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SCHOOL OF ENVIRONMENT, GEOGRAPHY & APPLIED ECONOMICS

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ERASMUS COURSE: THEMES IN SUSTAINABLE DEVELOPMENT

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THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOAL 9 IN EUROPE AND GREECE. THE ROLE OF CITIZENS

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We have created a **guide for individual actions** that each of us can follow for the success of each of the **17 of Sustainable Development Goals**, as set by the United Nations.



This presentation focuses on Sustainable Development Goal 9 “Industry, Innovation & Infrastructure”

- the predictions of this specific goal, as set by the United Nations (UN)
- the current global situation and the main problems that arise in the areas covered by the 9th SDG
- the policies, actions, programs and funding of the EU



Greece is examined as a case study

- Policies and actions at central and local level for the implementation of SDG 9
- Institutional framework
- Actions refer to infrastructure projects
- The contribution of each citizen, who through their individual daily habits, can positively contribute to the success of SDG 9




1.
**Description of SDG 9 “Industry, Innovation & Infrastructure”
(until the year 2030)**

SDG 9 focuses on:


- modern, resilient infrastructure
- sustainable industrial development
- technological progress
- sustainable development
- improvement of crucial social sectors.

Subgoal 9.1  Create resilient, reliable and quality infrastructure

Subgoal 9.2  Promote inclusive and sustainable industrialization

Subgoal 9.3  Strengthen access to financial services for small industrial and other enterprises

Subgoal 9.4  By 2030, upgrade infrastructure and construction to be sustainable and environmentally efficient

Subgoal 9.5  Promote scientific research, encourage innovation (mainly in developing countries)

In addition:

- financial, technical and technological support to African countries, less developed countries, Mediterranean developing countries and small island developing countries
- support for the development of domestic technology, research and innovation
- achieving affordable access to the internet for less developed countries

2. Description of the current situation - Strengths

The infrastructure sector strengthens:

- the economy
- social cohesion
- quality of life



The United Nations took into account data such as the following:

- The construction sector employed billions of people worldwide, providing million jobs.
- Each new job in the construction sector lead to the creation of an additional 2.2 jobs in other sectors of the economy.
- Small and medium-sized enterprises in the construction and industrial sectors constitute approximately 90% of the business world and offer the most jobs worldwide.
- There is significant room for growth in the food and beverage industry in the less developed countries.
- The agribusiness sector in developing countries has great potential for further growth.
- About 2.3 million people are employed in activities related to renewable energy sources.

Serious challenges:

- In many developing countries, basic infrastructure, such as road networks, water and sanitation projects, energy infrastructure and modern technological infrastructure, is absent.
- About 2.6 billion residents of developing countries do not have permanent access to electricity.
- About 2.5 billion people do not use basic sanitation facilities.
- 800 million people do not have access to clean water, with a significant part of them living in Africa and Asia.
- Between 1 and 1.5 billion people use unreliable telephone services.
- In low-income African countries, infrastructure problems lead to a reduction in business productivity of up to 40%.

UN found that it is imperative to address the problems through forecasting, strategic planning and implementation of appropriate policies and actions, both at the national level and through international cooperation, so that by 2030 the situation will have improved internationally, with the ultimate goal of sustainable development.



3. Policies and actions – European Union funding for SDG 9

The EU has adopted specific policies, actions, programmes and financial instruments aimed at sustainable local and regional development addressed to all regions and cities of its Member States

- Aims to support:

- job creation
- business competitiveness
- economic growth
- sustainable development
- improvement of citizens' quality of life
- existence of appropriate infrastructure
- adoption of targeted actions
- funding
- industry and innovation.



The three main EU funds that provide basic support are:

1. The European Regional Development Fund (ERDF)
2. The Cohesion Fund (CF)
3. The European Social Fund (ESF)

Together with:

- the European Agricultural Fund for Rural Development (EAFRD)
- the European Maritime and Fisheries Fund (EMFF)



Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 has redefined their common provisions, basic rules and priorities

In addition:

- Sustainable urban development is also becoming increasingly important (5% of RDF)
- Areas with geographical disadvantages (remote, mountainous or sparsely populated)

Beneficiaries of funding are:

- Local, regional and national authorities and administrative bodies
- Non-Governmental Organisations, associations and foundations
- Small and medium-sized enterprises (SMEs)



At the same time, main objectives of cohesion policy are:

- European Territorial Cooperation (ETC), known as Interreg
- investment for growth and employment.

With the main aim of promoting harmonious economic, social and territorial development throughout the Union.

For the previous programming period INTERREG V (2014–2020), a budget of €10.1 billion was allocated, which was invested in more than 100 cooperation programmes between regions and territorial, social and economic partners.

The interregional cooperation program (INTERREG Europe) and three networking programs (Urbact III, Interact III and ESPON) cover all 28 EU member states.

The logo for INTERREG, featuring the word "INTERREG" in a blue, sans-serif font with a red dot above the letter "I".

4.
Policies and actions – Greece’s projects to achieve SDG 9

Transport

- Upgrading transport infrastructure
- Completion of the Trans-European Transport Network projects
- Modernization of the transport system
- Improvement of safety
- Environmental protection
- Greece has become an international freight hub
- Reduce cross-border delays
- Upgrading of Greek and Balkan railway axes.



Digital Transformation

- National Digital Strategy during the previous period 2016 - 2021
- Increase in the productivity of the economy
- Improvement in quality of life
- Improved access to digital infrastructure, high-speed internet
- Support of small and medium-sized enterprises to utilize digital tools
- The Super-Fast Broadband (SFBB) action, with a budget of 700 million euros



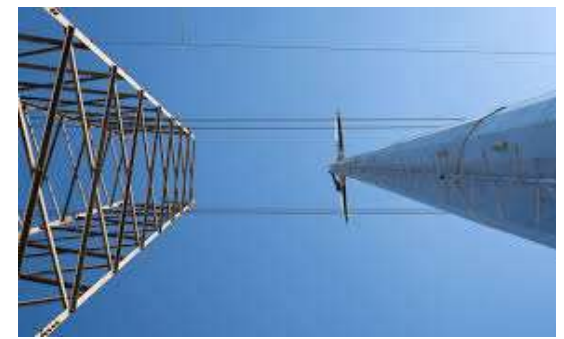
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- The UltraFast Broadband program (offering internet connectivity with speeds of at least 100 Mbps)
 - The Electronic Document Management System (EDMS)
 - The digital GEMI and the SYZEFXIS II project



The aim was:

The modernization of transaction with the public sector





Energy

- Strengthened through major infrastructure projects
- Installation of "smart" meters
- Completing the interconnection of the islands with the mainland system
- Interconnection of Greece



Research and innovation

- Strengthen human resources and infrastructure
- Promote innovative entrepreneurship
- Undertake targeted initiatives
- Funding for innovation and technology
- Innovative approach to the new development law
- Creation of institutions to support free research in universities and research centers
- Broader diffusion of innovation
- Establishment of the Hellenic Foundation for Research and Innovation
 - Supporting start-ups and small and medium-sized enterprises
 - Enhancing access to innovation for SMEs
- Promotion of innovative entrepreneurship in Greece is implemented through three main actions:
 - (a) supporting collaborative research and innovation projects between universities, research centers and businesses
 - (b) designing new incentives for private investment
 - (c) creating opportunities for new innovative enterprises through the Enterprise Participation Fund (EquiFund).
- Creation of a favorable environment for the 4th Industrial Revolution
- Investments in infrastructure with priority given to universities and research centers
- Strengthening Digital Innovation Centers for businesses
- Developing Support Structures for the private and public sectors
- Providing tax incentives
- Strengthening human resources in the field of research and business development
- Specialising workers and the unemployed in 4th Industrial Revolution skills.



Circular Economy

The transformation of the economy into a circular one is expected to:

- create new jobs
- enhance sustainable development
- reduce of carbon emissions
- improve resource efficiency
- improve innovation
- improve development of new technologies and the acquisition of new skills and k



The “National Action Plan for the Circular Economy” in Greece (2018):

- is aligned with the Agenda 2030
- provides for legislative regulations, strengthening of knowledge and mechanisms for monitoring progress

Important role in its implementation play:

- Programmes such as Horizon 2020
- LIFE
- the European Fund for Strategic Investments (EFSI)



5.
**Policies and actions/projects of local governments to achieve
SDG 9**

Municipality of Agios Dimitrios in the Attica region (Greece)

Created the upgraded mobile application “City On”,
through which citizens are informed about:

- the municipality’s digital services
- daily developments
- points of interest
- can submit requests
- report problems in their neighborhood

At the same time, the Municipality is going on:

- to the reconstruction and conversion of an existing Public Power Corporation substation into a distribution center
- procurement of new lawnmowers through which collected plastic caps are transformed into useful products
- electric vehicle charging plan



Municipality of Ilioupoli in the Attica region



- developed the “IntelligentCity” platform, which, through smart applications accessible from mobile phones
- connects citizens with the municipality’s services
- created the Comidor Collaborative Platform, with the aim of reducing photocopies

Municipality of Glyfada in the Attica region

- implemented the online application “FixMyCity”,
through which citizens can submit electronic requests
and at the same time monitor their management by
the municipality’s services



Similar digital services have been developed by the
Municipality of Chalandri
in the Attica region



Municipality of Heraklion
in the Attica region
through the “Citizen Request Service”



Region of Western Greece

- created the Network "Alliance for Entrepreneurship and Development in Western Greece" (SEADE), with the aim of establishing a Regional Support System for businesses

A regional innovation plan is being implemented, which includes:

- strengthening existing regional technology and innovation centers
 - supporting small and medium-sized enterprises to quickly promote ideas to the market
 - supplying innovative products and services, implementing demonstration projects and developing an electronic platform for creating partnerships
 - established a governance body dedicated to regional innovation policy
-
- A new strategy for small and medium-sized enterprises has also been adopted, based on the principles of the European Small Business Act (SBA)
 - HORIZON 2020 program is used to develop research projects



Region of Thessaly

- implemented the ps.thessaly.gov application, which has been operating since September 2019 and serves the organization of the Regional Council meetings
- facilitating the information of citizens and SMEs
- supports the University of Thessaly in three main directions:
 - operation of a Support Center for Youth Innovative Entrepreneurship
 - creation of modern infrastructure
 - improvement of the interconnection with the local industry
- finances building infrastructure of the university schools and the transformation of the historical “Yellow Warehouse” into an Innovation Center
- addresses social issues and monitors EU policies on climate change
- programs to support small and medium-sized enterprises are announced to increase competitiveness and access to new information and communication technologies



Infrastructure projects implemented by local authorities also play an important role and include interventions in:

- transport
- construction
- renovation
- expansion
- repair
- maintenance of buildings and networks

With the aim of :

- improving the quality of life
- economic development
- environmental protection



6.1

Proposals for individual actions to achieve SDG 9

Hungerford & Volk, 1990 define an environmentally responsible citizen as an individual who has awareness and sensitivity for the environment, understanding of its functions, relevant skills and active participation in solving its problems.



The achievement of goal 9 depends to a large extent on the change in behavior of citizens, combined with the adoption of guiding policies by states for improved reuse and recycling of available resources.



Therefore, in addition to actions at the international and national levels, as well as at the level of Local Government, of decisive importance for the achievement of the 17 Sustainable Development Goals is the active participation of citizens as responsible and informed members of society.





Systematic use of public transport and, as a priority, fixed-track means of transport (tram, metro, electric, suburban railway)





Preference for electronic services in transactions with the public and private sectors, where possible





Utilization of electronic applications of municipalities for information, submission of requests and reporting of problems, as well as corresponding business applications for communication, appointment booking and information





INTERNET BANKING

Benefits of Online Banking



Use of Internet banking for money transfers, bill payments and other banking transactions





Making purchases via the Internet and strengthening e-commerce





Participation in training programs or seminars on innovation and the 4th Industrial Revolution





Purchase, if economically feasible, electric vehicles and/or electric bicycles and scooters





Participate in innovation and research programs aimed at citizens





Implementation of innovative practices and formulation of new ideas by employees, both in the public and private sectors, with the aim of improving technology, research and innovation





Construction of sustainable and ecological housing from ecological and recyclable materials, utilizing renewable energy sources, such as solar and wind



6.2

Local government initiatives, such as Regions and Municipalities for the success of 9th SDG



Financial support for small and medium-sized enterprises to promote activities in the fields of technology and innovation





Organization of events on the theme of research and innovation, addressed to businesses and citizens



Maximizing Your Event's Reach for Dynamic Presentations



Creation of information spots for each objective separately, with the aim of raising awareness and motivating citizens to adopt relevant actions





Conversion of buildings housing businesses, universities or public bodies into "green" buildings





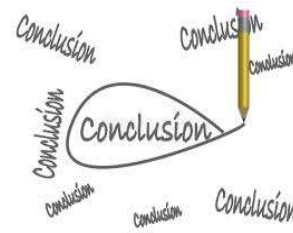
Encouraging senior citizens to make use of electronic services, through special training programs or through the creation of service centers that are addressed exclusively to them



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Conclusions



SDG 9 “Industry, Innovation & Infrastructure”:

1. Contributes to the creation of quality, reliable, sustainable and resilient infrastructure.
2. Promotes inclusive, sustainable industrialization.
3. Enhances access to financial services for small industrial units.
4. Leads to the upgrading and retrofitting of industries in a way that makes them sustainable.
5. Strengthens scientific research and encourages innovation.
6. Facilitates the development of sustainable and resilient infrastructure.
7. Supports domestic technological research, development and innovation.
8. Significantly increases access to communications and information technologies.




To build a more sustainable future, it is essential for industries to adopt a decisive transition towards a circular economy, with material cycles free of toxic substances and a carbon-neutral balance, in line with the Paris Agreement.

Such a model:

- will protect biodiversity and ecosystems
- address climate change
- pursue the sustainability of agricultural and food systems
- promote safe and sustainable low-emission energy sectors, as well as sustainable buildings and mobility systems
- strengthening European cohesion.





**The European Union, through policies,
actions and funding, plays a leading
role in the effort to achieve the
Sustainable Development Goal 9**

Greece, within the framework of SDG 9:

has made significant interventions in the infrastructure and transport sector

promoting access to digital infrastructure

improvement of the economic sector and the quality of life

high internet speeds and strengthening small and medium-sized enterprises

financing of infrastructure and programs of Universities, Research Centers

enhance innovation and research

promotion of E-Government and the transition to a circular economy

Local Government bodies (Regions and Municipalities), are increasingly participating actively in efforts for the success of SDG 9

- developing digital applications
- adopting innovative practices
- financially supporting businesses and universities
- improving the economy, technology and innovation at the local level.



Individual action is an essential factor in achieving the Sustainable Development Goal 9:

- the use of fixed-track means of transport
- the use of electronic services of public bodies and businesses
- the electronic payment of bills and purchases
- the participation in training programs related to innovation, research and the 4th Industrial Revolution

constitute important actions that enhance the achievement of goal 9.



In summary, it is emphasized that:
- SDG 9 “Industry, Innovation & Infrastructure” contributes decisively to the pillars of sustainable development – economy, society and environment.



The continuation and strengthening of efforts at international, national, local and individual levels is necessary



to shape a better, higher-quality and essentially sustainable future for all.





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