



**BME**  
**Faculty of Economic**  
**and Social Sciences**

# **BME GTK Sustainability Strategy**

## **2024-2030**

Created in collaboration with the following staff members of the Department of  
Environmental Economics and Sustainability at BME GTK:

Dr. Gábor Bartus, assistant professor  
Dr. Attila Buzási, head of department, associate professor  
Dr. Tibor Princz-Jakovics, deputy head of department for education, assistant professor  
Dr. Mariann Szabó, deputy head of department, assistant professor  
Dr. László Valkó, honorary university professor

Budapest, 2024

# 1. INTRODUCTION

In alignment with the [Mission Statement](#) and other strategic documents of the Faculty of Economic and Social Sciences at the Budapest University of Technology and Economics, this sustainability strategy outlines the principles, values, goals, and cooperative framework designed to embed sustainability across all faculty activities.

The Sustainability Strategy of BME GTK aims to integrate the UN Sustainable Development Goals (SDGs), the European Union's sustainable development policies, and the objectives of the National Framework Strategy on Sustainable Development, while considering local and university-specific contexts (see Annex).

**BME GTK is dedicated to value-based and responsible education and research, emphasising extensive partnerships, practical orientation, and the transparent communication and free access to intellectual capital and its results.**

Sustainability, defined as a set of criteria and objectives, guides us in systematically assessing the long-term impacts of decision alternatives on our resources—human, social, environmental, and economic—during the decision-making process.

**We hold sustainability particularly important as the expansion of knowledge, education, research, and innovation are the most natural ways to enhance human capital.** This underpins the Faculty's commitment to sustainability, further supported by principles of ethical and responsible operation and management.

The Faculty's sustainability strategy addresses the following areas:

- Education, by integrating sustainability into our courses, and talent management;
- Organisation of our research activities;
- Sustainable management of the Faculty's human resources and budget;
- Impact of our activities on the natural environment, focusing on material and energy efficiency and climate-neutral organisation of research and education;
- Ensuring equal opportunities, gender equality, transparency, and the absence of corruption.

## 2. SITUATION ANALYSIS

### 2.1. SDG-Focused Presentation of the Educational and Research Activities at BME GTK

The identification and active development of processes underlying the evaluation of the Faculty's education and research activities will aid in understanding our sustainability performance. **To facilitate this assessment, it is essential to evaluate and comprehend the impact made the by Faculty of Economic and Social Sciences on the various Sustainable Development Goals (SDGs).** This involves an overview of the SDG-focused work undertaken at GTK from 2020 to 2023, along with an assessment of our relative position within BME from a university-wide perspective. This will enable us to establish the distribution pattern of SDGs within the Faculty's education and research portfolio, highlighting any differences and similarities.

**In preparing this strategy, particular attention must be given to our position in international sustainability rankings for higher education.** The QS (Quacquarelli Symonds) rankings are of particular importance to GTK, as BME strives to climb higher in these university rankings. One aspect of the assessment underpinning the QS ranking is the research impact on “Equality”. This will be briefly discussed by examining the prevalence of SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities).

GTK offers interdisciplinary training and conducts cross-disciplinary research through its departments and institutes, which have a diverse scientific background. This mode of operation is reflected in its coverage of the SDGs. The analysis of GTK's education and research activities was based on a comprehensive university-wide SDG survey, with results summarised in a detailed database by the Rector's Office. Activities for 2020-2023 were identified in the following categories: subjects, student projects, research projects, patents, and publications.

These categories encompass the main activities conducted by BME and, specifically, by GTK, allowing for an assessment of their impact. The university-wide survey classified each group of activities based on three types of linkages tying them to the SDGs, prioritising the most significant SDG linkage (primary) and identifying two additional secondary linkages. We will examine the three most common primary SDG linkages to identify current priorities and gaps.

### 2.1.1 Assessment of Subjects Taught According to the SDGs

The evaluation of the subjects taught at GTK is presented in Figure 1, which illustrates the SDGs most frequently identified for the Faculty's subjects:

- SDG 12: Responsible consumption and production (41 subjects)
- SDG 9: Industry, innovation and infrastructure (35 subjects)
- SDG 10: Reducing inequalities (27 subjects)

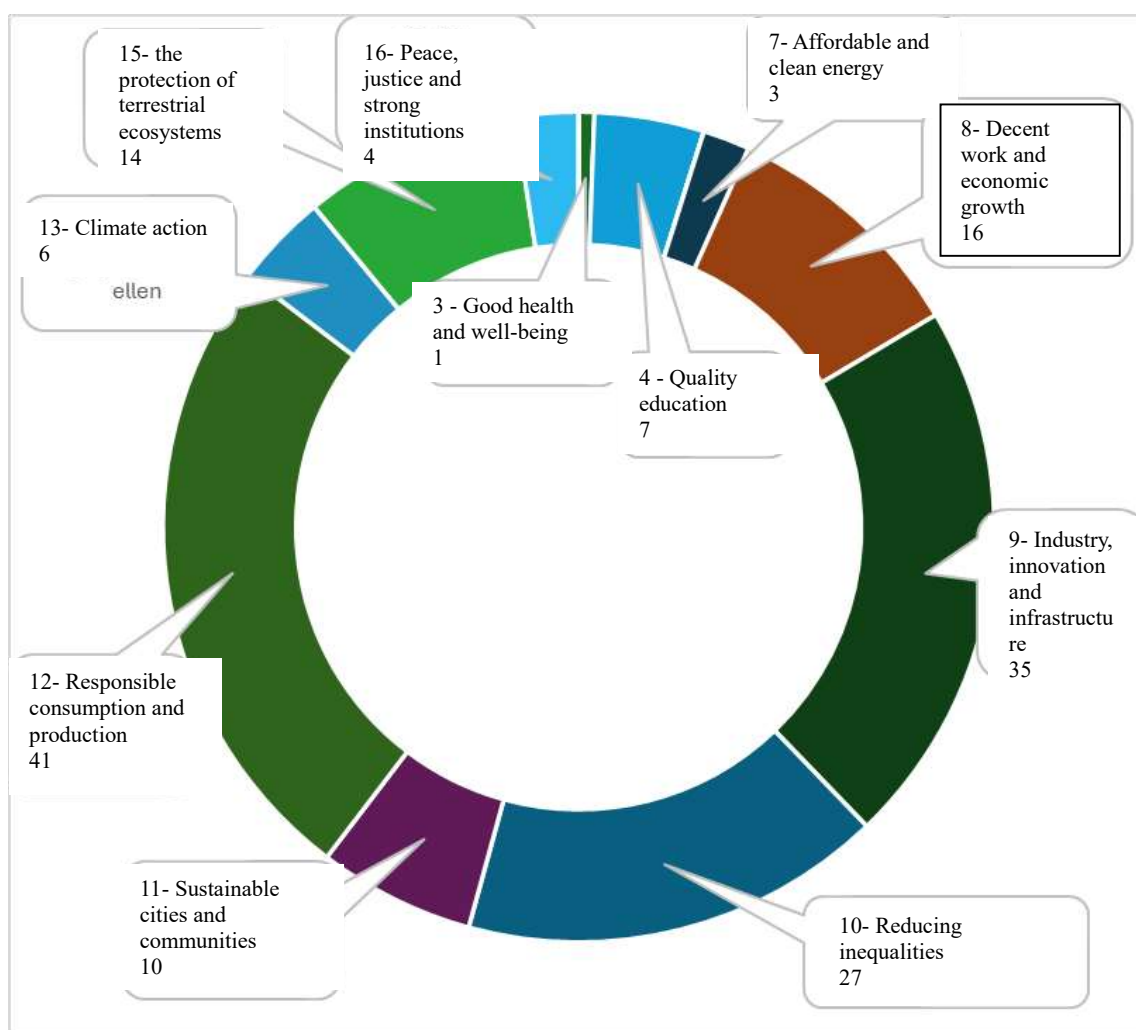


Figure 1: Number of Subjects Taught based on SDGs (2020-2023)

(Source: own creation based on information by the Rector's Cabinet)

For the SDGs relevant to the QS assessment, the following distribution was observed:

- SDG 5: Gender equality (0 subjects)
- SDG 10: Reducing inequalities (27 subjects)

This indicates that SDG 5 does not appear as a primary focus, whereas SDG 10 is the third most prominent subject focus. From a university-wide perspective, it is noteworthy that in the

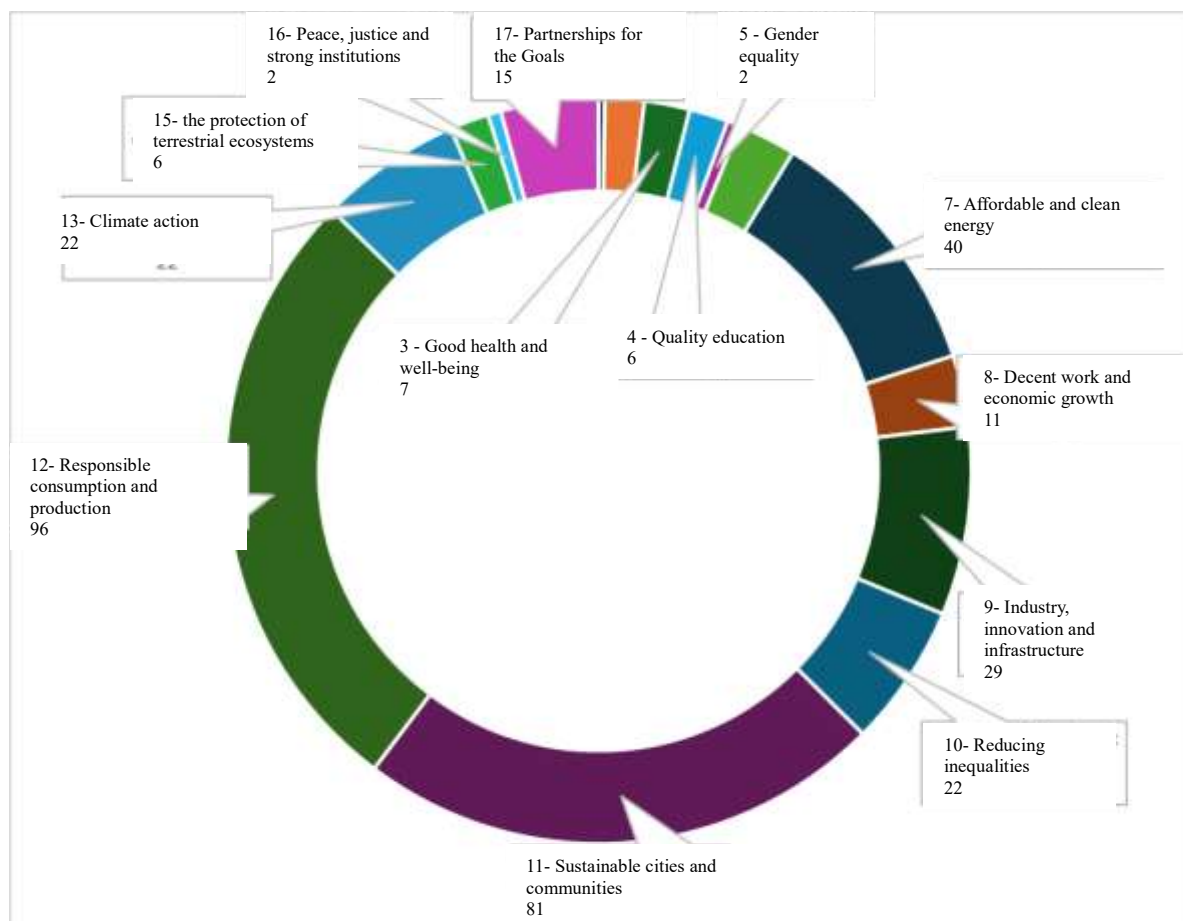
faculties of technology, SDG 10 is not featured in any subject; all instances are GTK-related, and SDG 5 is not represented at the primary level at all.

Apart from Goal no. 5, there is no primary linkage to SDGs 1 (No poverty), 2 (Zero hunger), 6 (Clean water and sanitation), 14 (Life below water), and 17 (Partnerships for the Goals).

### ***2.1.2 Assessment of Student Projects Regarding the SDGs***

The evaluation of student projects (including independent lab work, bachelor and master theses, TDK, PhD, and other project work) is presented in Figure 2, which indicates the most commonly identified SDGs in GTK students' projects:

- SDG 12: Responsible consumption and production (96 projects)
- SDG 11: Sustainable cities and communities (81 projects)
- SDG 7: Affordable and clean energy (40 projects)



*Figure 2: Number of student projects according to SDGs (2020-2023)*

*(Source: own creation based on information by the Rector's Cabinet)*

For the SDGs relevant to the QS assessment, the following distribution was observed:

- SDG 5: Gender equality (2 projects)
- SDG 10: Reducing inequalities (22 projects)

As shown above, SDG 5 appears minimally as a primary focus (only 2 master theses in total), while SDG 10 is also the focus of relatively few student projects (18 master theses and 4 bachelor theses). From a university-wide perspective, it is worth noting that, similar to the previous category, in the faculties of technology, neither SDG 5 nor SDG 10 is represented in any student work; all related projects are linked to GTK.

In terms of coverage, there are no primary linkages to SDGs 1 (No poverty), 2 (Zero hunger), 6 (Clean water and sanitation for all), and 14 (Life below water).

### ***2.1.3 Assessment of Research Projects Regarding the SDGs***

The evaluation of research projects (basic research, applied research, and experimental development) at GTK identified the most frequently linked SDGs as follows:

- SDG 4: Quality education (2 research projects)
- SDG 6: Clean water and sanitation for all (1 research project)
- SDG 9: Industry, innovation and infrastructure (1 research project)

Beyond the goals relevant for the QS assessment (SDGs 5 and 10) and these top three SDGs, no other goals appear as primary linkages for research projects. However, it is important to note that the total number of research projects assessed for GTK is also low, with only 4 projects in total.

### ***2.1.4 Assessment of Patents Regarding the SDGs***

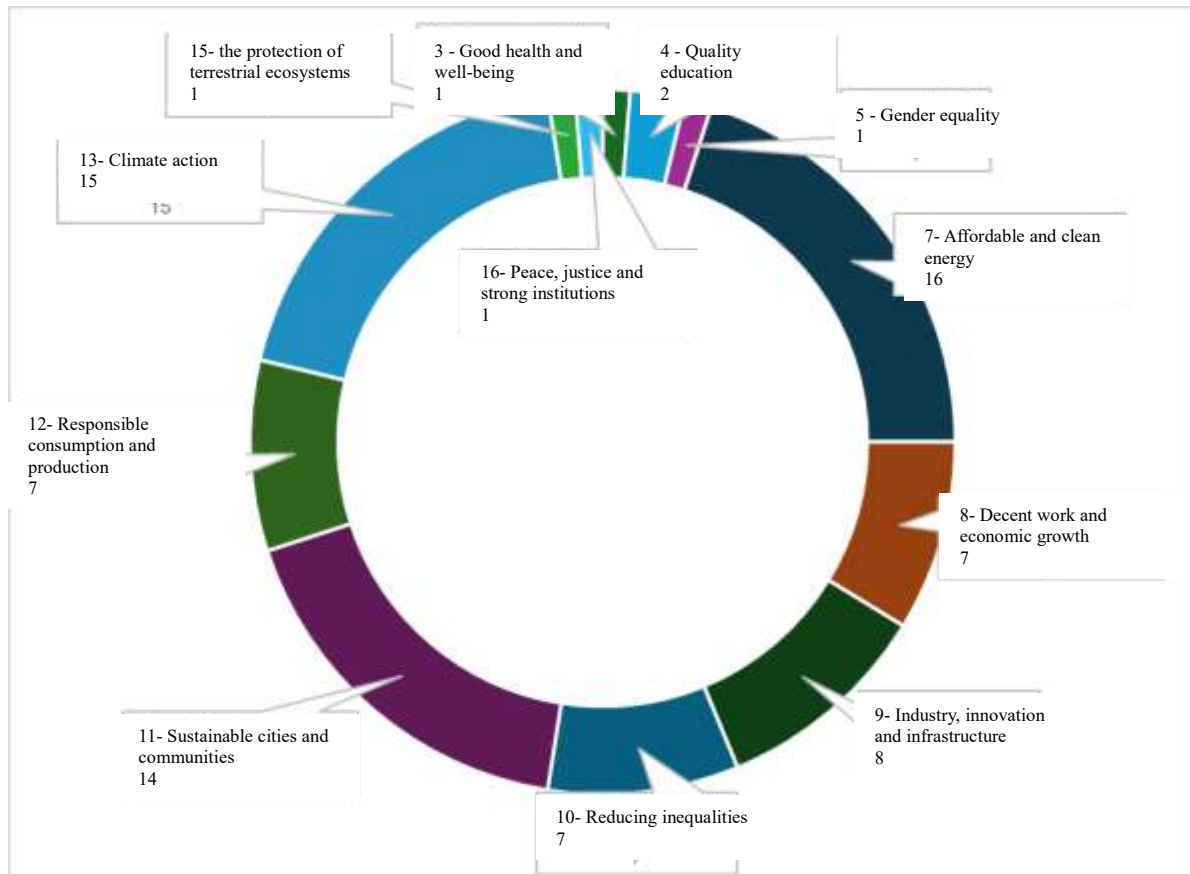
Regarding patents (EU, national, or with jurisdiction in other countries), no GTK patent activity has been evaluated according to the SDGs. Only four faculties contributed to the 13 patents at BME. It should be noted that GTK has not engaged in patenting activities due to its specific area of science, making this aspect less relevant for the current analysis.

### ***2.1.5 Assessment of Publications Regarding the SDGs***

Among the publications (books, book chapters, conference articles, technical papers, reports, and other publications), Figure 3 highlights the technical papers, showing that the most frequently identified SDGs were:

- SDG 7: Affordable and clean energy (16 articles)

- SDG 13: Climate action (15 articles)
- SDG 11: Sustainable cities and communities (14 articles)



*Figure 3: Number of Articles Published According to SDGs (2020-2023)*

*(Source: own creation based on information by the Rector's Cabinet)*

For the SDGs relevant to the QS assessment, the distribution of articles was as follows:

- SDG 5: Gender equality (1 article)
- SDG 10: Reducing inequalities (7 articles)

This indicates that SDG 5 appears only once as the primary focus, while SDG 10 is moderately represented. From a university-wide perspective, it is noteworthy that in the faculties of engineering, SDG 10 is found in just one article, with the rest being GTK-related.

In terms of coverage, there are no primary ties to SDGs 1 (No poverty), 2 (Zero hunger), 6 (Clean water and sanitation), 14 (Life below water), and 17 (Partnerships for the Goals).

## 2.2. Conclusions

Based on the SDG linkage for GTK's education and research activities, the following conclusions can be drawn:

- There are distinct patterns between the different groups of educational and research activities. For both educational categories, SDG 12 (Responsible consumption and production) is very prominent, but it is not among the top three focus areas for publications. SDG 13 (Climate action) receives significant attention in publications but is not a top priority for subjects and student work. However, some SDGs maintain similar priority levels across categories: SDG 7 (Affordable and clean energy) and SDG 11 (Sustainable cities and communities) are highly ranked in both student projects and publications.
- The low number of research projects and patents makes it difficult to identify strong SDG linkages within these categories.
- SDG 5 (Gender equality), which is relevant for the QS ranking, receives minimal attention. In contrast, SDG 10 (Reducing inequalities) is the third most frequently linked SDG in subjects and is well represented in student work and publications. From a university-wide perspective, it is evident that the faculties of engineering do not address the topics of equality and inequality at all (with the exception of one article); GTK, with its profile focused on economics and social sciences, is almost the only one with linkages to this area.



### 3. VISION AND GOALS

Sustainability, sustainable development and climate protection have been prioritized in the educational and research profiles of the University and the Faculty, particularly through the TÁMOP projects (TÁMOP-4.2.1/B-09/1/2010 and TÁMOP-4.2.2 B-10/1/2010) focusing on research universities and talent management.

Global and national sustainability and sustainable development strategies (including the National Framework Strategy on Sustainable Development) typically identify resources (tools, methods) along four dimensions that can contribute to the effective implementation of objectives prioritized at various (regional or organizational/institutional) levels of strategy formulation. International experience clearly confirms that creating and representing a sustainability strategy requires a combination of bottom-up initiatives, management determination, and an external institutional-regulatory framework supported by the prevailing “political will”.

**The staff of GTK, along with its thematic education and research performance to date, can serve as a foundation for implementing institutional sustainability goals (as interpreted in the SDG nomenclature). These goals are structured below and aim to disseminate sustainability practices within and outside the university.**

In the context of a university organization, the following target dimensions and the resources to support them are identified for BME GTK:

#### A. Human resources

- Training, knowledge transfer, talent development – training and education activities (SDG 4)
  - Design academic programmes and subjects in a future-oriented way (the content of education).
  - Conduct workshops within the university, open to peers, on interpreting sustainability, its dimensions, and levels. This is facilitated through the "F-factor" series of events initiated by the Department of Environmental Economics and Sustainability (SDG 11).
  - Incorporate sustainability theories and knowledge horizontally across all courses, supported by comprehensive curriculum development.

- Collect, disseminate, and apply training methods that consider the generational characteristics of incoming students and expected labour market developments (modes and forms of education).
- Research and innovation – contribution to national and international knowledge capital **(SDGs 8.2, 8.3, 8.4, 9.5)**
  - Develop a robust research portfolio with significant publication activity.
  - Maintain active links with economic actors to foster research and innovation.
- Developing career paths for lecturer-researchers (competitive salaries, esteem, development of employer services, appropriate transparency in management decisions) – ensuring that the best academics in relevant fields of knowledge give lectures and conduct research at the Faculty (SDG 9.5)
  - Contribute to health maintenance by providing sports facilities, ergonomic workplaces, and preventive health screenings.
- Ensuring a family-friendly university and gender equality **(SDG 5, SDG 8.5)**
  - [Family-friendly BME](#)
  - Provide special opportunities in the TVSZ (Code of Studies and Exams) to meet the specific needs of students with children, while maintaining the quality of training.
  - Allocate specific dormitory places for students with or expecting children.
  - Offer support to young lecturers/researchers, encouraging them to have children.

## **B. Social resources**

- Inclusive, participatory, and representative decision-making **(SDG 16.7)**
- Non-corruption and transparency **(SDG 16.5, SDG 16.6)**
- Safeguarding research freedom and protection of employees' rights **(SDG 8.8)**
- Promoting Social Mobility **(SDG 10)**
  - Special scholarships and remedial education programs for young people from underprivileged backgrounds, including Roma youth.
- Contributing to global equality through education of foreign students **(SDG 10, SDG 12a, SDGs 17.6-17.9)**
- Transfer and utilization of university sustainability knowledge in the surroundings of BME: In Lágymányos, the 11th district, and Budapest in general **(SDG 11)**

### **C. Environmental resources**

- Reducing material and energy consumption and their environmental footprint (**SDG 6, SDG 7, SDG 11.6, SDG 12**)
  - Implement electronic administration to minimize paper-based processes (**SDG 12.5**)
  - Ensure energy-efficient building operations and increase the share of renewable energy (**SDG 13**)
  - Promote selective waste collection (SDG 12.5)
- Sustainable Mobility (**SDG 3, SDG 11.2, SDG 13**)
  - Provide secure bicycle storage facilities
  - Encourage the use of public transport for commuting to and from the University
  - Implement the GTK Carbon Neutral Erasmus Programme and Carbon Calculator
- Developing a Carbon Neutrality Portfolio for GTK (**SDG 13**)

### **D. Economic resources**

- Balanced and efficient management, ensuring transparency (**SDG 17.13**)
- Improving educational and research facilities, providing state-of-the-art equipment (**SDG 9.5**)

## **4. FEASIBILITY**

The implementation of the BME GTK Sustainability Strategy spans the period from 2024 to 2030, with a proposed review in 2027.

The measures related to the objectives outlined in Chapter 3 have been analysed in the background study of the GTK Sustainability Strategy concerning resource requirements and feasibility within the given timeframe. Further discussions are necessary to facilitate practical implementation concerning the vision and targets set. “Short term” refers to measures that can be implemented almost immediately, while “medium term” typically refers to measures requiring 1-2 years of preparation. Longer-term measures can be used as a means to develop a well-performing faculty sustainability programme portfolio. These are recommended for preparation and implementation after the launch of short- and medium-term measures.

The implementation of these measures, set out in the BME GTK Sustainability Strategy, will be supported by the GTK Sustainability Action Plan following the adoption of the Strategy.

**ANNEX – CONNECTIONS BETWEEN RESOURCE TYPES IN THE NATIONAL FRAMEWORK STRATEGY ON SUSTAINABLE DEVELOPMENT AND THE UN SUSTAINABLE DEVELOPMENT GOALS**

<b>Resources – National Framework Strategy on Sustainable Development</b>	<b>ENSZ SDG</b>
Human resources	SDG1: No poverty
	SDG2: Zero hunger
	SDG3: Good health and well-being
	SDG4: Quality education
	SDG8: Decent work and economic growth
	SDG11: Sustainable cities and communities
Social resources	SDG5: Gender equality
	SDG10: Reduced inequalities
	SDG16: Peace, justice and strong institutions
Environmental resources	SDG2: Zero hunger
	SDG6: Clean water and sanitation for all
	SDG13: Climate action
	SDG15: The protection of terrestrial ecosystems
Economic resources	SDG7: Affordable and clean energy
	SDG8: Decent work and economic growth