.2 Volumen de remesas (en dólares de los Estados Unidos) en proporción al PIB total.

3.3. To narrow down and to concretise the content of the self-SDG app to be developed.

Goal 1.		
End poverty in all its forms everywhere.		
Targets	Challenges/Actions	Level of SDG achievement
1.1	Search for local organizations that help the poor, like Cáritas, and find ways to collaborate with them.	Intermediate
	Become a volunteer with 'Schools Without Borders' by sponsoring a student from Africa.	Advanced
1.2	Educate others about issues related to extreme poverty and its underlying causes. This can be done through organizing awareness events, participating in social media campaigns or giving talks in schools.	Basic
1.3	Participate in campaigns, ask petitions, write protests or letters to leaders supporting poverty reduction policies.	Intermediate
1.5	Engage in projects aimed at reducing the vulnerability of poor communities to climate change or other disasters by focusing on initiatives such as reforestation, water management, and resilient agricultural practices.	Intermediate
	Support humanitarian and emergency initiatives aimed at providing aid to communities affected by natural disasters, involving fundraising activities, organizing aid campaigns, and providing direct assistance on the ground, if possible.	Advanced

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
2.1	Engage in food programs: Get involved in local programs or initiatives that provide food to those in need, such as soup kitchens, food banks, or feeding programs for children.	Advanced
2.2	Promote the importance of a balanced and nutritious diet among your peers and in your community. Organize or participate in talks, workshops, or educational campaigns about the importance of consuming a variety of nutritious foods in every meal.	Advanced
2.3	Research different local, national and transnational small-scale food brands in order to make awareness of them in the community, paying special attention to the producers that are women, indigenous peoples, family farmers, pastoralists and fishers.	Intermediate
2.4	Learn about sustainable agricultural practices that promote soil conservation, biodiversity, and efficient use of natural resources. Share this information with other young people and community members to raise awareness about the importance of sustainable agriculture.	Basic
	Be an active member in the school garden	Intermediate
2.5	Learn about the importance of genetic diversity in agriculture and animal breeding. Understand how genetic diversity contributes to the resilience of crops and animal populations against diseases, pests, and environmental changes.	Basic
	Join seed exchange projects in your community or region: Take part in seed exchange events where local farmers and gardeners can share seed varieties and promote genetic diversity in their crops.	Intermediate

Goal 3. Ensure healthy lives and promote well-being for all at all ages.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
3.3	Learn the origin, transmission and prevention of AIDS, tuberculosis, malaria, neglected tropical diseases, hepatitis, water-borne diseases and other communicable diseases.	Intermediate
	Participate in vaccination campaigns against diseases such as hepatitis and other waterborne illnesses by volunteering, assisting in organizing vaccination events, and encouraging others to get vaccinated.	Advanced
3.4 3.5	Organize and/or participate in a community health and wellness event featuring healthy cooking classes, outdoor exercise sessions, educational talks on the benefits of a balanced diet and regular exercise, and informative sessions on the risks of excessive tobacco and alcohol consumption.	Intermediate
	Raise awareness about mental health, emphasizing the need to openly discuss issues like depression, anxiety, and stress, through awareness campaigns, talks in schools and promoting accessible mental health resources.	Basic
3.7	Participate in comprehensive sexual and reproductive health education programs addressing contraception, prevention of sexually transmitted diseases, consent, emotional health and healthy relationships.	Basic

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3.a	Promote 100% smoke-free environments in the school, including entrance areas, and enforce policies prohibiting smoking on school premises. Establish a surveillance team comprising students and staff to ensure compliance and address infractions promptly.	Intermediate

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
4.1 4.2	Become a volunteer with 'Schools Without Borders' by sponsoring a student from Africa.	Advanced
4.5	Take part in events to raise awareness about the needs and rights of people with disabilities and advocate for inclusion in all aspects of society, including education.	Intermediate
4.6	Offer your time as a mentor or tutor for vulnerable students who may need additional support in their education. Provide guidance and counseling to help them overcome barriers and achieve their educational goals.	Advanced
4.7	Adopt sustainable living practices in your own life, such as reducing resource consumption, recycling, using sustainable transportation, and choosing eco-friendly products. Share your actions and motivate others to follow your example.	Advanced

Goal 5. Achieve gender equality and empower all women and girls.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
5.1	Learn about the various forms of gender discrimination and how they impact women and girls worldwide.	Basic
5.1	Raise awareness about gender-based violence and its devastating impacts on the lives of women and girls, participating in talks, workshops, or educational events on gender-based violence prevention and how to support survivors.	Intermediate
5.3	Learn about the negative consequences of child, early, and forced marriage, as well as female genital mutilation. Understand how these practices impact the lives and well-being of girls and women worldwide.	Basic
5.4	Learn about the importance of unpaid domestic work and how it disproportionately affects women and girls. Understand how these responsibilities can limit women's and girls' opportunities for education and employment, perpetuating gender inequalities.	Basic
5.b	Offer mentoring and training in technological skills to women and girls in their community. This may include teaching basic computer skills, providing guidance on software and applications usage, and offering career advice in technology.	Advanced

Goal 6.		
Ensure availability and sustainable management of water and sanitation for all.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
6.3	Learn about the importance of water quality and the negative impacts of pollution. Understand how human activities contribute to water degradation and how these effects can be mitigated at both personal and community levels.	Basic
	Adopt water conservation practices in daily life, such as turning off faucets when not in use, repairing water leaks at home, and using water-efficient technologies.	Intermediate
6.b	Participate in clean-up activities of local rivers, beaches, and bodies of water to remove waste and pollutants.	Advanced

Goal 7.		
Ensure access to affordable, reliable, sustainable and modern energy for all.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
7.3	Turn off lights and electronic devices when not in use.	Basic
	Close doors and windows to conserve heat or air conditioning	Basic
	Efficiently use household appliances.	Basic
	Walk, cycle or use public transport instead of traveling by car.	Intermediate
	Make a school advertising campaign on energy and the environment.	Intermediate

Goal 8.		
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
8.4	Develop sustainable practices at home: such as turning off lights when they are not needed, turning off the faucet while brushing teeth, recycling materials and reducing food waste.	Basic
	Promote sustainable lifestyles with their families and communities by promoting more sustainable lifestyles. They can encourage their parents to use public transportation, buy local and organic products, and reduce consumption of meat and animal products.	Intermediate
	Support environmental initiatives in their communities, with recycling advertising campaigns, renewable energy and nature conservation projects.	Intermediate
	Participate in conservation activities such as cleaning parks and beaches, planting trees, and participating in local habitat restoration projects	Advanced

8.6	Make an individual commitment to improve their academic results and, therefore, increase their opportunities for future employment and training:	Basic
	Participate in awareness campaigns about the importance of education and vocational training for youth. This could include distributing information leaflets, school debates or disseminating messages through social networks.	Intermediate
	Participate in volunteer activities: Children can participate in volunteer activities in organizations that support the education and skills development of young people,	Advanced

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
9b	Promote awareness of the importance of innovation through advertising campaigns.	Intermediate
	Participate in youth entrepreneurship activities: A youth may participate in youth entrepreneurship activities that foster creativity, innovation and entrepreneurship.	Advance

Goal 10. Reduce inequality within and among countries.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
10.2 10.3	Practice empathy and respect for all people, regardless of their differences. This involves treating others with kindness and understanding, and not discriminating based on characteristics such as age, gender, disability, race, ethnicity, religion or economic status.	Basic
	Participate in school/local activities that celebrate diverse cultures, traditions, and perspectives, advocating for an inclusive school/local environment	Intermediate
	Participate in volunteer activities: A young person can participate in volunteer activities that promote the social and economic inclusion of vulnerable people. This could involve working with community organizations that provide support to marginalized groups, such as people with disabilities or those living in poverty.	Advance

	Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
11.6	Reduce the use of disposable products in their daily life, reusing and recycling materials such as paper, plastic, glass and metal.	Basic
	Participate in clean-up activities to help keep streets and public spaces clean. This may include picking up trash in parks, beaches and green areas, and properly separating waste for recycling.	Intermediate
	Walk, bike, or use public transportation, rather than relying on cars or private transportation. This can help reduce greenhouse gas emissions and improve air quality in the city.	Intermediate
	Participate in conservation and reforestation activities such as planting trees or helping to maintain local green spaces.	Advance
	Promote responsible purchasing of sustainably manufactured products, such as green and certified building materials, among your family and friends. This can help increase demand for sustainable products and support companies committed to responsible practices.	Intermediate
11c	Advocate for government policies and actions that support sustainable construction in less developed countries by writing letters to government leaders, conducting publicity campaigns that promote sustainable development.	Intermediate
	Participate in volunteer programs: A child can participate in volunteer programs with organizations working on sustainable construction projects in less developed countries. Although he or she may not be directly involved in the physical construction, he or she can help with awareness-raising, fundraising or other forms of support.	Advance

	Goal 12. Ensure sustainable consumption and production patterns.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
12.2	Participate in food donation programs at school or in the community.	Basic
	Participate in a school garden to learn about the importance of biodiversity and growing food sustainably.	Intermediate
	Support companies and brands that adopt sustainable practices in their production and supply of products by choosing products that have environmental certifications or are transparent about their sustainability practices.	Advance
12.3	Reduce food waste in your household by helping to plan meals, storing food properly and consuming leftovers.	Basic
	Research the food supply chain from production to consumption to better understand where food losses occur and how they can be prevented.	Intermediate
	Conduct surveys in the school, family and local environments to study habits in these areas an advertising campaign could then be carried out to promote the sustainable use of food.	Advance

12.5	Use reusable products instead of single-use products, such as reusable water bottles instead of disposable plastic bottles or cloth bags instead of plastic bags.	Basic
	Separate waste in your home to make recycling easier. You can learn about the different types of recyclable materials and encourage your family to recycle paper, cardboard, plastic, glass and metal.	Intermediate
	Make a publicity campaign to raise awareness of the importance of significantly reducing waste generation through waste generation through prevention, reduction, recycling and prevention, reduction, recycling, and reuse.	Advance

**Goal 13.  ** **Take urgent action to combat climate change and its impacts.**
Targets	**Challenges/Actions**	**Level of SDG achievement**
13.3	Participate in volunteer programs, especially awareness-raising of other young people.	Advance
	Through your social networks, let others know about what you do to stop climate change and how you are helping to combat it.	Basic
	Encourage your friends, family and co-workers to install the SelfSDG app.	Basic
	Organize and participate in events related to climate change mitigation and reduction of its effects.	Advance
	Encourage your friends, family and co-workers to join global movements like Count Us In, which aims to inspire 1 billion people to take practical action and challenge their leaders to act more forcefully on climate action.	Advance
	Read articles on the web related to climate change mitigation, adaptation and reduction of its effects.	Basic

**Goal 14.  ** **Conserve and sustainably use the oceans, seas and marine resources for sustainable development.**
Targets	**Challenges/Actions**	**Level of SDG achievement**
14.1	Use fewer plastic bottles,replacing then by reusable bottles.	Basic
	Use fewer plastic bags. replacing them with cloth bags.	Basic
	There are biodegradable sunscreens and suntan lotions that do not harm marine species; try to buy this type of products, which indicate on the label that they are environmentally friendly.	Intermediate
	Reduce the use of bottled water. This way you will be reducing the use of plastic bottles.	Intermediate
	Take care of the beach. Use the appropriate containers and if you find any garbage on your way, help to pick it up.	Intermediate

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
15.1 15.2 15.4	Plant a tree to help reduce climate change. We should all do our part in this either individually or as part of a collective. For example, the Plant-for-the-Planet initiative allows people to sponsor tree planting around the world.	Intermediate
	Participate in a school garden to learn about the importance of biodiversity and growing food sustainably.	Intermediate
	Buy fewer new clothes and wear them longer. Look for sustainable brands and/or use second-hand buying/selling platforms. Recycle clothes and repair when necessary	Intermediate
	Compost non-edible waste and use it to fertilize the garden. Composting is one of the best options to manage organic waste and at the same time reduce environmental impacts.	Intermediate
	Contribute to environmental conservation and sustainable development through energy saving. Turn off appliances and lights when not in use.	Basic
15.3	Apply water-saving household measures such as reducing shower time to 5 minutes, turning off the faucet while brushing your teeth, watering the garden at night, etc.	Basic

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
16.1 16.2	Identify a situation in which you have participated in or witnessed a violent reaction to a conflict. Think of alternatives to resolve the conflict without resorting to violence.	Intermediate
	Participate in awareness-raising events in social media campaigns to raise awareness of all types of violence and how to combat them.	Intermediate
	Read articles on the web related to achieving a more inclusive society and universal access to justice.	
16.b	Stop and think for a few minutes. Try to recognize in yourself or around you in situations that may have led to conscious or unconscious discrimination.	Intermediate
	Search the web and find out about cases of discrimination, for example in the gypsy community.	Basic

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Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.		
Targets	**Challenges/Actions**	**Level of SDG achievement**
17.3	Organize and collaborate in campaigns to collect food and other products for countries in need.	Intermediate
	Financially collaborate with a non-profit organization in your area	Advanced
	Participate in events organized at the school to raise funds for organizations related to sustainable development.	Intermediate

3.4. Sustainability National Report: The national targets from Germany, The Netherlands, Romania, Slovakia and Spain.

3.4.1. Germany

Introduction:

The German Sustainable Development Strategy was further developed by the Federal Government in response to the 2030 Agenda for Sustainable Development, which was proclaimed by the Secretary-General of the United Nations, António Guterres. The Federal Government adopted the German Sustainable Development Strategy on 10 March 2021 and it is intended to serve as a guideline for the implementation of the 2030 Agenda in Germany. The strategy underscores the importance of collective action in addressing pressing global challenges while emphasizing the role of national strategies in driving progress towards sustainability. The German Sustainable Development Strategy 2021 is a document issued by the German government that is based on the 2030 Agenda and its 17 global Sustainable Development Goals (SDGs). These goals cover a wide range of topics, from combating poverty and hunger to decent work, economic growth and climate protection measures. The strategy is designed as a "living document" that is continuously developed and adapted to changing conditions.

Overview of National Sustainability Goals:

The German Sustainable Development Strategy comprises measures at three levels: Measures with impacts in Germany, measures by Germany with global impacts, in particular activities in favor of global public goods, and concrete support for other countries, in particular within the framework of international bilateral cooperation. Responsibility for sustainable development at the national level lies with the Federal Chancellery in order to emphasize its importance for all policy areas and ensure cross-departmental management. Germany is also committed to progress in sustainable development internationally, particularly within the framework of the United Nations. The strategy outlines 75 indicators and targets across 39 areas, reflecting the multidimensional nature of sustainable development. It emphasizes the dynamic nature of the strategy, which evolves to adapt to changing conditions and challenges. Another important aspect of the

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German Sustainable Development Strategy is the promotion of social justice and equal opportunities. The aim here is to reduce the poverty rate and improve access to education, healthcare and jobs for all. The German Sustainable Development Strategy also proposes implementing a system of indicators to measure and track progress in realising the goals. In addition, a pioneering role is to be taken internationally in order to counteract global challenges such as climate change and poverty reduction.

Progress and Achievements:

Germany has made significant strides in advancing sustainability across various sectors, including renewable energy, resource efficiency, and social equity. Notable achievements include progress in increasing the share of renewable energies and improving settlement density. The German government aims to quickly put Germany on a sustainable growth path that will trigger a boost for modernization through innovation and lead the country out of the coronavirus crisis in a stronger position. To this end, an economic stimulus program with a financial volume of 130 billion euros was adopted for 2020 and 2021. This includes an economic stimulus and crisis management package, a package for the future and measures to fulfill international responsibility.

Challenges and Obstacles:

Despite progress, Germany faces obstacles in achieving its sustainability goals, including the need for policy reforms, resource constraints, global context and dependencies, financial and economic constraints, social and behavioural change and socio-economic disparities. Addressing these challenges requires concerted efforts to bridge policy gaps and promote inclusive growth that prioritizes environmental protection and social well-being.

Initiatives and Strategies:

In the strategy, the German government also focuses on the transition to a circular and low-carbon economy. The aim is to achieve a fully circular economy that promotes the recovery of resources and the reduction of pollution. The German Sustainable Development Strategy (DNS) also focuses on renewable energies and sustainable mobility in order to reduce CO2 emissions.

To overcome challenges, the German government has implemented initiatives aimed at promoting sustainability, including investments in digitalization, climate technologies, and education. The implementation of the German Sustainable Development Strategy requires the commitment of all political levels as well as social stakeholders and citizens. A dialogue group consisting of 15 institutions and organizations contributes to the preparation of the respective priority topics of the meetings of the State Secretaries' Committee. In addition, the Science Platform Sustainability 2030 supports the implementation of the strategy with scientific expertise.

Future Outlook and Recommendations:

The package for the future with a volume of 50 billion euros is intended to strengthen Germany's modernisation and its role as a global exporter of cutting-edge technologies, in particular through digital investments in the future and investments in climate technologies. It includes measures to promote the mobility transition, the energy transition and the achievement of climate targets, investments in digitalisation, the promotion of education/training and research as well as the strengthening of the healthcare system and protection against pandemics.

Looking ahead, Germany aims to accelerate progress towards sustainability by leveraging economic stimulus programs and fostering innovation. Recommendations include strengthening policy coherence, enhancing public engagement, and leveraging technological innovations to address emerging challenges such as climate change and digitalization.

Conclusion:

The German Sustainable Development Strategy serves as a cornerstone for advancing sustainability in Germany and globally. Its ongoing evolution reflects a commitment to addressing complex challenges while promoting inclusive and sustainable development. Collective action and innovation are essential for realizing the vision of a resilient, equitable, and environmentally sustainable future.

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3.4.2. The Netherlands

Introduction:

Since the adoption of the 17 Sustainable Development Goals (SDGs), the Netherlands has made significant progress towards achieving them, both at home and abroad. Dutch efforts at national and international levels are often closely linked to the EU's internal and external policy agenda. Successive governments have addressed the major challenges reflected in the SDGs. Public interest in the goals has grown exponentially, too, with companies and other organisations in all sectors increasingly using them as a compass. The ambitions of the present Dutch government and different stakeholders to transition to sustainable and inclusive models are gradually converging. At the same time, the challenges are immense. Key questions include: how do we translate ambitions on paper into real change? How do we strengthen policy coherence so as to create synergies? How can cooperation and partnerships help to scale up and accelerate the process?

Successive governments have invested in priorities that are closely linked to the SDG challenges most important to the Netherlands. The previous government (2017-2021) initiated transitions in the areas of climate and energy, circular agriculture and achieving a fully circular economy by 2050. The government that took office in January 2022 will build on this. The new coalition agreement 'Looking out for each other, looking ahead to the future' aims to accelerate the transition to a sustainable economy and create a more robust society based on equality of opportunity and caring for each other. These are central tenets of the 2030 Agenda. This ambitious commitment and the associated funding provide an ideal springboard for achieving the SDGs. The introduction of a 'generational impact assessment' means that the interests of young people and future generations will be taken into account when developing policy, thus giving them a permanent seat at the table. We are therefore well set up for the final sprint towards 2030.

Overview of National Sustainability Goals:

In September 2015 the Netherlands made a commitment to achieve all 17 SDGs by 2030 at the latest. The following year, the government began putting together a Plan of Action for national implementation of the SDGs, establishing a statistical benchmark and reviewing current policy. A pragmatic approach was adopted, in which SDG governance is organised on the basis of existing responsibilities and institutions. The Minister for Foreign Trade and Development Cooperation coordinates the international efforts of the Netherlands on the SDGs and additionally has a role in coordinating the national implementation of the SDGs. The minister is assisted in the latter task by a high-level national SDG coordinator and and interministerial working group.

This approach was evaluated in 2021, reviewing where the Netherlands stood in relation to the goals after five years, what additional policy had been pursued in the past few years and how effectively implementation of the SDGs is being managed in the Netherlands. The following five aspects were considered in this regard: (1) political commitment, (2) division of responsibilities, (3) accountability, (4) efforts to increase public awareness and involvement, and (5) policy monitoring and evaluation. The evaluation found that society is putting pressure on central government to adopt an SDG strategy. It was positive about accountability via the annual national SDG report and the Monitor of Wellbeing & the SDGs, both of which are debated in parliament. The way new policy is assessed in light of the SDGs could, however, be improved by monitoring use of the existing SDG assessment tool. The evaluation made a number of recommendations aimed at stepping up overall efforts to achieve the SDGs, managing implementation more effectively, improving policy coherence and preventing compartmentalisation. In ist response, the previous government stated that the SDGs could be made even more visible in policy, and recognised the benefit of having a common sustainability language. The SDG assessment creates scope for enhancing policy design and coherence. The recommendation to integrate the concept of wellbeing and SDGs into the policy and budget cycle is in line with the discussion on this subject between the government and the House of Representatives. With regard to efforts to increase awareness and involvement, the evaluation found that social stakeholders, especially young people, are generally positive about the support they receive to work on the SDGs. The role of SDG Nederland is particularly valued. It channels efforts, acts as a catalyst and facilitates networking. Finally, on the subject of monitoring and evaluation, the report recommended translating the SDGs into specific, national policy goals to make assessment even more effective.

Data collection

There has also been progress with data collection since the previous VNR in 2017. Statistics Netherlands (CBS) carried out a baseline survey in 2016 based on the UN indicators, with data available for around a third of these. Data is now available for half of the official UN indicators (71% if the indicators already achieved are included), and there are good alternative indicators for a further 13%. Each year, at the government's request, CBS further refines the indicators, which helps clarify the progress made and the challenges remaining. Since 2019, at parliament's request, the annual SDG assessment and the Monitor of Wellbeing have been incorporated into one publication. The indicators of both frameworks overlap and complement each other. The SDGs make it possible to quantify wellbeing and provide more detailed insight into certain aspects of it. Conversely, the focus of the wellbeing measurement is on the 'here and now', 'later' and 'elsewhere', which helps us understand the consequences of our current wellbeing for future generations and for people elsewhere in the world, thus clarifying underlying principles of the SDG agenda, such as 'Leave No One Behind' and future-readiness.

What is the Netherlands' position according to the figures?

The figures included in the VNR come from the 2021 Monitor of Wellbeing & the SDGs, the latest measurement available when this report was written. We see high scores, in particular, for SDG 4 (education), SDG 5 (gender equality), SDG 9 (sustainable industrialisation component), SDG 11 (living environment component) and SDG 17 (partnerships). At least half of the indicators for these SDGs show a positive trend. For SDGs 2, 6 and 8, we see many positive trends and few negative trends

The goals on which the Netherlands does not score well are SDG 15 (life on land), SDG 11 (housing component) and SDG 9 (infrastructure and transport components). Notably, the trends for SDGs 7 and 13 have been largely positive for the past few years, partly due to an increased share of renewable energy in the energy mix, a downward trend in the total energy consumption of the economy and lower carbon emissions from domestic traffic and transport. The same goes for SDG 5. This does not mean that we have achieved these goals. Much remains to be done on each of them. For SDG 5 (gender equality), for instance, there is still a noticeable difference between the economic independence of women (63.8%) and men (81.1%), although the figure for both is rising; the male/female pay differential is still significant, but has fallen to 13.7%. With regard to SDG 1 (no poverty), the Netherlands ranks first in Europe and will be able to achieve this goal by 2030. Another favourable development is the declining proportion of children living below the low-income threshold. The number of households living below the poverty line for more than four years has also fallen slightly (3.1% in 2020), but the number of homeless people has risen in recent years.

The Netherlands has many policies for the goals that are more challenging for us, particularly the 'environmental goals' (SDGs 7, 12, 13, 14 and 15). These goals generally fall under several ministries, but the different policies do inform each other. For instance, the aim for policies with regard to climate neutrality, circularity, energy, water management, transport, the environment and a sustainable agri-food system (SDGs 2, 6, 7, 9, 12 and 13) is that they reinforce each other. The picture as regards the other SDGs is varied. With a few exceptions (e.g. equal opportunities policy, foreign trade and development cooperation policy and the National Environmental Policy Framework), the SDGs are not explicitly mentioned in policy. CBS suggests that if the SDG targets are clearly translated into ministerial policy goals, they will be more measurable.

Progress and Achievements:

To prepare for the progress evaluation six SDG dialogues were organised for the purpose of obtaining input from stakeholders, including representatives from all tiers of government, civil society organisations, the private sector, young people, educational institutions and the research community. As part of this exercise, the Netherlands' implementation of the SDGs was viewed through the lens of six systemic challenges ('entry points').

The SDGs concern the economy, society, wellbeing, human rights, security and participation. Both the strength and the challenge of the agenda lie in the interlinkages between the goals. While the importance of a comprehensive approach is universally acknowledged, it is not easy to put this into practice. The UN Global Sustainable Development Report (2019) recommends focusing on a number of systemic challenges, defined as entry points, which encompass several SDGs and largely correspond to the Netherlands' current priorities. The stakeholder dialogues therefore covered six overarching entry points for the Netherlands, addressing the most relevant SDGs in relation to each other. This made it possible to consult a large number of stakeholders and consider different viewpoints, resulting in critical, open and constructive dialogues. The many useful insights gained – and seeing things from each other's perspective – provide a sound basis for the years ahead. The following summaries of these dialogues also include stakeholders' viewpoints.

Entry point 1: Circular agriculture, biodiversity and the food system

The transition to circular agriculture (SDG 2) in the Netherlands is closely linked to the protection and restoration of nature and biodiversity (SDGs 14 and 15) and ensuring a sustainable and healthy food system for all (SDGs 2, 3 and 12). According to Statistics Netherlands (CBS), the Netherlands scores well on SDG 2, with good access to nutrition and high agricultural productivity. In terms of sustainability, CBS finds that the area under organic production has increased, but is still small compared with other European countries. Food waste and antibiotics use in agriculture are falling. The main challenge is excess nitrogen deposition in the environment, which is also high compared with the rest of Europe. This leads directly to the poor score for SDG 15, the achievement of which poses a major challenge to the Netherlands. More generally, erosion of natural capital is endangering future prosperity. Insufficient data was available for SDG 14, but CBS warns of a deterioration in biodiversity. In the area of health and nutrition, the rise in obesity is cause for concern. In the Netherlands, no one needs to go hungry and there is a wide choice of relatively cheap foodstuffs (SDG 2). The downside of this is that the emphasis on high production at low cost has placed tremendous pressure on biodiversity and the environment, particularly given the Netherlands' small surface area. The Netherlands therefore lags behind the rest of Europe in terms of biodiversity values and trends, both in water and on land (SDGs 14 and 15). It is generally acknowledged that the agricultural production system in its present form (worldwide and in the Netherlands) will be untenable in the future. Our planet can no longer sustain the burden of current production methods and consumer behaviour. This has led to an ambitious policy to promote circular agriculture. This also encompasses sustainable management of agricultural soils and sustainable crop protection, reducing leaching of nitrates and other harmful substances from farmland, and a new forestry strategy. Nutrition policy is aimed at prevention, healthy choices and a healthy food environment, for example with the National Prevention Agreement and public awareness instruments such as the five food groups and Nutri-score product labels. While policy aimed at making the agri-food system more sustainable is lauded as a success, its implementation is challenging. On the other hand, there have been

some positive results in the area of nature development. To achieve the European nature restoration goals, natural areas will need to be substantially expanded and nature conservation must strive to ensure that the natural environment throughout the country meets basic quality criteria. SDG 14 warrants special attention. There is little information about this goal in the statistics, but steps have been taken in recent years to introduce a more integrated policy. For instance, the North Sea Agreement (2021) includes agreements between the Dutch government and stakeholders on striking a better balance between the various activities taking place in the North Sea up to 2030 and beyond. Making the seafood industry more sustainable is one of the priorities of European fisheries policy.

Entry point 2: Wellbeing

Many things contribute to people's wellbeing: good physical and mental health (SDG 3), safe, healthy and green surroundings with access to suitable, affordable housing (SDG 11) and opportunities for lifelong learning (SDG 4). Wellbeing also contributes to the resilience of individuals and communities. Compared with the situation in other countries, Dutch healthcare (SDG 3) is well organised and perceived health is high. Obesity is increasing, however. The global pandemic has also put additional pressure on the health system and has had a negative effect on healthy life expectancy. Looking at public health from a wider perspective, the Netherlands is facing three key challenges: the health inequalities between people with high and low socioeconomic status; the increase in mental health problems due to the pandemic; and new health risks as a result of climate change. In terms of lifelong learning (SDG 4), the Netherlands is doing well internationally, but there are sections of society that are being left behind. With regard to the physical environment and communities (SDGs 3 and 11), there are challenges in the areas of suitable, affordable housing and climate adaptation. The vast majority of people are happy with their housing and where they live. The physical environment is under threat, however, which also affects the wellbeing of individuals. Environmental pollution may be decreasing, but it still causes illness and premature death.

Prevention, healthy lifestyles and a healthy living environment are increasingly addressed in policy, such as in the Environment and Planning Act and in the new National Environmental Programme that is being developed. Coherence between the different goals is also embedded in policy. In healthcare, much has been done to provide the right care, in the right place.

Entry point 3: A circular inclusive economy and use of raw materials

The Netherlands' commitment to responsible consumption and production (SDG 12) is reflected in the policy aim to be a fully circular economy by 2050. The target for 2030 is to halve the use of primary abiotic raw materials. The circular transition helps meet four major challenges facing the Netherlands: climate change (SDG 13), environmental pollution (SDGs 6 and 11), biodiversity loss (SDGs 14 and 15) and prevention of raw material depletion and energy supply security risks (SDG 12). The proviso is that the circular economy must be inclusive and innovative and must create decent jobs (SDGs 10, 9 and 8).

Entry point 4: A fair climate and energy transition, climate adaptation and water

In the past six years, the Netherlands has invested a great deal of effort in SDG 13 and in implementing the Paris Agreement. The ongoing climate and energy transition (SDGs 13 and 7) focuses on switching to a sustainable energy supply and a carbon-neutral economy. In addition, the

government combines climate adaptation efforts with sustainable water management (SDG 6), sustainable economic growth and decent work (SDG 8), the circular economy (SDG 12), nature and biodiversity (SDG 15), and conservation and sustainable use of oceans and seas (SDG 14). Reducing inequality (SDG 10) is crucial to ensure a fair transition in which everyone can participate.

Entry point 5: Inclusive society, equal opportunities and open government

The Netherlands wants to be an inclusive society with equal opportunities for all. Protecting human rights is a key underlying principle of the SDG agenda and underpins the Dutch Constitution. In recent years there has been a significant increase in awareness in the Netherlands that deprivation and poverty have many facets that interact with each other. It is not just a question of reducing poverty (SDG 1) and inequality (SDGs 10 and 5); educational opportunities (SDG 4), access to the labour market (SDG 8), and participation and access to justice (SDG 16) are equally important to achieve an inclusive society and equal opportunities.

Entry point 6: Global responsibility and policy coherence for development

The SDGs are an integrated agenda. The Netherlands is striving to combine its efforts to achieve the SDGs at home with support for SDG actions in other countries. It is also seeking policy coherence for the SDGs at EU level, in line with the European Commission's ambition that the SDGs and the Paris Agreement should continue to guide the EU's internal and external work.

The Netherlands makes a significant contribution to achievement of the SDGs in other countries through aid, trade and investment (SDG 17), with responsible business conduct (RBC) (SDG 12) high on the agenda. At the same time, we have to acknowledge that our negative environmental footprint abroad is large. As a result of our raw material- and energy-intensive economy and our consumption patterns, we are putting considerable pressure on natural resources and land use beyond our borders. A number of stakeholders criticise Dutch tax policy. Initiatives to make the Dutch economy more sustainable and enhance RBC will help reduce this footprint. There is an action plan on policy coherence with specific measures to further reduce spillover effects, which will help us meet SDGs 17, 12, 10 and 2, both at home and abroad. Strengthening multilateral cooperation in tackling major global challenges is important for all 17 SDGs.

Challenges and Obstacles:

Entry point 1: Circular agriculture, biodiversity and the food system

One key challenge is to link efforts on conservation and agriculture objectives more effectively by adopting new revenue models and raising awareness about the interdependence of these two systems. At current market prices, more sustainable food production is insufficiently profitable for many farmers. A revenue model is needed that is profitable for both the agricultural sector and the natural environment, while also ensuring that healthy food in sufficient quantities remains affordable for all. Land stewardship by farmers has immense benefits for society. Since remuneration for these services is not yet obtained through product prices, the government will need to continue or introduce grant schemes to safeguard provision of these public goods.

In the current situation, measures for circular agriculture, the natural environment, climate and other goals are at times at odds with each other. A more coherent focus on the goals in combination (giving equal consideration to the three Ps of sustainability: people, planet and prosperity) is an important avenue to explore. It would be helpful to centre on values such as good public and

environmental health, the quality of the living environment, a fair income for farmers, affordable food and greater priority for regional and local markets.

The agri-food transition calls for a change in behaviour by all parties: farmers, farm advisers and suppliers, retailers, banks, food processing companies and consumers. The government can support this transition by setting regulatory frameworks, because clarity helps businesses in the long term. Agreements with and between a broad range of social actors can play an important role in addressing 'how' questions and the Netherlands has a great deal of positive experience with this instrument. Stakeholders do, however, feel that such agreements should be made more inclusive by involving more diverse types of farms and more diverse groups, such as young people and women. If European resources from the Common Agricultural Policy were to be used more in line with the European Green Deal, the Farm to Fork strategy and the Biodiversity strategy, this would be an important step forward for SDGs 2 and 15.

Entry point 2: Wellbeing

Prevention is at the heart of policy, but to be able to direct efforts effectively, it must be defined more clearly, with tangible goals. It is also important to determine where responsibility lies for investing in prevention in different sectors. Policy is placing greater emphasis on healthy lifestyles, but legislation and financial incentives do not yet reflect this: the healthcare sector earns more by treating sick people than by preventing illness in healthy people, and health insurers are less inclined to reimburse preventive care. This could change if positive health outcomes were the guiding principle. **Reducing health inequalities between different groups also calls for a targeted approach.**

Young people's mental health burden is growing as a result of pressure to achieve and uncertain future prospects. Providing early interventions in their own setting and giving them space for taking things a bit easier from time to time could prevent a great deal of distress. Education is strongly focused on cognitive learning and not so much on providing an 'outlet'. Music lessons, swimming lessons, sport and homework supervision at all primary and secondary schools can help pupils develop coping skills. The mental healthcare sector is still beset with many organisational difficulties, especially long waiting lists and providing patients with the treatment that is most suitable in their specific situation.

Suitable employment is a key factor in wellbeing, but for vulnerable young people and adults it is a challenge finding work. Opportunities for ongoing personal development, reskilling and upskilling reduce unemployment and promote everyone's wellbeing, but people in these groups benefit especially. An appropriate education system that welcomes diversity and inclusion promotes this and may also reduce the dropout rate. Cooperation between all relevant stakeholders is crucial. One success story here is the partnership between municipalities, employers, schools and trade unions in the Noord-Holland Noord region to achieve a strong and inclusive labour market.

Easy access to a clean, healthy and green living environment with space to exercise and meet people has major benefits for physical and mental wellbeing. Biodiversity and climate measures reinforce each other and contribute to better health. Urban green space also enhances resilience to climate change and helps reduce air pollution. By creating more cycle paths and green corridors, municipalities link infrastructure and transport with nature and health. Working with residents to make neighbourhoods greener helps enhance social cohesion. Here again, the question

arises as to who is responsible for creating added value for society and what incentives exist. In practice, integrated environment and planning strategies clash with legal frameworks that limit municipalities as to what social and environmental conditions they can set land developers. The many claims on the limited space available call for regulatory impact assessment, and the SDGs could be useful in this respect. This requires us to see expenditure on nature as an investment towards many social and other policy goals rather than as a cost. To ensure that the natural environment is taken into account in decision-making, it is important to elaborate the positive effects of green spaces in existing measuring systems and legally safeguard both the rights of nature and the right to nature.

Entry point 3: A circular inclusive economy and use of raw materials

To accelerate the transition to a circular economy, market incentives for circular solutions need to be made more attractive than those for linear solutions. Circular solutions are currently often expensive because of the high labour costs and the low cost of some raw materials like virgin plastic. As a result, circular product design is still not always prioritised. Commercial funding for circular projects and business models is still limited as a result of the emphasis on the risks involved.

Circular activities are often still limited to recycling and focus too little on retaining material value, for example by 'upcycling'. The R ladder describes different circularity strategies, with Refuse, Rethink, Reduce, Reuse and Repair at the top, and Recycle and Recover at the bottom. The aim is to operate as high up the ladder as possible. Often, the focus is on technical solutions, such as reducing material inputs per unit of product. Yet the circular transition also involves process changes (operational management and production process) and important behavioural aspects.

Change at the beginning of the chain is needed, for example by introducing packaging legislation and incentives for sustainable consumption. For both the circular and the energy transition, there should be clear rules on reparability and service life. Ensuring that government instruments consistently promote circularity will also be a challenge. Initiatives to market raw materials recovered from waste water, for example, meet with legal and pricing barriers. Public authorities can also play an important part through procurement and tendering: circular procurement is a policy ambition, but not an obligation. Circularity as one of the contract award criteria can become more embedded if public authorities look more closely at the total cost of ownership, which also includes social value and additional costs over the entire period of use. A key tool for accelerating the transition is to tighten up criteria, definitions and measuring systems, and many parties around the world are already working on this.

Investments in the circular economy, climate, biodiversity and sustainable water management (SDGs 6, 12, 13 and 15) can have multiplier effects, but an integrated approach to several transitions without negatively affecting other transitions is not yet the norm. Moreover, whereas in the case of climate policy, international carbon accounting rules disregard savings in indirect carbon, circularity, by definition, requires the entire value chain to be considered. We therefore need to improve our understanding of how different transition strategies influence each other, including possible trade-offs between them. The feedback loop between monitoring and implementation management must also be improved. It is not enough for producers to focus on their own business operations; the direct and indirect effects in the whole chain from raw materials through to end user should also be taken into account in the goals and measuring systems.

Entry point 4: A fair climate and energy transition, climate adaptation and water

Considerable progress has been made launching the climate and energy transition, but it is a huge task and efforts will have to be significantly stepped up over the next few years. Stakeholders want to see a correlation between the activities undertaken in different sectors, more central coordination and initiatives to promote creativity. Deploying various government instruments consistently and coherently to achieve the climate goals also continues to be a challenge. A number of stakeholders encourage the government to do more in terms of carbon pricing and setting standards, as this would go a long way towards changing the behaviour of businesses and members of the public. They also feel the 'polluter pays' principle could be applied more strictly to taxation, thus contributing to the climate transition. It is essential to increase support for climate measures, for instance by clearly communicating the gravity of the situation. Education has a key role to play, too. It is equally important for companies to be transparent about and accountable for their actions.

The risks facing the Dutch soil and water ecosystem are diverse and increasing. More and more often, short-term and long-term interests conflict, such as choosing whether to reinforce dikes to address immediate threats or create space for water in order to serve longer term goals. In the long term, land with a higher risk of flooding must only be used in a way that is appropriate.

At the moment, however, due to the housing shortage there is a risk of homes being built in areas that may prove to be unfit for this in the longer term. Taking climate adaptation into consideration in decision-making processes helps avoid these kinds of lock-ins and encourages climate-robust land use.

The biggest challenge is ensuring a fair transition, both now and for future generations. This relates to, for example, timely action to help employees find alternative employment (in the green sector) where necessary, and training people accordingly; fair distribution of negative income effects, supporting people in vulnerable groups in particular; and giving citizens and employees a say in decision-making. To gain public confidence, it is important for citizens to be able to contribute ideas about how to achieve a fair distribution of costs and benefits. The substantial climate-related resources must also be used to support vulnerable groups during the transition. In addition, international cooperation will be a key factor in ensuring that the shift to a climate-neutral economy brings opportunities and benefits for all countries.

The SDGs and the climate goals are matters of common interest. Existing legislation and regulations must be amended and market incentives provided in order to remove any barriers to the transition. Social innovation helps organise our production and consumption differently, rather than simply optimising existing models. The government can set a good example by consistently applying the existing SDG assessment and the proposed generational impact assessment to appraise new policy. This will also help give more weight to health, nature and the interests of future generations when decisions are made. Formulating an overarching vision that brings together the major challenges could provide a reference point. This will require ministries and policy research institutes to place the SDGs front and centre, reserving an important role for SDG 10 (reduced inequality).

Entry point 5: Inclusive society, equal opportunities and open government

Efforts to tackle inequality of opportunity are gaining significant momentum. The challenge in the years ahead will be to achieve change in the field. A key requirement in this regard is to make it

easier for public bodies to take the human dimension into account where necessary. A number of issues demand special attention and, at the same time, present opportunities.

To improve socioeconomic security, more needs to be done to identify the most vulnerable groups, such as homeless people. While Dutch organisations that work with homeless people know who they are at micro level, there is no accurate overview of this group at macro level or in statistics. Access to work and income are essential, but if mental health is neglected, the solutions proposed are often unsustainable. The focus should be on people's individual needs and on the network around them. This also requires scope for a customised approach. It is vital that people are better informed about their rights and access to legal aid, especially those in vulnerable groups. Labour market measures are needed to improve the situation of the working poor, migrant workers and people with flexible contracts.

Combining out-of-school efforts with measures to achieve equal opportunities in education (SDGs 4, 10 and 11) can transform schools into places where people can develop their talents and acquire 21st century skills. To this end, links need to be forged between schools, civil society organisations and businesses so that pupils can apply their knowledge in the real world.

Inequality has grown on the labour market, partly because of the growing number of people, especially young people and migrant workers, on flexible contracts. Women in part-time, lower-status jobs are also more vulnerable. Young people with a migration background experience discrimination when trying to find a work placement, leading to school dropout and inequality of opportunity.

Gender and other forms of inequality have an adverse effect on economic productivity and on society as a whole. Because of this, it is important to continue investing in ways that help address inequality (as the SDGs and wellbeing policy do) as part of the post-pandemic recovery. Education, too, needs to do more to address gender inequality, discrimination and LGBTI issues. Different groups are now better represented in the media, in government and in politics, but there is plenty of room for improvement. One particular concern is that equal treatment legislation does not apply equally to European and Caribbean Dutch citizens; people from the Caribbean part of the Kingdom should have greater involvement.

Entry point 6: Global responsibility and policy coherence for development

Despite the successes, the trade commitments and the Netherlands' considerable ODA contributions, there are some serious challenges ahead. Evaluations suggest that the voluntary agreement approach reaches just 1.6% of businesses in high-risk sectors. Only large firms are required to report on their RBC,12 with half performing poorly in the Transparency Benchmark survey. In light of that, the government welcomes the European Commission's legislative proposal for a Corporate Sustainability Due Diligence Directive (CSDDD), published on 23 February 2022. This is a huge step towards EU legislation on the subject. To accelerate the major transitions, we also need to improve policy coherence and further reduce our footprint in other countries. In this regard we must overcome various difficulties, but these challenges also present opportunities.

Raising awareness is the first important step towards changing people's behaviour. Consumers and businesses still know very little about the spillover effects of our production and consumption. Although value chains are gradually becoming more sustainable and the economy more efficient, overall use of natural resources is still not declining. The transition to renewable energy sources in the Netherlands has led to increased imports of metals and biomass, which has an ad-

verse impact on the environment and possibly also on human rights elsewhere in the world (as a result of mining and deforestation). To increase awareness, stakeholders believe it is important to be transparent about spillover effects, for example through true pricing. An open, public debate about reducing consumption and refraining from certain behaviour is not easy, but is also an important step. Supporting conscious consumerism and preventing waste, especially food waste, are preconditions for reducing our environmental footprint

Initiatives and Strategies:

Multilateral strengthening of an integrated approach

During its membership of the UN Security Council in 2018, the Kingdom highlighted the importance of the SDGs as the ultimate conflict prevention agenda, by helping to put poverty, climate change, human rights violations and water stress on the agenda as the root causes of conflict between and within countries. The Security Council subsequently adopted Resolution 2417, condemning the starving of civilians as a method of warfare – as well as the unlawful denial of humanitarian access to civilian populations.

Through long-term predictable, unearmarked funding to UN development agencies, the Netherlands is contributing to a more effective UN development system and thus supporting the implementation of the SDGs at global and country level. The Kingdom is also working in human rights forums to promote the SDGs, as human rights and the SDGs are linked and mutually reinforce each other. For instance, we spearheaded the resolution to end child marriage15 and the resolution on violence against women (together with France).16 This means that the Netherlands has been able to put important issues on the agenda, including at the 2018 UN General Assembly, where we took a pioneering role in tabling the first resolution on sexual harassment, as part of broader efforts to prevent and eliminate violence against women.

Support for the most vulnerable people so that no one is left behind

To achieve the SDGs, specific support is required for the most vulnerable people and to ensure that everyone is reached ('Leave No One Behind'). This is only possible if these groups are given a stronger voice and can help shape policy to deliver the SDGs. COVID-19 has curbed civil society in many parts of the world. For years, the Netherlands has been investing in building grassroots organisations in the poorest countries as a key part of effective policy, accountability and transparency. As a world leader in this area, we recently renewed the Power of Voices programme thus reaffirming our commitment. Four grant instruments aimed at strengthening civil society were set up in 2021, with a duration of five years and a budget of more than €1.2 billion. These are Power of Voices, Power of Women, the SRHR Partnership Fund and Women, Peace and Security. Under these programmes local NGOs and Dutch civil society organisations team up to work on capacity building projects designed to achieve the SDGs.

Digitalisation for sustainable development

With the Digital Agenda for Foreign Trade and Development Cooperation (2019), the Netherlands is seeking to prevent digitalisation from worsening existing inequalities. The agenda focuses on young people, women, marginalised groups and people in rural areas. The Netherlands is a vocal advocate of the freedom of expression, both online and offline. People should be able to express their opinions, take part in political and social debate, and access secure, uncensored

information (SDG 16). Inclusive e-learning and digital skills will be instrumental in this (SDG 4) and in countering the effects of disinformation. Through programmes aimed at skills and jobs, the Netherlands is helping to expand young people's opportunities in the digital economy (SDGs 8 and 9), for example in Jordan, where 1,500 young people participated in IT skills training. Under the Strategic Partnership with UNCTAD, the eTrade for Women scheme is supporting female tech entrepreneurs in 17 Asian and African countries by providing them with advice and expertise.

The Digital Agenda aims to take advantage of the opportunities that digitalisation offers developing countries in terms of economic development. One example is the Orange Corners Innovation Fund, which is supporting 126 entrepreneurs in five developing countries by providing them with early-stage funding to develop innovative products or services (SDG 9), including in the digital sector. Digital economy also plays a growing role in programmes designed to create economic opportunities for refugees, displaced persons and host communities (SDG 8).

Coherent approach to the climate-food-water nexus

The Netherlands supports developing countries and partnerships in order to help combat climate change and its effects worldwide. We were one of the sponsors of the NDC Partnership, initiated the Global Commission on Adaptation and set up the Global Centre for Adaptation, and also hosted the successful Climate Adaptation Summit in 2021. The Netherlands' contribution to climate finance for developing countries has increased to €1.3 billion, made up of equal parts of public and private funding. The Netherlands allocates more than half of its climate finance to adaptation. Globally, this is only a quarter, leading the UN Secretary-General to call for a 50/50 balance between adaptation and mitigation at the Climate Adaptation Summit. The Glasgow Climate Pact aims to double funding for adaptation by 2025. Together with Tajikistan, the Netherlands will co-host the UN 2023 Water Conference.

The Netherlands is helping partner countries build capacity in order to address climate change, water scarcity and food security (SDGs 13, 6 and 2) in tandem. One concrete objective is for 8 million hectares of farmland to be managed sustainably by 2030. Moreover, the Netherlands has helped many countries in Africa, Asia and the Middle East to improve water management and ensure sustainable access to clean drinking water and sanitation. The Netherlands has also supported organisations involved in managing transboundary rivers and optimising the use of water in agriculture.

Innovative finance and partnerships

Small businesses and people living in poverty will be able to invest if they have access to financial services, thereby helping to create decent jobs and sustainable economic growth (SDG 8). To reach disadvantaged groups, the Netherlands is supporting the development of an innovative range of new or improved financial products and services, including digital solutions. Over nine million businesses and individuals have benefited from financial services provided under Dutch-funded programmes, and some 25 new financial products have been introduced. The Dutch development bank FMO is a world leader in the fields of social development and sustainability. Its MASSIF programme, for example, has provided financial services to 5.7 million businesses in the past year. The One Acre Fund, a non-profit social enterprise, has issued loans to 1.3 million smallholders, the Health Insurance Fund has provided 700,000 households with health insurance and the Global Index Insurance Facility has facilitated access to climate insurance for 600,000 farmers.

The Netherlands is committed to ensuring sustainable economic development in low- and lower-middle-income countries by improving the local business climate, enhancing entrepreneurship and promoting productivity and innovation. In 2021, for instance, we supported more than 264,000 jobs and 16,700 business plans, and helped improve the working conditions of nearly 2.8 million agricultural and factory workers. To spotlight the problem of child labour, we organised a major conference in 2020 called Taking Next Steps.17 In 2021, the Netherlands was the first EU member state to become a Pathfinder Country of the ILO's Alliance 8.7 – the global multi-stakeholder platform for eradicating child labour (SDG 8.7).

The business sector can make a significant contribution to achieving the SDGs. A growing number of Dutch companies are embracing the SDGs as a sustainability compass. The government encourages them to actively solve global challenges together when trading with foreign partners. With this in mind, it organises trade missions, mainly for SMEs, focusing on challenges in SDG-relevant sectors. Instruments such as the Sustainable Enterprise and Food Security Facility and the SDG Partnership Facility support Dutch companies involved in private sector development in emerging markets, thus utilising the strength of trade and industry to achieve the SDGs. In recent years, the Netherlands has also set up multi-stakeholder initiatives to make international value chains more sustainable. Examples include the Clothing and Textile Agreement and the Dutch Initiative for Sustainable Cocoa (DISCO). In 2015 the Netherlands launched the Amsterdam Declarations Partnership. Over the next few years, the government will lobby for greener trade instruments in line with the Paris and Glasgow agreements.

Future Outlook and Recommendations:

The Netherlands is well placed to achieve the SDGs. Throughout the COVID-19 pandemic, the country has demonstrated resilience in most areas, although the long-term effects have yet to be seen. The pandemic has, however, revealed the vulnerability of systems and societies to external shocks. We know that we face major challenges in the form of climate change, biodiversity loss, increasing pressure on raw materials, water and soil, and the risk that inequality poses to our society. Building a future-proof society and economy is therefore a matter of urgency.

Since the SDGs were adopted, ambitious policies have been put in place to transition to a climate-neutral economy and energy system, sustainable circular agriculture and a circular economy. The Netherlands has also pursued its efforts to build an inclusive and just society with equal opportunities for all. In healthcare, employment and education, the focus is on preemptive support and achieving greater inclusion. The government is also reviewing its own procedures, striving for more transparency and accessibility. Within partnerships, we are working to promote responsible business conduct in international supply chains, and progress has been made in reducing a number of negative spillover effects. All this provides a sound basis for the government to press ahead with the sustainability transition and step up efforts to make equal opportunities a reality.

Major tasks like these are not straightforward. Greater ambitions, increased awareness and best practices have not yet led to change on a broad scale, at the speed required. The challenge in the next few years will be to do more, and to do it faster and better. Stakeholders consulted for this VNR therefore sometimes expressed criticism, but also gave many useful suggestions to speed up the process. The lessons learned and experience gained will prepare us well for the years ahead. The main recommendations to emerge from the stakeholder dialogues are as follows.

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The stakeholders asked the government to adopt a more proactive role and provide clear frameworks. Businesses also noted that explicit agreements and a general long-term goal are prerequisites for acceleration, as well as clarifying – and, if necessary, setting clear rules for – who is responsible for what.

– The second important point is to make sustainability profitable by giving insight into actual costs (true pricing) and giving priority to social goals (value creation). Only then will there be effective incentives to make circular products and services cheaper than their linear counterparts, for example, or to make preventive healthcare a more financially attractive option than curative care.

– It is also important to set concrete interim and final goals, comprising targets and clear indicators, and to have reliable baseline data for monitoring progress and, where necessary, stepping up efforts. The SDGs provide a good reference point when setting national objectives for the tasks ahead.

– Greater coherence between policies and instruments could prevent a situation where efforts in different policy areas sometimes counteract each other. Assessing policy in light of the SDGs is a good start. The challenge is to ensure there is no trade-off between coherence and speed.

– There are plenty of excellent examples of an integrated approach, such as programmes that link education and the labour market. Invest in scaling up this kind of approach.

– Encourage and support partnerships and ensure that obstacles are eliminated. Good examples include the City Deals and the Region Deals, where central government already plays a facilitating role. Here, too, it is important to consider how appropriate approaches can be scaled up and used long term.

– A wide range of actors in society have energy, enthusiasm, knowledge and resolve in abundance. There is a great need for knowledge sharing and collaboration. Responding to this need and engaging these actors, for instance through ongoing stakeholder dialogues, can enhance the government's own efforts. Involving stakeholders in formulating and implementing policy yields valuable insights and creates a climate of cooperation. It is important that this process be as inclusive as possible.

– Honest messages about things that need to change are essential to raise awareness even further and garner broader public support. It is difficult for everyone to change their behaviour, but that awkward conversation is necessary to be able to make the transition to a sustainable society.

– Greater interaction between efforts at home and abroad is vital to prevent negative spillover effects and create opportunities for low-income countries. By considering the opportunities sector by sector, national measures to promote circularity, for example, could go hand in hand with trade and investment in the Global South.

Conclusion:

These challenges and lessons are not unique to the Netherlands. Many of them are in evidence across the Kingdom, despite the very different situations encountered. All countries are facing a massive task, but the SDGs offer us a shared vision of the future. The Netherlands will continue to work towards achieving these goals in partnership with others, both at home and abroad.

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References:

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3.4.3. Romania

Introduction

Romania's membership in the European Union has significantly influenced its adherence to sustainable development goals (SDGs). Through EU membership, Romania aligns its policies with EU regulations, benefiting from support mechanisms, capacity building, access to markets and financing from European Funds. This partnership enhances Romania's ability to implement sustainable practices across various sectors, contributing to its overall progress towards achieving the 17 SDGs. Although Romania still faces significant challenges in meeting its sustainability targets compared to other EU countries, over the last several years it has made significant progress. This is mainly due to the national institutional framework set in place to foster sustainable development practices across various sectors.

Overview of National Sustainability Goals

Romania's journey towards sustainable development began with its first strategy in 1999 (with the motto "Doing more with less"), emphasizing the importance of balancing economic growth with environmental conservation. This document had a relatively limited impact on public policies at the national level. The country's EU accession in 2007 prompted a shift in national priorities, leading to the adoption of the National Sustainable Development Strategy of Romania 2008-2020-2030 in November 2008 (with the motto: "Keep healthy what keeps you in good health"). The SDGs addressed by Romania's 2008 strategy primarily focused on foundational aspects such as economic growth, environmental protection, and social cohesion. These goals aimed to establish a framework for sustainable development that balanced economic progress with environmental conservation and social well-being.

Romania revised its National Sustainable Development Strategy in November 2018, aiming to accelerate the implementation of the 2030 Agenda while ensuring policy coherence and fostering multi-stakeholder engagement. This updated strategy also prioritized the promotion of renewable energy sources. Serving as a guiding framework for the implementation of the 2030 Agenda, it encompasses all 17 SDGs, contextualized at the national level. The NSDS acknowledges and addresses economic, social, and environmental conditions on global, European, and national scales, aiming to fulfill the needs of the present generation while preserving the ability of future generations to meet their own needs, reflecting a more people-centric approach.

The responsibility for developing and implementing the SD Strategy lies with the Department of Sustainable Development (DSD), established in 2017 within the Romanian Government. The **Sustainable Romania project** (SIPOCA 613 – 2019-2021), co-financed by the European Social Fund through the Administrative Capacity Operational Program 2014-2020, served to implement the National Strategy for Sustainable Development and to strengthen the governance effort.

Dedicated decision-making and expertise bodies were created:

– *The Interdepartmental Committee for Sustainable Development* (including all ministers of the Government);

– the *Advisory Council for Sustainable Development* - established in 2020, its purpose is to guarantee the consistent involvement of representatives from academia, research organizations, and civil society in the implementation of Romania's Sustainable Development Strategy. The expertise and experience of the Council members played a significant role in shaping the National Action Plan for implementing the strategy, as well as in establishing the monitoring and evaluation mechanism through the finalization of the indicator set.

Institutional framework for sustainable development
Source: The Romania's Sustainable Development Strategy

– the *Network of Hubs for Sustainable Development* – set up in 2019 at DSD's initiative. It comprises 22 hubs with about 90 experts, ensuring continuity and policy coherence for sustainable development across various sectors. Each hub, staffed with existing technical personnel, monitors, and drives the implementation of Sustainable Development Goals (SDGs) within its respective field, serving as ongoing partners in executing the 2030 Agenda and facilitating cross-sectoral policy harmonization.

– *Sustainable Romania Coalition* - established in 2020 by the Sustainability Embassy in Romania, it is an independent, private, non-political structure fostering ongoing dialogue and engagement in the implementation and monitoring of Romania's Sustainable Development Strategy. The coalition consists of over 145 organizations representing civil society and the private environment.

Progress and Achievements:

Various powerful tools have been established to facilitate progress towards sustainable development in Romania. These include the *National Action Plan for the implementation of the 2030 Romania's Sustainable Development Strategy*, the Occupational Standard for the *Expert of Sustainable Development* profession, the *National Indicators* for Sustainable Development 2030, the *Aggregator Sustainable Romania* open data platform, and the *Romanian Code of Sustainability*. These tools engage society at all levels, from government entities to individual citizens, in the collective journey towards sustainable development.
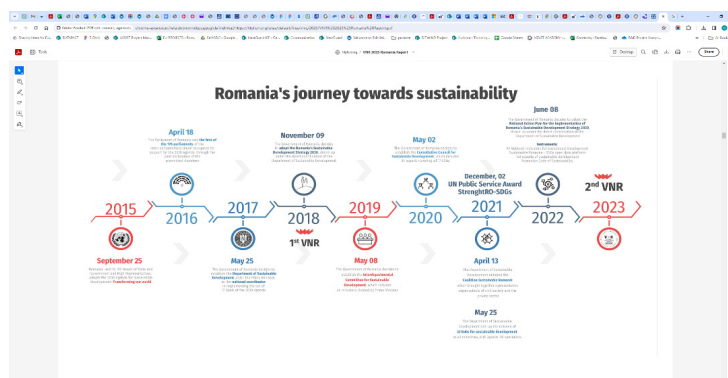
To monitor and evaluate Romania's progress in implementing the Strategy, 99 national indicators are overseen by the National Institute of Statistics. These indicators are either linked to EUROSTAT indicators or correspond to global indicators of the 2030 Agenda.

An illustration of Romania's progress has been included in the Sustainable Development Report 2023, ranking place 35 out of 166 countries, in terms of performance, with a score of 77.5.
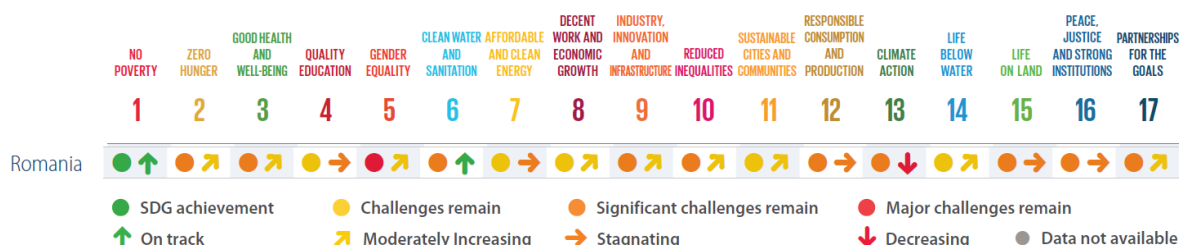
Challenges and Obstacles:

Despite progress, Romania faces challenges in fully implementing the SDGs, including issues related to inequality, environmental degradation, and economic development. Addressing these challenges remains a priority for the country's sustainable development agenda. **Economically**, there is a need to foster long-term growth that benefits all citizens, shifting towards a sustainable and competitive economy driven by innovation and citizen empowerment. **Socially**, efforts should focus on creating a cohesive society, reducing inequality, and improving education and healthcare systems to promote inclusivity and a sense of belonging among citizens. **Environmental** awareness has grown, highlighting the importance of collective responsibility in protecting the environment and fostering a sense of community to address challenges effectively. By boosting social capital and promoting environmental stewardship, Romania can unlock its citizens' potential and ensure a high standard of living for all.

Initiatives and Strategies:

Promoting the 2030 Agenda and Romania's Sustainable Development Strategy, along with increasing public awareness, are crucial for achieving sustainable development in Romania. The National Action Plan prioritizes activities aimed at promoting sustainable development principles and values, aligning with the goals of the strategy. Various initiatives, involving public authorities, the private sector, civil society, and NGOs, have been implemented to raise awareness and promote sustainable development. These initiatives include organizing information events, public debates, communication campaigns with media involvement, and educational actions such as integrating sustainable development topics into school curricula.

Future Outlook and Recommendations:

Looking ahead, the future outlook for achieving national sustainability goals in Romania is promising but requires concerted efforts and collaboration. Recommendations for further actions include enhancing policy coherence, promoting sustainable consumption and production, and strengthening stakeholder engagement. Partnerships with the private sector, civil society, academia, and leveraging technological innovations can accelerate progress towards goal attainment.

Conclusion:

In conclusion, Romania faces a twofold challenge in its sustainable development journey: firstly, it still needs to overcome historical disparities compared to the developed EU countries; secondly, it must fully embrace a new paradigm of sustainable development across all economic and social levels. This means that Romania needs to ensure the efficient use of natural resources while also enhancing human well-being with a balanced and forward-looking approach to progress.

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3.4.4 Slovakia

Introduction

In response to growing crises and social inequalities, Slovakia has recognized the need to align its systems with the Sustainable Development Goals (SDGs) outlined by the United Nations. This commitment is particularly evident in its emphasis on environmental education at all schooling levels, highlighting its dedication to integrating SDGs into the educational framework.

Overview of National Sustainability Goals

Slovakia's educational institutions incorporate environmental consciousness and sustainable principles teachings into their curricula. Primary schools organize activities such as tree-planting ini-

tiatives, waste reduction campaigns, and nature trips, fostering a sense of responsibility towards nature and enhancing students' critical thinking. Secondary schools offer climate change, renewable energy, and biodiversity courses, equipping students to advocate for sustainable practices. Universities, like Comenius University in Bratislava, offer specialized programs to prepare students to address sustainability issues across various fields.

Progress and Achievement

Slovakia actively promotes sustainability in education through partnerships with organizations such as UNESCO and the European Commission. These collaborations help educators share strategies, develop teaching approaches, and conduct research to advance the SDGs regionally and globally. Civic organizations like the Pontis Foundation, Eduma, and the Institute for Circular Economy also promote SDG-related activities.

Challenges and Obstacles

Several challenges hinder the integration of SDGs into Slovakia's educational system:

– Curriculum Integration: Revising curricula to include SDG principles and training teachers to incorporate these effectively.

– Teacher Training: Providing professional development opportunities to deepen educators' understanding of sustainability issues.

– Resource Allocation: Balancing funding for SDG initiatives with other educational priorities.

– Assessment and Evaluation: Adapting traditional assessment methods to measure critical thinking and environmental literacy.

– Community Engagement: Building partnerships with parents, local communities, NGOs, businesses, and government agencies.

– Inclusive Education: Ensuring accessibility of SDG-related education for all students, including those from marginalized backgrounds.

– Monitoring and Reporting: Establishing mechanisms to track and report progress in integrating SDGs into the education system.

Initiatives and Strategies

Several organizations in Slovakia implement SDG-related activities:

– Pontis Foundation: Organizes CEE CSR Summits and sets the SDG agenda for Slovakia.

– Eduma: Works with young people to raise awareness about education's importance and provides volunteer opportunities.

– Institute for Circular Economy: Promotes circular economy practices contributing to sustainable development.

– Mobile Teacher (Mobilny Ucitel): This joint initiative addresses the needs of deaf and hard-of-hearing individuals and contributes to inclusive education.

– S(LOVE)CODE Project by Accenture: Develops digital skills among underrepresented communities, supporting SDG 4 and SDG 5.

Future Outlook and Recommendations

To further advance the integration of SDGs into education, Slovakia should:

- Enhance teacher training programs focused on sustainability.
- Increase funding for SDG-related educational materials and activities.
- Develop innovative assessment methods for SDG-related skills.
- Foster greater community engagement and partnerships.
- Ensure inclusive access to SDG education for all students.
- Implement robust monitoring and reporting systems to evaluate progress.

Conclusion

Slovakia's commitment to aligning its education system with the SDGs is evident through various initiatives and partnerships. Despite facing challenges, the progress in integrating sustainability into education at all levels provides a strong foundation. With continued effort and strategic enhancements, Slovakia can further advance its SDG-related goals, contributing to a more sustainable future for its citizens and the global community.

3.4.5. Spain.

Introduction:

At the Spanish level, the Ministry of Social Rights and Agenda 2030, as its name reflects, has placed a special interest in developing the 17 Sustainable Development Goals, incorporating them into all public policies, and monitoring and controlling the degree of compliance through various indicators.

In 2022, the Monitoring Report of the **National Sustainable Development Strategy 2030**[1] was published , which reported on the progress, and also difficulties, carried out after the approval of the 2030 Agenda by the UN in 2015.

Overview of National Sustainability Goals:

This report states that for the Government of Spain there are 8 country challenges, which summarize the selected priorities from among the 17 SDGs.

Specifically, these 8 country challenges are:

1. End poverty and inequality
2. Tackling the climate and environmental emergency
3. Closing the gender inequality gap and ending discrimination
4. Overcome the inefficiencies of an excessively concentrated and dependent economic system

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1. Ministry of Social Rights and Agenda 2030 (2022). 2022 Progress Report of the 2030 Sustainable Development Strategy. https://www.mdsocialesa2030.gob.es/agenda2030/documentos/IP22_AC.pdf

5. End job insecurity

6. Reverse the public services crisis

7. End global injustice and threats to human rights, democratic principles and the sustainability of the planet

8. Revitalize our rural environment and face the demographic challenge.

In 2022, the Monitoring Report of the National Sustainable Development Strategy 2030 was published , which reported on the progress, and also difficulties, carried out after the approval of the 2030 Agenda by the UN in 2015.

On the other hand, among Spain's 8 priorities for the 77th session of the UN General Assembly[2], is priority number 3: Continue promoting compliance with the SDGs and a fair and sustainable socioeconomic recovery without leaving anyone behind.

Progress and Achievements:

For each country-challenge, accelerating policies are defined, which aim to contribute to achieving a series of SDGs, as can be seen in the following table:

Country Challenge	Accelerating policy	SDG1	SDG2	SDG3	SDG4	SDG5	SDG6	SDG7	SDG8	SDG9	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
1	1	x	x	x	x	x			x	x	x		x	x			x	x
2	2		x	x	x	x		x	x	x		x	x	x	x	x		
3	3	x	x	x	x	x			x	x	x		x				x	x
4	4				x	x		x	x	x				x	x	x		
5	5	x		x	x	x			x	x	x							
6	6	x	x	x	x	x			x	x	x	x					x	
7	7	x	x	x	x	x		x	x	x		x	x	x		x		x
8	8	x	x	x	x	x		x	x	x	x		x	x		x		

Source: National Sustainable Development Strategy 2030 (Author's own creation)

As can be seen, SDG6 (Clean water and sanitation) has not been included in any of the country's challenges, which is surprising in a country permanently threatened by drought, and in which restrictions are often necessary, due to lack of water, or due to inadequate quality. SDG14 (Underwater life-oceans) also has little presence in the accelerating policies that aim to address the country's challenges.

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2. Ministry of foreign Affairs, Government of Spain (2022). Spain's priorities for the 77th session of the UN General Assembly https://www.exteriores.gob.es/es/PoliticaExterior/Documents/202209_DOCNNUUESP.pdf

For each country-challenge, and its corresponding accelerating policies, a set of goals, action priorities, and measures have been proposed; as well as the specific SDGs that each set of these three elements works on.

Challenges and Obstacles:

The correct execution and management of the application of this approach in the processes of design, formulation, implementation, monitoring and evaluation of public policies; entails the need to assume leadership. In this context, the Secretary of State for the 2030 Agenda, and without prejudice to the powers attributed to other departments, is working on the creation of a Division for the Coordination and Monitoring of the Comprehensive System of Policy Coherence for Sustainable Development, integrated into its structure, which accompanies the integration of the processes of design, formulation, implementation, monitoring and evaluation of public policies aimed at fulfilling the 2030 Agenda and the implementation of different interaction analysis tools and processes, as well as in the measurement for the evaluation of the impacts of regulation, in the dimensions of sustainable development, through the incorporation of sustainable impact reports in the regulatory projects of the General Administration of the State, budget alignment, as well as evaluation of public policies and accountability.

However, the dispersion of powers of the Spanish state, divided into 17 autonomous communities with legislative and management powers; whose governments belong to different political parties, can pose a threat to the correct execution of this strategy.

Initiatives and Strategies:

Besides the **National Sustainable Development Strategy 2030**, in Spain initiatives and strategies addressing the Sustainable Development Goals (SDGs) are multifaceted, involving various stakeholders including the government, businesses, civil society organizations, and academia. Here are some key aspects:

Government Policies and Initiatives:

– National Sustainable Development Strategy: Spain has developed a National Sustainable Development Strategy aligned with the SDGs, outlining priorities and actions across various sectors.

– Climate Change Mitigation: Spain has committed to reducing greenhouse gas emissions and increasing renewable energy sources. The government has implemented policies such as the National Climate Change Adaptation Plan and the Energy Transition Strategy.

– Circular Economy: Spain is promoting circular economy practices to reduce waste generation and promote resource efficiency. Initiatives include the Circular Economy Strategy and the promotion of eco-design and recycling programs.

Innovative Approaches and Best Practices:

– Green Finance Initiatives: Spain has been exploring innovative financing mechanisms to support sustainable projects, such as green bonds and sustainable investment funds.

– Digitalization for Sustainability: Leveraging technology for sustainability, Spain has initiatives promoting digital solutions for energy efficiency, smart cities, and sustainable agriculture.

- Public-Private Partnerships: Collaboration between government, businesses, and civil society is fostered through public-private partnerships to implement sustainable projects and initiatives.

Successful Projects and Programs:

- Renewable Energy Expansion: Spain has successfully increased its renewable energy capacity, particularly in wind and solar energy, through policies promoting investment and innovation in the sector.

- Urban Sustainability: Several Spanish cities have implemented sustainable urban development projects, including initiatives to improve public transportation, enhance green spaces, and promote energy-efficient buildings.

- Biodiversity Conservation: Spain has designated protected areas and implemented conservation programs to preserve biodiversity, such as the Natura 2000 network and species recovery plans for endangered fauna and flora.

Overall, Spain's approach to the SDGs involves a combination of policy frameworks, innovative solutions, and collaborative efforts across sectors to achieve sustainable development objectives. Continuous monitoring and evaluation of progress are crucial for further refinement and enhancement of these initiatives.

Future Outlook and Recommendations:

Looking ahead, achieving national sustainability goals in Spain will require continued commitment, innovation, and collaboration among stakeholders. Here's a look at the future outlook and some recommendations for accelerating progress:

Future Outlook:

Integration of SDGs: Spain should further integrate the SDGs into national policies, plans, and strategies across all levels of government and sectors to ensure a comprehensive approach to sustainability.

- Climate Action: With increasing urgency to address climate change, Spain must ramp up efforts to reduce greenhouse gas emissions, transition to renewable energy sources, and enhance climate resilience.

- Circular Economy: Embracing circular economy principles will be essential to minimize waste generation, promote resource efficiency, and create new economic opportunities.

- Social Inclusion: Ensuring social inclusion and equity should remain central to sustainability efforts, addressing disparities in access to resources, opportunities, and services among different population groups.

Recommendations for Accelerating Progress:

- Enhanced Monitoring and Evaluation: Strengthening mechanisms for monitoring, reporting, and evaluating progress towards sustainability goals will provide insights into effectiveness and areas needing improvement.

- Education and Awareness: Increasing public awareness and education on sustainability issues can foster behavior change and empower individuals to contribute to sustainable development.

- Innovation and Research: Investing in research and innovation, particularly in green technologies and solutions, can drive sustainable economic growth and competitiveness.

- Policy Reforms: Continuously reviewing and updating policies to align with evolving sustainability challenges and opportunities is crucial. This includes revisiting regulatory frameworks, incentives, and subsidies to better support sustainable practices.

- Cross-Sectoral Collaboration: Encouraging collaboration among government, businesses, civil society, academia, and international partners will leverage diverse expertise and resources for collective action towards sustainability.

Potential Partnerships, Policy Reforms, and Technological Innovations:

- Public-Private Partnerships: Further fostering collaborations between the public and private sectors can unlock innovative financing mechanisms and facilitate the implementation of sustainable projects.

- Green Finance: Expanding green finance initiatives, such as green bonds and sustainable investment funds, can mobilize additional resources for sustainable development projects.

- Digitalization: Leveraging digital technologies and data analytics can optimize resource management, improve efficiency, and enable smarter decision-making across various sectors.

- Nature-Based Solutions: Investing in nature-based solutions, such as ecosystem restoration and green infrastructure, can provide multiple benefits including biodiversity conservation, climate resilience, and community well-being.

By embracing these recommendations and fostering partnerships, policy reforms, and technological innovations, Spain can accelerate progress towards achieving its national sustainability goals and contribute to global efforts for a more sustainable future.

Conclusion:

In conclusion, Spain, with its current government, is making a determined commitment to incorporate the 2030 Agenda into all national policies, as demonstrated by the creation of a ministry that includes the 2030 Agenda in its name; and the development of the National Sustainability Strategy. In this strategy, according to the table shown above, it can be seen that there are some SDG´s that receive more attention than others.

The incorporation of these policies into practice presents a series of challenges, such as the lack of allocation of resources, or the positioning against the 2030 Agenda of the parties located further to the right of the political spectrum, and that are governing in coalition in some Autonomous Communities with management powers on the subject of many SDGs.

It is therefore very relevant to carry out information, awareness and education campaigns that bring citizens closer to the noble objectives of the SDGs and their targets, to overcome existing reluctance about them.

Chapter 4

Digital Tools for the 17 SDGs
An overview of existing apps

Introduction

Mobile applications play a crucial role in raising awareness, mobilizing action, and promoting accountability for the SDGs. By leveraging the widespread use of smartphones and tablets, these apps empower individuals, organizations, and communities to contribute to sustainable development efforts. In this chapter we are presenting selected apps

4.1 Compilation of previous related actions already carried out

In this section are presented some noteworthy apps dedicated to promoting and achieving the UN Sustainable Development Goals. These apps have been selected by the consortium members having in mind 3 fundamental Key features:

- Education and Awareness: Many apps provide educational resources, interactive content, and informative articles to increase understanding of the SDGs.

- Goal Tracking and Monitoring: Some apps allow users to track progress towards specific goals, monitor global indicators, and stay updated on related news and events.

- Action and Engagement: Several apps facilitate individual and collective action by suggesting practical steps, organizing campaigns, and connecting users with volunteer opportunities and advocacy initiatives.

Through this selection we tried to identify positive functionalities and strengths of the apps, having in mind that we could use in our study and furthermore in the implementation of the SelfSDG app, but also weaknesses of them and respectively try to avoid them during our implementation.

Next we are presenting the list of the 23 apps that we selected and studied. A more detailed analysis is presented in Annex X.

#	App	SDGs	Main goal of the app
1	Aworld	SDG 13, SDG 11, SDG 12 and SDG 15.	AWorld app's main goal is to inspire and motivate individuals to adopt sustainable habits in their daily lives. It aims to educate users about the impact of their actions on the planet and provide them with a platform to track their progress in making more sustainable choices.
2	BSG for SDG	All SDGs	The 'BSG for SDG' app is a comprehensive platform dedicated to everything related to Sustainable Development Goals (SDGs). From enhancing knowledge and reflecting on daily actions to promoting sustainable living, the app empowers users to make positive changes in their lives. It also allows users to share their sustainable actions, fostering a community committed to adopting 'Sustainable Human Behaviour' as an essential step towards achieving the SDGs. Overall, the app combines education, active participation, and a variety of multimedia resources to create a comprehensive and engaging platform for promoting sustainable living and awareness of the SDGs.
3	Global Goals at Stake	All SDGs	The goal of this app is to empower users by facilitating engagement with the 17 Sustainable Development Goals, fostering reflective understanding of global challenges, and encouraging thoughtful consideration of the impact of decisions on both policy and individual levels.
4	Litterati	SDG 11, SDG 12, SDG 14, SDG 15	Litterati's main goal is to empower individuals to make a significant, measurable impact on the environment by cleaning up litter. Through community engagement and data collection, the app aims to provide insights that can drive policy changes and corporate responsibility towards a cleaner, healthier planet.
5	Samsung Global Goals	All SDGs	The Samsung Global Goals app is designed to engage users in contributing to the United Nations Sustainable Development Goals by 2030. It allows users to learn about the 17 goals, donate to specific causes, and track their contributions.
6	SDG in Action	All SDGs	The main goal of the SDGs in Action app is to educate users about the SDGs, inspire them to take action towards these goals, and provide a platform for users to connect with others, share their actions, and learn about events and news related to the SDGs.
7	FreeRice	SDG 2, SDG 4	The main goal of Freerice is to provide education to its users on a wide range of subjects while simultaneously fighting world hunger. Each correct answer results in a financial donation to the WFP, which uses these funds to purchase rice and distribute it to people in need around the world.
8	ShareTheMeal	SGD 2	The main goal of ShareTheMeal is to address the issue of hunger by providing a platform for users to donate directly to feed children in vulnerable communities.
9	Forest	SDG 12	The main goal of Forest is to promote responsible consumption of time and reduce digital distractions by encouraging users to stay focused on tasks, thereby increasing productivity and mindfulness.
10	Be My Eyes	SDG 10	The main goal of Be My Eyes is to promote inclusivity and reduce inequalities by leveraging technology to assist individuals with visual impairments in their daily lives.
11	Charity Miles	Primarily SDG 3, SDG 1 and SDG 17	The main goal of Charity Miles is to promote physical activity and healthy lifestyles while raising money for charitable causes. By combining fitness tracking with charitable giving, the app encourages users to exercise regularly while supporting various nonprofit organizations.
12	Rescuetable	SDG 12	The main goal of Rescuetable is to reduce food waste by connecting consumers with surplus food from local restaurants and cafes, thereby promoting responsible consumption and production practices.

13	LitterCoin (SGD 15)	SDG 15, SDG 11	blockchain reward system for anyone who wants to help map plastic pollution. Littercoin is a Citizen Science Open Data Litter-Mapping Game that allows users anywhere to receive recognition for mapping and producing open data on plastic pollution
14	Brain Pop	SDG 4, SDG 5, SDG 10	Expanding learning tools. Helping students create, construct and collaborate as they explore their world.
15	Closca Water	SDG 3, SDG 6, SDG 7, SDG 11, SDG 12, SDG 13	Eliminating plastic bottles. Their commitment is reducing single-use plastic in water consumption by means of a refill and reuse policy.
16	ME TOCA	SDG 5	Sharing house chores in a fair and well - balanced way. Reflecting on how much time each member of a family spends on house chores.
17	Mi Luz	SDG 7, SDG 11, SDG 13	It helps users save money by using electric appliances when electricity is cheaper.
18	Global Goals at Stake, Versión 1.5.6	All SDGs	Team game, where each team is assigned 2-4 SDG´s, and the teams must answer questions about the SDG´s
19	ODS Research & Action	All SDGs	Facilitate research, based on the challenges identified by users
20	Club17 SDG tracker	All SDGs	Share information, connect with others and collaborate on sustainable projects, in a local area
21	Mapting	All SDGs	A free mobile App to discover the Sustainable Development Goals and promote sustainable actions and projects through picture & video sharing.
22	SDGme (iOS)	All SDGs	SDGme is an app that allows you to track SDG actions from different lifestyles and activities, and compare them to other people, in your company, school, university, social club, etc.
23	Yindii – Sustainable Food App	SDG 2, SDG 13	Yindii is a surplus food app to rescue delicious unsold food from restaurants, cafes and grocery stores at 50% to 80% discount. Yindii is on a mission to tackle climate change by ending food waste and its consequences to the environment.

Following we are presenting the Strengths and Weaknesses that we have identified per app.

#	App	Strengths	Weaknesses
1	Aworld	**User Engagement:** Through daily challenges and progress tracking, the app effectively engages users in sustainable practices. **Educational Content:** Provides valuable information on environmental issues and sustainability, helping to raise awareness among its users. **Community Aspect:** The sense of community and shared goals enhances user motivation and commitment to sustainability.	**Adoption Barrier:** Users who are not already interested in sustainability might find it challenging to engage with the app. **Impact Measurement:** While the app tracks individual actions, measuring the real-world impact of these actions can be difficult and may not always accurately reflect the user's contribution to sustainability goals. **Feature Limitations:** Depending on the user's location and lifestyle, some app features might not be fully applicable or relevant, limiting its effectiveness in promoting sustainable habits.

IES Cristóbal de Monroy
Alcalá de Guadaíra

Fundación Avantia
For social development

RCE OM
Kompetenzzentrum für
Nachhaltige Bildung

bratislava
policy
institute

ASSIST
Innovative Minds

gluk
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your trusted partner

2	BSG for SDG	The app stands out for its and its capacity to cater to **diverse learning preferences through a range of resources.** **This adaptability and high** level of intuitiveness ensures that it can effectively engage a wide audience with varying individual **preferences and learning styles**. BSG for SDG is both a **Web App and a Mobile App**.	The app is available only in English.
3	Global Goals at Stake	The app is intuitive, and it is accompanied by a set of Rules and a comprehensive Guide for Educators, providing context, rules and recommendations on how to play the game in class. It is a multilanguage app, being available in English, Danish, Spanish, German, Turkish, French, Hungarian and Romanian.	Being a board game, Global Goals at Stake can only be played in pairs / teams and it does not enable users to monitor their progress / commitment to SDGs.
4	Litterati	**Community Engagement:** By fostering a sense of community and collective action, Litterati motivates sustained participation in cleanup activities. **Data-Driven Solutions:** The data collected through the app can inform policy and corporate decisions, providing a powerful tool for environmental advocacy. **Educational Value:** Litterati also serves as an educational tool, raising awareness about the impact of litter and encouraging responsible consumption.	**User Motivation:** Sustaining user motivation over time can be challenging, as the novelty of participating may wear off without ongoing engagement strategies. **Dependence on User Activity:** The app's impact is directly tied to user participation; without active involvement, its ability to collect data and effect change is limited. **Data Accuracy and Quality:** Relying on user-submitted data means the quality and accuracy of the data can vary, potentially affecting its usefulness for analysis and policymaking.
5	**Samsung Global Goals**	**Global Reach Integration with Samsung Ecosystem Innovative Technology Corporate Partnerships Gamification and Incentives** Innovative approach through cash-generating features: **Advertising Revenue:** The core income-generating feature of the Samsung Global Goals app is through advertisements. Users can voluntarily watch ads within the app, and 100% of the advertising revenue generated is donated to the UNDP to support various projects aligned with the SDGs. This method allows users to contribute without directly spending money. **Donations:** The app also provides a feature for users to make direct donations to the SDGs of their choice. While browsing through the goals and learning more about each one, users can choose to donate to specific projects. This direct donation is an additional way for the app to generate funds for the SDGs. **In-App Purchases:** Though not a direct method of fundraising for the SDGs, some apps may offer in-app purchases where a portion of the proceeds is dedicated to supporting related causes. In the case of the Samsung Global Goals app, the primary focus is on ad revenue and direct donations rather than in-app purchases for fundraising. Passive income sources: live wallpapers in theme with SDG's, adds viewing while charging the phone.	A weakness could be considered the **limitation to Samsung devices only** (excluding other devices). Over time sustaining user engagement may pose a challenge because of the limited features of the app. Apart from learning about the goals and potential financial contributions, **the impact of the app seems limited**.

6	SDG in Action	**Comprehensive Coverage:** Covers all 17 SDGs, providing a holistic view of sustainable development goals. **Educational Resource:** Offers valuable information on each goal, making it a great educational tool for individuals and institutions. **Engagement and Participation:** Encourages active participation through events, actions, and community features, fostering a sense of global citizenship and collective action.	**User Interface and Experience:** Some users may find the app's interface less intuitive or engaging compared to other social or educational apps, potentially affecting user retention. **Awareness and Outreach:** The app's impact is contingent on its adoption. Raising awareness about the app and encouraging downloads can be challenging, limiting its potential reach and effectiveness. **Measuring Impact:** While the app encourages action, measuring the direct impact of individual and collective actions on the SDGs can be complex and is not explicitly addressed within the app.
7	FreeRice	**Dual Impact:** Freerice supports both education and hunger relief, making it a unique platform for social good. **Accessibility:** Being a web-based platform, it's easily accessible to anyone with an internet connection, promoting wide participation. **Educational Value:** The app provides a valuable educational tool for a variety of subjects, encouraging lifelong learning and curiosity.	**Engagement:** While gamification adds an element of fun, keeping users continuously engaged over time can be challenging without regular updates and new content. **Awareness:** Despite its noble cause, Freerice might not be as well-known as other educational or humanitarian apps, limiting its potential impact. **Ad-Dependent Funding:** The model relies on ad revenue, which can fluctuate based on user engagement and external economic factors, potentially affecting the consistency of rice donations.
8	**Share The Meal**	Easy and convenient **donation process** through a **user-friendly** mobile app. Transparent and accountable use of donations, providing real-time updates on the impact of contributions. Targeted campaigns and social sharing features help mobilize resources and raise awareness about global hunger.	**Dependency on user donations** for funding may limit the scalability and sustainability of the app's impact. **Limited reach** may restrict access to the app for individuals in marginalized communities or areas with limited internet connectivity.
9	**Forest**	Encourages mindfulness and productivity by visually representing focused work with virtual trees. Offers a gamified experience with rewards for staying focused, enhancing user engagement and motivation. Promotes environmental sustainability through partnerships with tree-planting organizations, aligning with SDG 12 (Responsible Consumption and Production).	It may not be effective for all users in reducing digital distractions or improving productivity. Requires consistent use and self-discipline to achieve desired results, which may be challenging for some individuals.
10	**Be My Eyes**	Facilitates direct and immediate assistance for blind and visually impaired individuals, enhancing their independence and accessibility to information. Fosters a sense of community and social connection between blind or visually impaired users and sighted volunteers. Promotes inclusivity and reduces inequalities by leveraging technology to support and assist marginalized groups.	Reliance on volunteer availability may result in occasional delays in receiving user assistance. Limited to tasks that can be assisted through live video calls, excluding certain types of assistance that may require in-person support.

11	**Charity Miles**	Encourages physical activity and healthy life-styles by incentivizing users to exercise regularly. Provides a simple and easy way for users to support charitable causes through their everyday activities. Fosters a sense of community and social connection through team challenges and shared goals.	Relies on sponsorship and advertising revenue to generate donations, which may fluctuate and impact the consistency of charitable giving. Limited to activities that can be tracked using GPS, potentially excluding certain types of physical activity from contributing to charitable donations.
12	**Rescuetable**	Addresses a significant environmental issue by reducing food waste and promoting sustainable consumption practices. Provides a convenient and accessible platform for consumers to purchase surplus food items from local businesses at discounted prices. Supports businesses in minimizing food waste and increasing sustainability by monetizing surplus food inventory.	Relies on the participation and cooperation of local restaurants and cafes to list surplus food items on the app, which may limit availability in certain areas or from certain establishments. May face challenges in raising awareness and attracting a critical mass of users and businesses to ensure the sustainability of the platform.
13	**LitterCoin (SGD 15)**	Encourages community engagement and participation in litter clean-up activities, fostering a sense of ownership and pride in local environments. Provides tangible rewards and incentives for users to take action, motivating individuals to contribute to cleaner, more sustainable communities. Facilitates collaboration and partnerships between users, local stakeholders, and organizations to address litter and waste management challenges collectively.	Relies on user adoption and engagement to achieve meaningful impact, which may require effective marketing and outreach strategies to attract and retain users. Effectiveness may be limited by factors such as the availability of rewards or incentives, the frequency of clean-up activities, and the extent of community support and participation.
14	**Brain Pop**	The app is playful, offering engaging learning games, animated movies, and activities. Therefore, it's encouraging for the students. High quality design. Very attractive both for children and teenagers. From the point of view of students: The app has been shaped by hours and hours of use by students and teachers, and this fact guarantees its success among the target group. It's easy to use and intuitive for the students.	From the point of view of teachers: The amount of resources the app provides is huge, and teachers might find it a bit overwhelming the first time they use it. The app offers no clear step to step guide to initiate new teacher users. Such a guide would prevent such a feeling of being lost among so many choices and resources.
15	**Closca Water**	Firstly, the user is rewarded by the fact of re-filling. Therefore, getting points is motivating. Secondly, the user saves money by using the app as he or she doesn't have to pay for drinking water any more. Besides, by visiting the free refill spots, the user gets to know new places around which he or she might not have visited before (many of these places are in green areas).	At first glance, the concept of the app might be too simple. It's mainly based on a map with spots. Also, its design could be a bit more attractive.
16	**ME TOCA**	Intuitive and easy to use. Attractive for teenagers.	It requires compromise and a collaborative attitude of all the members in the family. It offers a picture of how the chores are distributed, but it doesn't provide solutions to an unbalanced distribution.

17	Mi Luz	The app is really easy to use. You choose the electric appliance you are going to use and, indicate the number of minutes it will be working. Once the app has this information, it tells you the best time to turn it on (or to program it to turn itself on). Mi Luz offers statistics which help the user know the weekly or monthly saving he or she has achieved.	It focuses on the fact of saving money, and its relation to some of the SDG is not as explicit as it ought to be. In other words, users should be aware that by using the app and adopting these habits they are helping the environment too, for example, and not just saving money.
18	Global Goals at Stake, Versión 1.5.6	It is dynamic, not only a source of information It is a game You get rewards when you prove to know things or know what to do in certain situations Players must decide what to do in different dilemmas It has been developed in five languages	It requires physical elements like the board, tokens or dice Only available for IOs, not for Android Not suitable for playing with people in the distance Limited number of questions or actions, some of which could become out of date.
19	ODS Research & Action	It provides general information about each SDG, and about each SDG in every participating country For each SDG, it asks the user about challenges and ways to accelerate the fulfilment of SDG´s It offers information about events It allows the creation or surveys for research purposes It allows networking with researchers For each user, a profile can be created, with activity, challenges, initiatives, competencies and events, which can be collaborative or not.	Only for 4 countries in Hispanic America The concepts of challenge, initiative and competence are confusing. Supposedly, for each identified challenge, different initiatives must be suggested, in order to acquire the competence It does not measure the user's competence, nor the level of compliance with the initiatives or challenges; It only counts numbers without possible comparison or reward system.
20	Club17 SDG tracker	There is an official UN video explain SDG´s Each SDG has a site with all the projects carried out in the community about it	Designed only for local communities Not easily applicable to wider audiences Not gamificated, you can not see other´s performance
21	Mapting	Easy to use, Social engagement, The Developer does not collected any data from this app	registration process is a bit harsh. A Unify license is required.
22	SDGme (iOS)	Customizable SDG actions, Ability to moderate actions, gamification, community based	registration process is a bit harsh. A Unify license is required.
23	Yindii Sustainable Food App	Great number of strong partners, commercial app	Available only in Hong-Kong, Thailand and (soon) Singapore

4.2 Features to improve

Starting from the 23 SDG APPs proposed by the different consortium members, the aim of this paragraph is focusing on those aspects which should be enhanced in our Self SDG app, as well as detecting others which should be avoided. For this reason we have gathered the desired features to include but also weaknesses to avoid in the next tables.

Strengths to include

Our Self SDG APP should be or include…	Source (APP)
It should provide valuable information on environmental issues and sustainability, helping raise awareness among its users – In other words, the app should be EDUCATIONAL.	AWORLD
It should have a high level of INTUITIVENESS (a key factor for success in our stakeholders).	BSG for SDG
It should be INNOVATIVE regarding GAMIFICATION. = The app will be ENCOURAGING for the students provided that we achieve this condition.	SAMSUNG GLOBAL GOALS BRAIN POP
It should foster a SENSE OF COMMUNITY and SOCIAL CONNECTION.	BE MY EYES
It should be developed in DIFFERENT LANGUAGES.	GLOBAL GOALS AT STAKE
It should be useful in GROUP SETTINGS such as classrooms or educational events.	SDG WHEEL OF FORTUNE
Other strengths: It should provide information about events about to happen, or up-to-date information, so it must be connected with reality	ODS Research and action
Maybe it should allow networking with users located far away	ODS Research and action
It must have a rewarding system (points)	Club17 SDG tracker
It must show movies or videos	Brain Pop

Weaknesses to avoid

Our Self SDG APP should not be or include…	Source (APP)
If the app relies exclusively on user-submitted data, the quality and accuracy of the data can vary, potentially affecting its usefulness for analysis.	LITTERATI
The app shouldn't restrict access for individuals in marginalized communities, or in areas with limited internet connectivity.	SHARE THE MEAL
The actions or activities proposed by the app shouldn't be too challenging – some apps require consistent use and excessive self-discipline to achieve desired results, and as a consequence, users lose interest.	FOREST
It shouldn't be designed only for local communities (a wider range would be desirable).	CLUB 17 SDG TRACKER
It should not be the type of app which only refers or reaches the people who are already involved in sustainability.	DER WIRKEL
Other weaknesses: It can not be available only for iOs or Android, it must be both	Global Goals at Stake, Versión 1.5.6
Not having a teacher guide can reduce the App impact	Brain Pop

4.3 Digital tools to use

Following we are presenting Digitals tools that we have identified and will have under consideration during the development of our SelfSDG app.

1. **Data Visualisation Platforms.** Data visualisation platforms are powerful tools that enable users to create visual representations of data, such as charts, graphs, and maps. These platforms often offer a wide range of features for analysing and presenting data in a visually appealing and interactive manner. Users can import datasets from various sources, perform data analysis, and design customised visualisations to communicate insights effectively. With intuitive interfaces and robust capabilities, data visualisation platforms play a crucial role in helping stakeholders understand complex data related to the Sustainable Development Goals (SDGs), identify trends and patterns, and make data-driven decisions to support SDG implementation efforts. Platforms such as Tableau, Power BI, and Google Data Studio allow users to create interactive and visually appealing charts, graphs, and maps to analyse and present data related to the SDGs. These tools can enable policymakers, researchers, and relevant stakeholders to better understand trends, identify areas of progress or challenge, and communicate insights effectively.

2. **Open Data Portals:** Open data portals are online platforms that provide access to a vast array of datasets collected by governments, international organizations, and research institutions. These portals typically offer datasets covering a wide range of topics relevant to the SDGs, including demographics, economics, health, education, and environmental indicators. Users can explore, download, and analyze data to monitor progress towards the SDGs, conduct research, and inform policy and decision-making processes. Open data portals promote transparency, accountability, and collaboration by making data freely available to the public, empowering individuals, organizations, and governments to leverage data for sustainable development. Open data portals, such as the World Bank's DataBank, UNICEF's data platform, and national statistical offices' portals, provide access to a wide range of datasets relevant to the SDGs. These platforms offer data on indicators related to poverty, education, health, environment, and more, empowering users to conduct research, monitor progress, and inform decision-making processes.

3. **Crowdsourcing Platforms:** Crowdsourcing platforms harness the collective intelligence and efforts of a large number of individuals to solve problems, gather information, or complete tasks. These platforms enable users to contribute data, insights, or expertise to projects related to the SDGs, often through web-based or mobile applications. Crowdsourcing initiatives in the context of the SDGs may involve tasks such as mapping infrastructure, monitoring environmental changes, or collecting data on social and economic indicators. By engaging citizens in data collection and analysis, crowdsourcing platforms generate localized insights, promote community participation, and support evidence-based decision-making for sustainable development. Crowdsourcing platforms such as Ushahidi, Crowd2Map, and OpenStreetMap engage citizens in collecting and mapping data on various development issues, including infrastructure, healthcare services, and environmental challenges. These platforms leverage the power of crowds to generate localized insights, support disaster response efforts, and enhance community participation in SDG-related activities.

4. **Collaboration and project management tools:** Collaboration and project management tools are software applications designed to facilitate teamwork, communication, and task manage-

ment for projects and initiatives. These tools offer features such as task boards, shared calendars, file sharing, and real-time messaging to enable teams to collaborate effectively and stay organized. In the context of SDG implementation, collaboration tools can support coordination among stakeholders, allocation of resources, tracking of project milestones, and communication of progress and updates. By providing a centralized platform for collaboration and information sharing, these tools enhance efficiency, transparency, and accountability in SDG-related initiatives, helping organizations achieve their development goals more effectively. Collaboration tools such as Trello, Asana, and Microsoft Teams facilitate teamwork, coordination, and project management for organizations working towards the SDGs. These platforms enable teams to set goals, allocate tasks, track progress, and communicate effectively, fostering efficient and collaborative implementation of development projects and programs.

Conclusion

As we strive to achieve the ambitious targets set forth by the UN Sustainable Development Goals, mobile apps serve as valuable tools for mobilizing resources, fostering collaboration, and driving positive change. By harnessing the power of technology and innovation, we can accelerate progress towards a more sustainable and equitable future for all. In this chapter we presented an overview of existing apps related to SDGs focusing on interesting features that we could include in our app but also areas that are missing and we can improve.

Chapter 5

Learn to live everyday life competently with the Self-SDG-App

Introduction

The intersection of climate change, sustainability, and education represents a critical nexus for fostering meaningful learning and behavioural change among young people. As the world grapples with the escalating challenges posed by environmental degradation, it becomes increasingly imperative to understand how educational processes can be harnessed to promote sustainability and climate consciousness. This chapter delves into the multifaceted relationship between climate change education and sustainability, exploring how learning processes can catalyse a shift towards more sustainable behaviours and mindsets.

At the core of this exploration is the recognition that significant behavioural change, particularly in the context of sustainability, requires more than just the transmission of knowledge. It involves engaging the emotions, perceptions, and cognitive frameworks of individuals. Ken Wilber's integral model serves as a foundational framework in this discussion, illustrating how change occurs both individually and collectively, and both internally and externally. By understanding these dimensions, we can better appreciate the complex interplay of factors that drive meaningful learning and change.

The SelfSDG-App aims to empower individuals by providing them with the tools and knowledge necessary to understand and tackle these complex issues. By focusing on SDG 13 (Climate Action) and integrating it with the other 16 goals, the app promotes a holistic approach to sustainable development. This is achieved through interdisciplinary actions and a comprehensive educational strategy that not only raises awareness but also fosters a sense of agency and responsibility among users.

Furthermore, the chapter examines the role of neuroscience in understanding youth engagement and commitment. Adolescence is a critical period for developing prosocial behaviours and commitments to various causes, including sustainability. By exploring the neural mechanisms underlying commitment and engagement, we can gain valuable insights into how to support and enhance these behaviours. For instance, studies utilizing functional magnetic resonance imaging

(fMRI) have shown how brain activity in regions associated with reward processing can influence young people's dedication to relationships and activities.

The SelfSDG-App leverages these insights to create an interactive and engaging learning environment. By using the app, users can self-assess their level of commitment to the SDGs, set personal goals, and receive tailored challenges designed to increase their engagement. The app's design is informed by Ken Wilber's integral model of change, which emphasizes the interplay between individual and collective experiences, as well as internal beliefs and external behaviours. This holistic approach ensures that the app addresses the various dimensions of sustainable behaviour change.

In addition to the neurological perspective, the chapter addresses the socio-psychological factors that influence youth commitment and engagement. Factors such as personality, interests, social networks, and previous experiences play significant roles in shaping how young people engage with their communities and the world at large. Programs like the Sport Commitment Model (SCM) and the Empowering Youth to Thrive (EYTT) initiative are highlighted as effective strategies for fostering higher order thinking skills and promoting resilience among youth

The primary objective of this chapter is to promote an educational approach that incorporates sustainability and climate education across curricula, equipping future generations with the tools and mindset necessary to contribute to a sustainable and resilient world. It also introduces the Self-SGD App as an innovative tool designed to help individuals in their daily lives address and engage with the Sustainable Development Goals (SDGs).

This chapter is divided into three main sections, with subchapters focusing on Climate change and sustainability with learning processes, how young people show commitment in relation to their mindsets, and the sustainable development of competences among young people and citizens in general.

5.1 Relationship between the problems of climate change and sustainability with learning processes

This chapter focuses on the urgent need to address climate change's detrimental impact on human development, emphasizing the interconnectedness of this challenge with broader sustainability goals. Highlighting the role of education, particularly Education for Sustainable Development (ESD), the text advocates for a comprehensive approach spanning all 17 Sustainable Development Goals (SDGs) to mitigate climate change. It stresses the importance of integrating climate education into educational systems worldwide and fostering awareness, behavioral shifts, and informed decision-making to build resilient, low-emission societies. By prioritizing education as a fundamental strategy, the aim is to equip individuals, communities, and nations with the necessary knowledge, skills, and attitudes to tackle climate change effectively and achieve a sustainable future.

5.1.1 The Challenge of Climate Change and Sustainable Development

One of the clearest examples of the unsustainability of human development in the last two centuries is climate change caused, fundamentally, by the increase in greenhouse gases in the atmos-

phere, which are causing global warming, and the alteration of the atmospheric dynamics. These greenhouse gases (GHG) come mainly from the accelerated combustion of so-called fossil fuels (oil, coal, natural gas) in our heating systems, motor vehicles, industry...

Among the 17 SDGs there is a specific one, SDG 13 (Climate Action: Take urgent action to combat climate change and its impacts), responsible for specifically addressing this challenge; but given that its effects have a moderate or high impact on other elements (water, forest, food, health...), in reality, it is a phenomenon that can be addressed transversally through the actions carried out to achieve compliance with all the SDGs. In other words, it is a major challenge for Humanity, which can and must be addressed through interdisciplinary action, through numerous reduction, adaptation and mitigation actions, which cover all of the 17 SDGs.

The drastic decreases in seasonal ice at the Earth's poles, the rise in sea level, changes in precipitation regimes that cause significant droughts or floods, as well as the increase in the frequency of extreme weather events are just some of the effects of the warming and changes in the planet's climate. Human and livelihood losses are increasing, especially in Africa and Small Island Developing States (SIDS). Without exception, all countries will be affected, demonstrating that climate change mitigation and adaptation are necessary to address one of the world's greatest challenges today. Climate change is a complex global problem as it is interrelated with many other issues, such as economic development and poverty reduction. Developing countries contribute the least to climate change, but are most at risk of being affected by its effects[3].

Education is the most effective tool to prepare societies for the global challenges posed by climate change, providing individuals, communities and the world at large with the knowledge, skills and attitudes needed to build sustainable societies, with low emissions and resilient to climate change. Education for Sustainable Development (ESD) is not an "extra", but an essential component of any strategy to combat the effects of climate change, implement a global agreement and achieve the Sustainable Development Goals (SDGs). ESD contributes to raising awareness and changing behaviors and attitudes and allows people to make informed decisions about their lives .3 Perhaps the most important is that education can produce a fundamental change in our way of thinking and acting and of fulfilling our responsibilities towards others and towards the planet. Therefore, addressing the problem and its possible solutions through education, it is accepted as one of the necessary actions, which must be implemented in all countries , and in all stages of the educational systems.

We are talking about Education for Sustainable Development, and even Education for the fight against Climate Change, which must be developed through performances in diverse areas, as stated at the:

Basic education program about the change climate for Sustainable Development Goals:

1. Strengthen the capacity of Members States of delivering an education about the change climate for sustainable development, of high quality in the primary and secondary schools, through :

- – an improvement in policies , educational analysis , research and planning ;
- – the education of teachers and the training of educational planners ; and
- – the formation of the review or reform of study plans .

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3. UNESCO (2017) Changing minds , not the climate: the role of education (ED-2017/WS/49 REV). https://unesdoc.unesco.org/ark:/48223/pf0000266203

2. Promote and improve innovative educational approaches , in order to integrate an education about climate change for quality sustainable development in schools , through :

– interdisciplinary practices;

– scientific education;

– whole school approaches;

– technical and vocational education and training (TVET); and

– disaster risk reduction education.

3. Raise awareness about climate change and improve non - formal education programmes, through the media , networking and establishing collaborative partnerships.

UNESCO published in 2017 a document called *Getting climate-ready: a guide for schools on climate action*[4], in which they propose four areas of action in the schools :

– School government

· Guideline # 1 Creating A Climate Action Team

– Teaching and Learning

· Guideline # 2 Teach Climate Change in All Subject Areas

· Guideline # 3 Teach Critical, Creative and Futures Thinking

· Guideline # 4 Empower Students to Take Action

– Facilities and Operations

· Guideline # 5 Make Your School a Model of Climate Action

– Community Partnerships

· Guideline # 6 Build Community Partnerships for Learning and Teaching.

But to achieve those three objectives of the Basic Climate Change Education Program for Sustainable Development; developed in the four areas of action in schools, through the six guidelines; and especially to achieve a change in methodological approaches, and raising awareness about climate change and sustainability; It is necessary to know what are the elements that really cause in human beings, and especially in young people, significant learning that implies a real change in behavior, the ultimate objective of our SelfSDG Project.

5.1.2. Approaches to Achieving Sustainable Development Goals

In this section, we delve into the multifaceted approaches necessary to effectively address the challenges posed by climate change and achieve sustainable development goals. Building upon the foundational understanding established in the preceding section, we explore theoretical frameworks and practical strategies to foster significant behavioral change and promote sustainable practices. By examining key variables, necessary conditions, and impactful learning processes, we illuminate the path towards meaningful action and reflection in pursuit of a more sustainable future.

4. Gibb , Nathalie. UNESCO (2017). Getting climate-ready: a guide for schools on climate action. https://unesdoc.unesco.org/ark:/48223/pf0000246740

Ken Wilber, American philosopher and writer, created a model to explain how the process of change occurs, interrelating two key variables:

· One is determined by whether the life experience is individual or collective.

· The other is given by whether this experience is internal or external.

The first of these two variables indicates that the change process occurs in a dimension of the individual as a unitary system that evolves. Still, it is also possible thanks to the movements that are produced by the set of individuals that form a more complex system and in which they interact with each other.

The second variable indicates that the change occurs from the internal beliefs and paradigms present in these individuals or systems, but it also appears from the external manifestations or behaviors that they carry out[5]. The combination of both variables gives rise to the four quadrants that Wilber establishes as fundamental in his integral model (see Image 01)
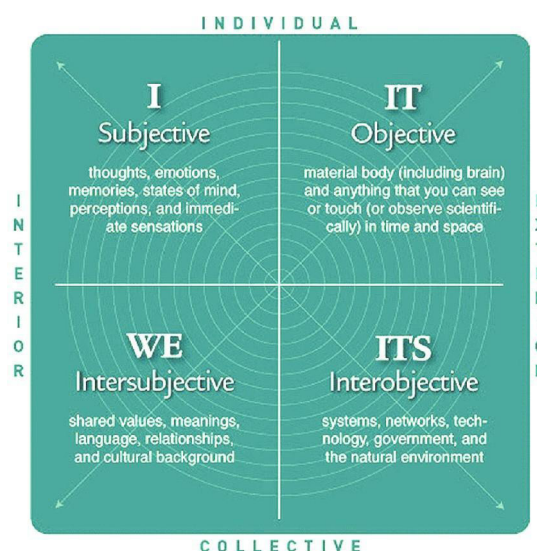
Thus, we see that significant learning processes, capable of generating changes in action, are based on:

· Emotions. Kollmuss and Agyeman (2002)[6] identify fear as a major obstacle to developing awareness of the sustainability crisis. On the other hand, they cite evidence that a strong felt connection to the natural world is often crucial in leading people to act.

· Perceptions of agency. Without agency, the feeling of being able to do something meaningful in response to the problems we want to combat, people will not be prepared to carry the burden of conscience.

· Old behavior patterns are identified as one of the most important obstacles to change.

5. Wilber, K. (2000). Integral Psychology. Boston: Shambhala.
6. Kollmuss , A., & Agyeman, J. (2002). *Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behaviours*. Environmental Education Research , 8(3), 239-260.

- Shared values, beliefs, and world views.
- Skills and knowledge are not sufficient but necessary
- Memories and mental states which persist long-term in people
- Immediate sensations
- Observable elements
- Relationships

In short, both the information that our SelfSDG Project App offers, as well as the way to self-assess the level of commitment to the 17 SDGs, as well as the challenges posed to increase that level of commitment; they all must appeal to these elements related above, to achieve a real and lasting impact on users.

Four necessary conditions are proposed to respond to the challenge of sustainable development. These are:

a) 'awareness' of what is happening and what is required,

b) 'agency' or the ability to find an answer that seems personally meaningful,

c) 'association' with other people in groups and networks.

Each of them is necessary but insufficient separately, which means that any change program must work on all three. To successfully achieve this and commit to the vital contextual agenda outlined above, a key process is required, that of

d) 'action and reflection'. This allows real actions to be carried out, once the three previous conditions have been met; and also obtain a reflection on the impact of those actions that helps us provide feedback to our awareness and capacity for action.

As a summary, a significant change in behavior in people can only occur when a series of conditions are met, and when learning models that have a neurological impact are put into practice, as will be addressed in the next section.

This chapter showed how important it is to connect climate change, sustainability, and education. We learned that teaching about sustainability isn't just something extra—it's really important for fighting climate change and making our world better. Using Ken Wilber's ideas, we see that learning and changing how we act come from what we believe, what we do, and what happens around us. To make a real difference, education needs to include these things, teaching us how to act sustainably in our daily lives. We need to keep working on educational strategies that help us understand and deal with climate change so we can build a better future together.

5.2 Exploring How Young People Show Commitment Through Brain Activity

Introduction

As teenagers navigate the complexities of growing up in today's world, the idea of commitment becomes a factor that shapes their choices and actions. In this section, we look at how neurosci-

ence intersects with commitment levels, seeking to uncover the brain mechanisms that fuel their dedication. By studying these brain connections, we can gain insights for developing targeted support and interventions that cater to the needs of youth. Various socio-psychological factors influence young people's commitment to civic engagement and community service. Studies show that participation in community service activities in high school can predispose students to continue their involvement in college[7].

Additionally, young individuals' activity level and participation in social networks is influenced by personality, interests, and previous degrees of implication[8]. Neurobiological development plays a role in facilitating age differences in prosocial behavior, with early adolescents showing unique patterns of brain activation related to costly and non-costly prosocial decisions[9]. Furthermore, the Sport Commitment Model (SCM) highlights that social variables and enjoyment significantly predict commitment in youth participating in Taekwondo. At the same time, involvement opportunities and personal investments are critical predictors for youth and adults[10].

Key Highlights

– The intersection of Neuroscience and Commitment: Understanding the neural mechanisms of commitment is crucial for providing targeted support to youth during adolescence.

– Socio-psychological Factors: Factors like personality, interests, and social networks influence youth commitment, with community service involvement in high school correlating with continued engagement in college.

– Brain Connections in Commitment: Studies using fMRI show increased brain activity in reward-processing regions when young adults demonstrate commitment within relationships, revealing neural substrates of commitment.

– Significance for Youth Development: Enhancing students' commitment to learning and promoting resilience are vital for their growth, leading to higher self-esteem and academic motivation.

– Youth Engagement and Brain Science: Initiatives like the Empowering Youth to Thrive program improve higher-order thinking skills, while the Youth-Led Community Health Learning Initiative addresses health disparities.

– Neurobiology of Engagement: Dopamine release in the striatum correlates with effort in obtaining rewards, influencing youth motivation in engagement.

– Importance for Personal Development: Actively engaging in activities fosters skills essential for success, contributing to youth's personal development and building inclusive communities.

7. Susan, R., Jones., Kathleen, E., Hill. (2016). Understanding Patterns of Commitment. The Journal of Higher Education, doi: 10.1080/00221546.2003.11778888

8. Egor, V., Nevsky. (2020). *Analysis of Relationship between Commitment to Civic Engagement and Socio-Psychological Characteristics of Students*. doi: 10.18500/2304-9790-2020-9-4-377-384

9. Ricardo, Vizcaíno-Laorga., Beatriz, Catalina-García., MC, López, de, Ayala-López. (2019). *Participation and commitment of young people in the digital environment. Uses of social networks and perception of their consequences*. doi: 10.4185/RLCS-2019-1345EN

10. Jung-Hwan, Jeon., Jonathan, M., Casper. (2016). *Psychological antecedents of youth versus adult participation: An examination based on the Sport Commitment Model. Journal of Animal Science*, doi: 10.17161/JAS.V0I0.5049

5.2.1 Brain Connections Related to Commitment Among Young People

Commitment is a part of behavior that involves the determination and perseverance individuals demonstrate toward different goals and activities. In adolescence, commitment is evident in academics, relationships, and extracurricular pursuits. At its heart are complex brain processes that impact motivation and decision-making. For example, a study by Meyer Lindenberg (2012[11]) used functional magnetic resonance imaging (fMRI) to explore how brain activity relates to commitment within relationships among young adults. Their results showed increased brain activity in the striatum—a region linked to processing rewards—when participants viewed images of their partners compared to acquaintances.

Significance for Youth Development: Understanding the basis of commitment among adults has profound implications for their growth. In education, interventions that enhance students' commitment to learning can benefit from neuroscience findings to develop strategies that improve academic success. Moreover, in health, knowledge about how neural processes impact commitment can guide interventions that promote resilience and well-being among individuals dealing with stress and challenges. The commitment extends beyond relationships and influences aspects of youth development. Adolescents who show dedication to activities like sports, arts, or community service often exhibit higher levels of self-esteem, social connections, and motivation for academics. Studies over time have shown that a solid dedication to goals in adolescence can indicate future success in education and career. This highlights how vital commitment during this period can be for long-term achievements.

5.2.2 Exploring the Brain Science Behind Youth Engagement

Engagement is a vital behavior element in motivating and involving young individuals in various activities. Delving into the foundations of engagement offers insights into what drives youth participation and sets the stage for well-informed strategies to nurture their overall growth. The intersection of brain science and youth engagement is a burgeoning field with significant implications. Research has shown that neuroscience research programs, like the Empowering Youth to Thrive (EYTT) program, can enhance brain pathways to improve higher-order thinking skills in youth, aiding in their successful training and employment opportunities[12]. Additionally, involving young learners in Mind, Brain, and Education (MBE) research through programs like research assistant initiatives has been found to foster holistic development by enhancing academic and non-academic skills[13]. Furthermore, initiatives such as the Youth-Led Community Health Learning Initiative (YLCHLI) have demonstrated the benefits of youth engagement in community health planning, providing rich insights into disparities in health issues and offering actionable opportunities for community health improvement[14]. These findings underscore the importance of leveraging brain science to enhance youth engagement and development across various domains. On a level, engagement entails an interaction among neurotransmitters, brain circuits, and cognitive functions. Key brain areas linked

11. Meyer-Lindenberg, Andreas. *The future of fMRI and genetics research*. NeuroImage 62, no. 2 (2012): 1286-1292.

12. Lisa, M., Keegan., Jennifer, Leigh, Cartmel., Paul, L., Harris. (2020). *I've Changed, I'm Smarter: Empowering Youth to Thrive Neurosequential Approach to Employment, Education and Training Outcomes for Youth*.   doi: 10.22158/CT.V3N1P16

13. (2023). *Emerging Impacts of Involving Young Learners in Mind, Brain and Education Research*.   doi: 10.35542/osf.io/2463q

14. Andrew, E., Springer., Allison, Marshall., Randy, Randolph., Anna, V., Wilkinson., Barri, Rosenbluth., Amanda, Cortez., Meg, Greene., Leigh, Ann, Ganzar., Susan, Millea., Ashley, Levulett., Miguel, Delgado-Ochoa., Norris, Sebastian. (2022). *Exploring Models for Youth Engagement in Community Health Planning: The Youth-led Community Health Learning Initiative. Progress in Community Health Partnerships*,   doi: 10.1353/cpr.2022.0015 and also Robert, Blakey. (2017). *Does Watching a Play about the Teenage Brain Affect Attitudes toward Young Offenders. Frontiers in Psychology*,   doi: 10.3389/FPSYG.2017.00964

to engagement include the cortex, which oversees decision-making skills, and the limbic system, which controls emotions and drive. Neurotransmitters like dopamine and serotonin regulate pleasure and mood states, impacting how likely young people are to engage in tasks.

Studies have indicated that dopamine release in the striatum is connected to young individuals' efforts to obtain rewards. This underscores the processes that drive motivation within engagement. Further investigations focusing on youth involvement at school have identified factors such as interest in learning, feeling connected, and receiving support from teachers and peers as factors influencing success and overall happiness. **Grasping the neurobiology of youth engagement is vital for their growth and well-being**.

> ## Key highlights on how engagement and participation are improving the mental health of young people[15]
>
> – Sense of belonging: Active involvement in community, social, or recreational activities helps young people feel connected and supported by others, fostering a sense of belonging essential for good mental health.
>
> – Skill development: Participation in various activities allows young individuals to develop new skills and competencies, enhances self-confidence, and gives them a greater sense of control over their lives, reducing feelings of helplessness and anxiety.
>
> – Social support network: Interacting with peers, mentors, and role models through different activities promotes the formation of strong social connections and networks, providing emotional support during challenging times.
>
> – Reduced isolation: Increased engagement in daily life reduces the likelihood of feeling isolated and lonely, contributing to better mental health outcomes. Loneliness has been linked to an increased risk of depression, anxiety, and other mental health issues.
>
> – Physical activity: Many extracurricular activities involve physical movement, which promotes overall well-being and helps alleviate symptoms associated with stress, anxiety, and mild depression.
>
> – Purpose and meaning: Engaging in meaningful activities gives young people a sense of purpose and direction, contributing to positive mental health and overall satisfaction with life. A lack of purpose or goals can lead to feelings of aimlessness and dissatisfaction.
>
> – Coping mechanisms: Developing hobbies and interests outside of academic pursuits enables young people to build resilience and learn alternative coping strategies when faced with adversity, thus protecting against mental health challenges.
>
> – Positive identity formation: Engaging in diverse experiences supports healthy identity development. It exposes young people to various roles, perspectives, and values, allowing them to explore their strengths and passions.
>
> – Stress reduction: Engaging in enjoyable activities offers opportunities for relaxation and distraction from daily pressures, decreasing stress levels and its negative impact on mental health.
>
> – Prevention and early intervention: Regular engagement in daily life may help identify potential mental health concerns earlier, enabling timely access to appropriate interventions and support services.

15 Haim-Litevsky D, Komemi R, Lipskaya-Velikovsky L. *Sense of Belonging, Meaningful Daily Life Participation, and Well-Being: Integrated Investigation*. Int J Environ Res Public Health. 2023 Feb 25;20(5):4121. doi: 10.3390/ijerph20054121. PMID: 36901132; PMCID: PMC10002207.
O'Donnell, Alexander W., Gerry Redmond, Alex A. Gardner, Joanna J. J. Wang, and Anna Mooney. *Extracurricular Activity Participation, School Belonging, and Depressed Mood: A Test of the Compensation Hypothesis during Adolescence.* Applied Developmental Science, (2023), 1–16. doi:10.1080/10888691.2023.2260745.

Conclusion

Understanding how young people show their commitment through brain activity to meet their needs better and promote outcomes is essential. Combining neuroscience with commitment research provides insights into what drives youth involvement and dedication in areas of life. Using techniques like functional magnetic resonance imaging (fMRI), researchers have identified patterns of brain activation linked to commitment in adults, especially in relationships. This reveals the mechanisms that support commitment behaviors, offering insights into how the brain influences decision-making and motivation in youth. Furthermore, recognizing the importance of commitment in youth development goes beyond growth to societal impacts. Adolescents committed to activities like academics, sports, or community service often have self-esteem, social connections, and greater motivation for future achievements. This highlights the role that commitment plays in shaping long-term success and well-being. Exploring the neuroscience of engagement helps us understand the processes that drive youth participation and motivation. Insight into the brain mechanisms involved in engagement can guide the development of interventions and support systems grounded in evidence empowering individuals to excel academically, socially, and emotionally.

Drawing on knowledge from neuroscience, teachers, guardians, and decision-makers can craft plans to boost people's participation and nurture their overall growth. It also plays a role in constructing solid and welcoming communities for tomorrow. By exploring dedication and involvement in youths, we can pave the path for their prosperity and happiness, establishing a base for their contributions to society.

5.3 Description of a competence model and the different competence levels

5.3.1. Introduction

Curriculum policies worldwide are increasingly oriented on competences necessary for employability, personal fulfilment, and active citizenship. Learners' competences represent an ultimate goal and a core of the competence-based curriculum.

Education for sustainable development (ESD) is recognised as an integral element of quality education and, simultaneously, a key to co-creating more just, peaceful and sustainable communities, thus contributing to the implementation of global Sustainable Development Goals (SDGs)[16]. Developing relevant competences of learners and educators is considered a prerequisite for responsible action for sustainable development. Emphasising the leading role of international organisations in ESD, appropriate documents by the UNESCO and the European Commission are used as the reference.

The Framework aims, first of all, to provide a strategic context and conceptual background as well as to identify learning outcomes to be developed at the school. It includes cognitive, social and emotional, and behavioural domains that are all important in holistic education. Transdisciplinary topics related to SDGs provide relevant context for competence development because of their

16 United Nations (2015). *Transforming our World: The 2030 Agenda for Sustainable Development, A/RES/70/1*. https://sdgs.un.org/2030agenda

interpretation by different school subjects, from one side, and a focus on authentic, purpose-driven action from another. SOLO taxonomy[17] (Structure of Observed Learning Outcomes) ensures relevant reference points for learning and assessing competences, particularly emphasising increasing complexity.

The Framework is not intended to be prescriptive, particularly considering different educational settings, socio-cultural contexts and experiences. It should be considered a flexible guide to be used in reorienting competence-based curriculum to transformative education according to national circumstances.

For effective development of competences, all learning dimensions – cognitive, socio-emotional and behavioural – need to be developed in conjunction to create synergistic and holistic impacts on learning outcomes.

5.3.2. Competences for sustainable development

"Education is no longer just about teaching learners something but about helping them develop a reliable compass and the tools to confidently navigate through a complex, volatile, and uncertain world."

Building the future of education[18]

Sustainable development is not a scientific concept but rather a general political commitment to ensure human well-being, societal health and limited environmental impact. It requires active, creative, and critical citizens who are good at overcoming problems and conflicts in cooperation and are able to combine theoretical knowledge with practical innovations and ideas. Education is the most powerful instrument for change towards sustainability both at the personal and societal levels. The set of 17 SDGs covers all the key challenges important for societal transformation. Transformative education also requires different educational methods rooted in the local socio-cultural contexts and engaging learners as researchers or co-developers of practices.

To be efficient, education should reflect the principles of sustainable development itself. While there could be various interpretations of sustainability principles, depending on specific implementation area, the following four principles are fundamental:[19]

– the normativity principle;

– the equity principle;

– the integration principle;

– the dynamism principle.

Sustainability principles bring essential aspects to all learning dimensions (cognitive, social and emotional, and behavioural) and corresponding constructs of learning outcomes (competences).

17. Biggs, J., Collis, K. (1982). *Evaluating the quality of learning: The SOLO taxonomy (structure of the observed learning outcome)* New York: Academic Press.
18. OECD (2022). Building the future of education, p. 3.
   https://www.oecd.org/education/future-of-education-brochure.pdf
19. Waas,T., Hugé, J., Verbruggen, A., Wrigh, T. (2011) *Sustainable Development: A Bird's Eye View. Sustainability*, 3, 1637-1661.
   https://www.mdpi.com/2071-1050/3/10/1637

Humanistic values, such as respect for life and human dignity, equal rights and social justice, cultural and social diversity, and a sense of human solidarity and shared responsibility for our common future, are equally important for sustainable development and ESD. On the other hand, an initiative for positive change in the community requires considering citizenship as an indispensable component of ESD.

Sustainable development always implies societal and normative choices, which are ultimately based on values. These values cannot be taught directly. Instead, learners should be provided experiences of a personal relationship with the issue under consideration. Authentic learning environments like nature, social and cultural environments, cultural heritage, and the arts are critical elements of ESD and the competence-based curriculum.

A holistic worldview requires an inter- and transdisciplinary approach in education in order to address complexities in exploring social, cultural, economic and environmental issues. Rapid changes in different areas of life call for continuous learning and reflection processes, exploring controversial issues and dilemmas, where appropriate decisions and solutions may change as our experience increases.

SDGs, as a reflection of the complex trends in sustainable development, are transdisciplinary. They provide an opportunity to concentrate teaching and learning on real-world problems or themes, involving all relevant disciplines. Current situations or students' own interests often generate the starting point. Cross-curriculum connections make learning more holistic and meaningful for learners. Certainly, there is a possibility to introduce SDG topics in a single subject. However, there is a risk of limited (one-side) interpretation and additional time needed in the subject syllabus.

Integration of SDGs in the curriculum doesn't mean inserting new thematic modules into an already overcrowded curriculum or minimising the importance of academic content. Instead, it is about reorienting subjects to achieve higher-order learning outcomes through a double-purpose process: students acquire subject knowledge and skills and, at the same time, learn how to contribute to a sustainable transformation of society.

There is general agreement on eight key competences for sustainability that allow a person to engage constructively and responsibly with today's world[20]. Key competences are understood as transversal (context-independent) and include the following: Systems thinking, Anticipatory, Normative, Strategic, Collaboration, Critical thinking, Self-awareness, Integrated problem-solving. A targeted selection of key competences (transformative competences) represents a distinctive feature in relation to the competence-based curriculum[21].

The European Commission (EC) is committed to meeting the SDGs, and quality education (SDG 4) is a key to achieving all SDGs. Recently, EC presented two competence frameworks which are

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20. UNESCO (2017). Rieckmann, M. (ed.) *Education for sustainable development goals: Learning objectives*. UNESCO publishing. https://unesdoc.unesco.org/ark:/48223/pf0000247444_eng

21. *"Competency-based curriculum: a curriculum that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally-defined subject content. In principle such a curriculum is learner-centred and adaptive to the changing needs of students, teachers and society. It implies that learning activities and environments are chosen so that learners can acquire and apply the knowledge, skills and attitudes to situations they encounter in everyday life. Competency-based curricula are usually designed around a set of key competences/competencies that can be cross-curricular and/or subject-bound."* http://www.ibe.unesco.org/en/glossary-curriculum-terminology

compatible with sustainable development, i.e. *LifeComp*[22] and *the European Sustainability Competence Framework*, i.e. *GreenComp*[23]. These frameworks cover competences needed by learners of all ages to live, work and act in a sustainable manner.

However, particularly at the school level, it is crucial to ensure a holistic learning experience based on a balance of interrelated cognitive, socio-emotional and behavioural components. For this reason, as well as taking into account LifeComp and the GreenComp as well as Future of Education and Skills 2030,24 the following constructs of competences are presented in Table 2 and described in Annex 1.

Table 2. Dimensions of learning vs. Key abilities

Competences for sustainable development	
Dimensions of learning	**Key abilities**
Cognitive	Critical thinking; Systems thinking; Creative thinking
Social and emotional (personal)	Communication; Collaboration; Solidarity
	Reflexivity; Value-orientation; Responsibility
Behavioural	Exploring alternative futures; Innovative decision; Transformative action

In this context a holistic perspective should also be emphasised: the Framework covers a complex of equally relevant, interrelated and interdependent learning outcomes. To cope with any given situation, individuals activate several abilities, which will vary to address the demands of each circumstance. The values embedded in cultures form a foundation for personal and social development.

Assessment of a competence seems to be the main challenge in the competence-based curriculum. A competence means the proven ability of the learner to apply knowledge and skills in value-driven activities, including different learning settings and real-life situations. In order to capture progression in competence development, a relevant taxonomy is necessary. In the Framework SOLO taxonomy[25] is recommended as a basis for the description of learning outcomes. SOLO stands for Structure of Observed Learning Outcomes and describes progressive levels of student achievements.

SOLO taxonomy stimulates the creation of a relational context and relational learning processes to foster transformative sustainability education. Within the SOLO taxonomy, knowledge and understanding are described as an increase in the number and complexity of connections that learners make as they progress from low to high levels of competence development. The focus is on

22. *EC (2020) LifeComp: The European Framework for Personal, Social and Learning to Learn Key Competence*. doi:10.2760/302967, JRC120911.
https://publications.jrc.ec.europa.eu/repository/handle/JRC120911
23. *EC (2022). The European sustainability competence framework*. doi:10.2760/13286, JRC128040.
https://publications.jrc.ec.europa.eu/repository/handle/JRC128040
24. *OECD (2020). The Future of Education and Skills 2030*.
https://www.oecd.org/education/2030-project/contact/OECD_Learning_Compass_2030_Concept_Note_Series.pdf
25. Biggs, J., Collis, K. (1982). *Evaluating the quality of learning: The SOLO taxonomy (structure of the observed learning outcome)* New York: Academic Press.

depth and quality of understanding rather than quantity of information. It should be emphasised that the direction of increasing complexity is a basis for systems thinking.

Similar logic is used in describing the student's action, starting from the declarative knowledge and action according to instruction/ example – to planning and implementation of innovative activity as well as reflection in a context of sustainable development/ the SDGs (see Table 3).

5.3.3. Conclusion

Assessment of competences is a main challenge in the competence-based curriculum. A competence is the proven ability of learners to apply knowledge and skills in value-driven activities across different learning settings and real-life situations. To capture progression in competence development, the SOLO taxonomy is recommended. It describes progressive levels of student achievements, emphasizing the creation of a relational context and learning processes that foster transformative sustainability education. Increasing complexity is key, moving from declarative knowledge and action according to instruction to innovative activity planning, implementation, and reflection within the context of sustainable development and the SDGs.

Table 3. Characteristics of SOLO levels

SOLO levels					
Dimensions of learning	**Elements of competence**	**Uni-structural**	**Multi-structural**	**Relational (systemic)**	**Extended Abstract**
		Surface learning		Deep learning	
Cognitive	Knowledge and understanding (application)	Disciplinary, procedural	Multi-disciplinary, procedural	Inter-disciplinary, epistemic	Trans-disciplinary/ contextualised, epistemic
Behavioural	Performance	According to instruction/ example	Self-directed, planned	Purposeful, problem solving	Responsible, value oriented
Social and emotional	Attitude (as reflected in performance)	Accepted (given) attitude	Different attitudes, looking for arguments	Different attitudes, looking for inter-relationships	Authentic attitude, based on democratic/ humanistic values

Annex 1

Key ability	Description
Cognitive	
Critical thinking	to question and evaluate ideas, solutions, norms and practices; identify strengths and weaknesses of evidence, arguments, claims and beliefs; reflect on own one's values, perceptions and actions; take a position in the sustainability discourse according to the sustainability criteria.
Systems thinking	to recognise and understand relationships; analyse complex systems; research how systems are embedded within different fields and different scales; and deal with uncertainty.
Creative thinking	to approach a problem or challenge from a new perspective, alternative angle, or with an atypical mindset ("think outside the box"); engage productively in the generation, evaluation and improvement of ideas that can result in original and effective solutions; reflect and assess the appropriateness of the chosen alternative and its possible consequences.
Social	
Communication	to communicate respectfully and constructively in different environments (including multicultural); utilise multiple media and technologies as well as networking tools; express and understand different viewpoints; be tolerant and prepared both to overcome prejudices and to compromise.
Collaboration	to identify team members/ stakeholders and their interests; motivate and facilitate participatory decision-making and commitment for implementation; work effectively in diverse teams by distributing responsibilities and leadership; exercise negotiation and consensus building in conflict resolution.
Solidarity	to understand and respect the different values, needs and perspectives of individuals/ groups; debate and explore equity and justice in resolving dilemmas and conflicts; facilitate social cohesion; collaborate with others in the common or public interest, including the sustainable development of society.
Personal	
Reflexivity	to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires with empathy.
Value -orientation	to identify and clarify values, understand and reflect on the norms and values that underlie one's actions; negotiate sustainability values, principles, goals, and targets as well as make appropriate decisions and judgments; and act in accordance with such judgements.
Responsibility	to promote and support human rights, social and cultural diversity, and to take responsibility for the environment; to evaluate the consequences of their own actions and of collective actions; handle obstacles and change; and participate in civic and social life.
Behavioural	
Exploring alternative futures	to understand and evaluate multiple futures – possible, probable and desirable; create one's own visions for the future; apply the precautionary principle; deal with uncertainties, risks and dynamic situations.
Innovative decision	to search for new information; design and evaluate scientific inquiry within complex systems; develop new knowledge, insights, ideas, techniques, strategies and solutions and apply them in real-life situations; make informed decisions based on data/ evidence, scientific arguments and value clarification.
Transformative action	to apply different approaches to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development; collaboratively plan, mobilise resources (people and things) and implement innovative actions that further sustainability at the local level and further afield.

Conclusion

Throughout the chapter, the interconnectedness of the 17 Sustainable Development Goals is highlighted, with a particular focus on how addressing climate change (SDG 13) necessitates a comprehensive, interdisciplinary approach. The SelfSDG-App serves as a powerful tool in this context, enabling users to not only learn about sustainability but also to actively engage in behaviors that contribute to the achievement of these goals.

The intricate relationship between climate change education, sustainability, and youth engagement underscores the need for a multidimensional approach to fostering meaningful behavioural change. This chapter has highlighted the critical role of educational processes in promoting sustainability, drawing on insights from neuroscience, socio-psychological theory, and competence-based education.

Neuroscience provides a valuable lens through which we can understand the mechanisms of youth engagement and commitment. Studies utilizing techniques like fMRI have revealed how brain activity in regions associated with reward processing can influence young people's dedication to various causes. These insights are crucial for developing targeted interventions that support and enhance prosocial behaviours during adolescence, a formative period for developing long-term habits and commitments.

Socio-psychological factors also play a significant role in shaping youth engagement. Personality traits, interests, social networks, and previous experiences all influence how young people interact with their communities and the environment. Programs like the Sport Commitment Model (SCM) and the Empowering Youth to Thrive (EYTT) initiative demonstrate the effectiveness of leveraging these factors to foster resilience and higher-order thinking skills among youth.

Moreover, the development of a competence model for sustainable development is essential for preparing learners to navigate the complexities of the modern world. By aligning educational objectives with the Sustainable Development Goals (SDGs), educators can equip students with the skills and knowledge necessary for responsible action towards sustainability. This approach not only enhances employability and personal fulfilment but also fosters active citizenship and community engagement.

Ultimately, the chapter emphasizes that significant behavioural change requires a holistic approach that engages the emotions, perceptions, and cognitive frameworks of individuals. Ken Wilber's integral model illustrates how change occurs both individually and collectively, and both internally and externally. By understanding these dimensions, we can develop more effective strategies to inspire and empower the next generation to take meaningful action towards a sustainable future.

In conclusion, the intersection of climate change education, sustainability, and youth engagement represents a critical area for research and practice. By drawing on insights from neuroscience, socio-psychological theory, and competence-based education, we can develop comprehensive strategies to promote sustainability and climate awareness among young people. This holistic approach is essential for fostering the behavioural change necessary to address the pressing environmental challenges of our time. Through continued exploration and innovation in educational practices, we can pave the way for a more sustainable and resilient future for all.

Chapter 6

Justification for the Creation of an SDG Self-Assessment Matrix

The interconnected nature of the Sustainable Development Goals (SDGs) demands an interdisciplinary approach to fostering behavioral change and long-term engagement. The SDG Self-Assessment Matrix serves as a crucial tool in this context, allowing individuals to evaluate their personal commitment to sustainability while identifying pathways for deeper involvement.

Bridging Awareness and Action

Research highlights that awareness alone is insufficient to drive meaningful change; individuals require structured guidance to translate knowledge into action. Neuroscientific insights suggest that sustained commitment to a cause—such as poverty eradication (SDG 1) or climate action (SDG 13)—is reinforced when people can track their progress, experience intrinsic rewards, and engage emotionally with the issue. The Self-Assessment Matrix provides a scaffolded approach that helps users recognize where they stand and what steps they can take to enhance their impact.

A Structured and Inclusive Approach

The matrix aligns with competence-based education by offering progressive engagement levels:

- Basic – Awareness and minimal action.
- Intermediate – Active learning and small-scale contributions.
- Advanced – Sustained involvement and community impact.
- Ambassador – Leadership in advocacy and systemic change.

By structuring engagement in this way, the matrix provides an inclusive framework that accommodates diverse experiences, motivations, and socio-economic backgrounds, making it an adaptable tool for learners, professionals, and communities.

Enhancing Youth Engagement and Motivation

Adolescence is a critical period for identity formation and social responsibility. Research in socio-psychological theory and youth engagement models—such as the Sport Commitment Model (SCM) and Empowering Youth to Thrive (EYTT)—demonstrates that structured goal-setting and clear progress markers can significantly enhance motivation. The Self-Assessment Matrix functions as a motivational guide, providing tangible indicators of personal development and fostering higher-order thinking skills related to sustainability.

Integration with Educational Practices

The matrix is a valuable pedagogical tool for educators, aligning with the United Nations' Education for Sustainable Development (ESD) framework. By integrating it into curricula, teachers can:

– Facilitate self-reflection among students on their sustainability practices.

– Encourage peer-to-peer learning and collaborative action.

– Support competence development in critical thinking, ethical responsibility, and global citizenship.

– Empowering Holistic and Systemic Change

Inspired by Ken Wilber's Integral Model, the matrix operates at both individual and collective levels:

– Internal (Individual Level): Changes in knowledge, attitudes, and self-perception.

– External (Individual Level): Concrete actions such as volunteering, sustainable consumption, and advocacy.

– Internal (Collective Level): Cultural shifts in organizations, schools, and communities.

– External (Collective Level): Policy influence, institutional engagement, and systemic change.

Conclusion

The SDG Self-Assessment Matrix bridges the gap between knowledge and action, fostering engagement, motivation, and accountability in sustainability efforts. By combining insights from neuroscience, socio-psychological theory, and competence-based education, it serves as a transformative tool for individuals, educators, and policymakers committed to achieving the SDGs. Through continued exploration and integration, the matrix can drive long-term behavioral change and collective impact, paving the way for a more sustainable and resilient future.

Self-Assessment Matrix for Commitment to SDG 1: No Poverty

Level	Self-Assessment Criteria
Basic	– I know about SDG 1 and its main objective. – I can identify some issues related to poverty in my surroundings. – I occasionally share information about poverty on social media or in conversations.
Intermediate	– I actively inform myself about poverty and its causes. – I participate in awareness campaigns or make small donations to organizations working on poverty reduction. – I try to reduce economic inequalities in my daily life, for example, by purchasing fair trade products.
Advanced	– I engage in volunteer work or projects that combat poverty. – I actively promote awareness of poverty in my community or social circle. – I consistently support humanitarian initiatives or social enterprises working to eradicate poverty.
Ambassador	– I lead or drive projects, campaigns, or initiatives to fight poverty locally or globally. – I collaborate with governments, NGOs or businesses to design sustainable solutions. – I inspire others to get involved in actions against poverty and share my knowledge and experiences in forums, events, or publications.

Self-Assessment Matrix for Commitment to SDG 2: Zero Hunger

Level	Self-Assessment Criteria
Basic	– I am aware of the hunger problem in the world. – I understand the importance of a balanced diet. – I try to avoid food waste at home.
Intermediate	– I reduce food waste and support food banks. – I participate in food security initiatives. – I consume fair trade and sustainable products.
Advanced	– I participate in sustainable food projects. – I support initiatives for organic and local farming. – I collaborate with nutrition education programs.
Ambassador	– I develop or promote food security policies. – I work with organizations focused on eradicating hunger. – I spread knowledge and promote structural changes in food access.

Self-Assessment Matrix for Commitment to SDG 3: Good Health and Well-being

Level	Self-Assessment Criteria
Basic	– I participate in health promotion campaigns at my school or community. – I support initiatives that promote emotional and physical well-being. – I understand why access to healthcare services for all is important.

Level	Self-Assessment Criteria
Intermediate	– I know about SDG 3 and its main objective. – I try to lead a healthy life by exercising and eating well. – I inform myself about the importance of physical and mental health.
Advanced	– I help organize awareness events on health and well-being. – I promote healthy habits among my peers and family. – I participate in activities that promote mental and physical well-being.
Ambassador	– I lead initiatives to improve health and well-being in my community or school. – I work with youth organizations to promote equitable access to health. – I share knowledge about health in forums, social media or school events.

Self-Assessment Matrix for Commitment to SDG 4: Quality Education

Level	Self-Assessment Criteria
Basic	– I know about SDG 4 and its main objective. – I understand the importance of education in improving people's lives. – I value access to education and try to make the most of my learning opportunities.
Intermediate	– I participate in tutoring activities for my peers. – I am interested in learning about the issues that prevent some children and young people from studying. – I support initiatives that aim to improve education in my community.
Advanced	– I develop or collaborate on educational projects inside or outside of school. – I work with school groups or clubs to improve learning. – I promote inclusive and accessible education for all.
Ambassador	– I lead projects that aim to improve education in my community. – I participate in events or initiatives that encourage access to education for everyone. – I inspire other students to value and make the most of their education.

Self-Assessment Matrix for Commitment to SDG 5: Gender Equality

Level	Self-Assessment Criteria
Basic	– I know about SDG 5 and its main objective. – I understand the importance of gender equality. – I respect and value gender diversity.
Intermediate	– I participate in discussions or activities about gender equality at school. – I inform myself about the challenges faced by women and gender-diverse individuals. – I support fair and equal treatment in my environment.
Advanced	– I promote equal opportunities in my school community. – I take part in projects or awareness campaigns on gender equity. – I get involved in activities that support the rights of women and LGTBIQ+ individuals.

Level	Self-Assessment Criteria
Ambassador	– I lead initiatives or projects that promote gender equality. – I work with youth organizations or communities to eliminate gender discrimination. – I share my knowledge and experiences at events and on platforms.

Self-Assessment Matrix for Commitment to SDG 6: Clean Water and Sanitation

Level	Self-Assessment Criteria
Basic	– I know about SDG 6 and its main objective. – I understand the importance of clean water and sanitation. – I try not to waste water in my daily life.
Intermediate	– I participate in school or community activities about responsible water use. – I stay informed about issues related to access to drinking water worldwide. – I try to reduce water consumption at home and school.
Advanced	– I get involved in water conservation or sanitation projects. – I promote responsible water use in my environment. – I take part in campaigns to improve access to drinking water in vulnerable communities.
Ambassador	– I lead initiatives to improve access to clean water and sanitation. – I work with my community or school on water awareness projects. – I share information and experiences on social media or at school events.

Self-Assessment Matrix for Commitment to SDG 7: Affordable and Clean Energy

Level	Self-Assessment Criteria
Basic	– I know about SDG 7 and its main objective. – I try to reduce electricity consumption. – I know some sources of renewable energy.
Intermediate	– I stay informed about clean energy and its impact. – I participate in energy-saving campaigns. – I try to reduce my energy footprint at home and school.
Advanced	– I take part in renewable energy projects. – I promote energy saving in my community. – I contribute ideas on the sustainable use of energy.
Ambassador	– I lead campaigns on clean energy. – I work on energy efficiency programs. – I share knowledge and promote the transition to sustainable energy.

Self-Assessment Matrix for Commitment to SDG 8: Decent Work and Economic Growth

Level	Self-Assessment Criteria
Basic	– I know about SDG 8 and its main objective. – I understand the importance of decent work. – I value people's effort and work.
Intermediate	– I stay informed about labor rights. – I participate in youth entrepreneurship activities. – I reflect on the impact of child labor worldwide.
Advanced	– I promote decent work in my community. – I take part in social entrepreneurship projects. – I research companies that promote decent work.
Ambassador	– I lead initiatives to create youth employment opportunities. – I work with organizations to improve working conditions. – I spread awareness about the importance of fair employment.

Self-Assessment Matrix for Commitment to SDG 9: Industry, innovation and Infrastructure

Level	Self-Assessment Criteria
Basic	– I know about SDG 9 and its main objective. – I understand the importance of basic infrastructure for economic and social development. – I recognize the connection between technological innovation and industrial development.
Intermediate	– I stay informed about technological innovations that improve productivity in key sectors. – I reflect on the importance of sustainability in infrastructure and its impact on the environment. – I participate in activities or projects that promote innovation and technological development.
Advanced	– I promote the use of sustainable and innovative technologies in my community. – I support the creation of infrastructure that enhances accessibility and resilience to disasters. – I research best practices in innovation and sustainable infrastructure.
Ambassador	– I lead initiatives to foster technological innovation and infrastructure improvement in my environment. – I work with organizations to promote the development of sustainable industries. – I raise awareness about the importance of proper infrastructure and innovation in improving social well-being.

Self-Assessment Matrix for Commitment to SDG 10: Reduced Inequalities

Level	Self-Assessment Criteria
Basic	– I know about SDG 10 and its main objective. – I am aware of the social inequalities affecting my community. – I recognize the importance of social and economic inclusion.

Level	Self-Assessment Criteria
Intermediate	– I stay informed about human rights and public policies to reduce inequalities. – I reflect on how inequalities impact access to education, health, and employment. – I participate in activities that promote inclusion and equal opportunities.
Advanced	– I promote social inclusion in my environment by advocating for equitable access to essential services. – I support programs that fight against discrimination based on gender, ethnicity, or disability. – I research policies that help reduce inequalities and implement them in local projects.
Ambassador	– I lead initiatives to eliminate discrimination and promote equality in my community. – I work with organizations to develop social inclusion measures. – I raise awareness about the importance of reducing inequalities through events and impact-driven platforms.

Self-Assessment Matrix for Commitment to SDG 11: Sustainable cities and communities

Level	Self-Assessment Criteria
Basic	– I know about SDG 11 and its main objective. – I recognize the importance of living in a city or community that provides quality of life and sustainability. – I am aware of common urban challenges such as inadequate housing and pollution.
Intermediate	– I stay informed about sustainable solutions to improve the quality of life in cities. – I reflect on urban issues and how public policies can enhance accessibility and sustainability. – I participate in local activities that promote a more sustainable and resilient urban environment.
Advanced	– I advocate for the construction of adequate housing and the improvement of urban infrastructure in my community. – I support projects that encourage sustainable transportation and the creation of public spaces. – I research innovative solutions for waste management and air quality improvement.
Ambassador	– I lead initiatives to transform cities into more sustainable, inclusive, and resilient places. – I work with local organizations to implement sustainable urban projects. – I raise awareness about the importance of sustainable cities and communities in events and public forums.

Self-Assessment Matrix for Commitment to SDG 12: Responsible Consumption and Production

Level	Self-Assessment Criteria
Basic	– I know about SDG 12 and its main objective. – I recognize the importance of reducing resource waste and the need for more responsible consumption. – I understand the connection between production and environmental impact.

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Level	Self-Assessment Criteria
Intermediate	– I stay informed about responsible consumption practices and their effects on the environment. – I reflect on the life cycle of the products I consume and their ecological impact. – I participate in activities that promote recycling and waste reduction.
Advanced	– I advocate for responsible consumption in my community and among my peers. – I support initiatives for sustainable production and the efficient use of natural resources. – I research and apply strategies to reduce environmental impact in my consumption habits.
Ambassador	– I lead awareness campaigns on responsible consumption and waste reduction. – I work with businesses and organizations to promote sustainable and responsible production. – I raise awareness about conscious consumption and the circular economy in various spaces.

Self-Assessment Matrix for Commitment to SDG 13: Climate Action

Level	Self-Assessment Criteria
Basic	– I know about SDG 13 and its main objective. – I recognize climate change as an urgent global challenge. – I am aware of some of the effects of climate change in my community and around the world.
Intermediate	– I stay informed about the causes of climate change and possible solutions. – I reflect on how my daily activities impact the environment. – I participate in local activities that promote climate action and sustainability.
Advanced	– I promote practices to mitigate climate change, such as energy conservation and the use of renewable energy. – I support local policies and projects that contribute to climate change adaptation and mitigation. – I research technologies and innovative solutions to combat climate change.
Ambassador	– I lead initiatives that promote climate action in my community and at the regional level. – I work with organizations to implement effective measures against climate change. – I raise awareness about the importance of climate action through talks, workshops, and awareness campaigns.

Self-Assessment Matrix for Commitment to SDG 14: Life below water

Level	Self-Assessment Criteria
Basic	– I know about SDG 14 and its main objective. – I recognize the importance of oceans and marine ecosystems for life on Earth. – I am aware of some of the threats oceans face, such as pollution and overfishing.
Intermediate	– I stay informed about marine biodiversity and measures to protect marine ecosystems. – I reflect on how human activities negatively impact underwater life. – I participate in beach clean-ups or awareness programs on marine protection.

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Level	Self-Assessment Criteria
Advanced	– I promote ocean conservation and the protection of marine ecosystems. – I support initiatives that encourage sustainable fishing and the responsible use of marine resources. – I research strategies and measures for the protection of marine biodiversity.
Ambassador	– I lead marine conservation projects and initiatives to protect underwater life. – I work with international organizations to implement ocean preservation measures. – I raise awareness about the importance of protecting oceans and marine ecosystems in events and public forums.

Self-Assessment Matrix for Commitment to SDG 15: Life on Land

Level	Self-Assessment Criteria
Basic	– I know about SDG 15 and its main objective. – I recognize the importance of terrestrial ecosystems for the planet's balance. – I am aware of some of the threats ecosystems face, such as deforestation and biodiversity loss.
Intermediate	– I stay informed about biodiversity conservation and practices that protect terrestrial ecosystems. – I reflect on the impact of human activities, such as deforestation, on natural habitats. – I participate in local reforestation activities or the protection of natural areas.
Advanced	– I promote biodiversity conservation and the protection of terrestrial ecosystems. – I support initiatives that encourage habitat restoration and reforestation. – I research best practices to protect terrestrial ecosystems and local wildlife.
Ambassador	– I lead ecological restoration projects and conservation initiatives for terrestrial ecosystems. – I work with organizations to implement environmental protection measures. – I raise awareness about biodiversity and ecosystem conservation through advocacy campaigns.

Self-Assessment Matrix for Commitment to SDG 16: Peace, justice and strong institutions

Level	Self-Assessment Criteria
Basic	– I know about SDG 16 and its main objective. – I recognize the importance of peace, justice, and transparency in societal development. – I am aware of key institutions that ensure justice and equality in my community.
Intermediate	– I stay informed about human rights and policies that promote justice and peace. – I reflect on the role of democracy and transparency in building strong institutions. – I participate in activities that promote peace and respect for fundamental rights.
Advanced	– I advocate for social justice, peace, and transparency in my community. – I support initiatives that fight against corruption and promote accountability. – I research public policies that strengthen institutions and social justice.

Level	Self-Assessment Criteria
Ambassador	– I lead initiatives that promote peace, justice, and transparency in my community and surroundings. – I work with governmental and non-governmental organizations to improve institutions and governance. – I raise awareness about social justice and peace in local and global impact spaces.

Self-Assessment Matrix for Commitment to SDG 17: Partnerships for the goals

Level	Self-Assessment Criteria
Basic	– I know about SDG 17 and its main objective. – I recognize the importance of partnerships in achieving sustainable development globally. – I am aware of some organizations that work on the SDGs.
Intermediate	– I stay informed about partnerships between governments, businesses, and organizations to achieve the SDGs. – I reflect on how collaborations can enhance the impact of sustainable projects. – I participate in local activities that promote cooperation and joint efforts.
Advanced	– I advocate for collaboration among different stakeholders (governments, businesses, civil society) to achieve the SDGs. – I support initiatives that encourage joint efforts in solving global and local challenges. – I research best practices for establishing sustainable and effective partnerships.
Ambassador	– I lead collaborative projects with various organizations to drive SDG implementation. – I work with international partners to strengthen cooperation in key areas of sustainable development. – I raise awareness about the importance of global partnerships in achieving the SDGs.