

Economic Sustainability

Scouts4GreenApp

Resilient infrastructure
Unit 2.4

Developed by SCNG



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Learning Outcomes

Resilient infrastructure

- Knows what the 2030 Agenda and Sustainable Development Goals are
- Knows, which Sustainable Development Goals (SDGs) relate to Economic Sustainability
- Understands how Economic Sustainability Goals relate to the the other sustainability themes: Ecological and Economic Sustainability
- Understands the vocabulary relating to Economic Sustainability

Introduction



What is Resilient infrastructure?

Resilient Infrastructure is essential for sustainable development, enabling societies to withstand and recover from various challenges. It encompasses critical systems like transportation, energy, and water facilities.

In the face of urbanization and climate change, resilient infrastructure must prioritize sustainability, adaptability, and inclusivity.

This involves designing infrastructure to withstand natural disasters, minimize environmental impact, and ensure equitable access to services. Through proactive planning and investment, resilient infrastructure can bounce back swiftly from adversity, supporting thriving communities and economic stability. In this module, we explore strategies for building resilient infrastructure that meets the needs of present and future generations.

The 2030 Agenda and the Sustainable Development Goals (SDGs)?



- In 2015, the United Nations member states unanimously endorsed and embraced the 2030 Agenda for Sustainable Development: <https://sdgs.un.org/goals>
- This agenda delineates 17 Sustainable Development Goals (SDGs), designed to tackle various intertwined global challenges and propel sustainable development by 2030.
- The 2030 Agenda stands as a collective rallying cry, urging cooperation to eliminate poverty, hunger, safeguard the environment, and ensure equitable prosperity.
- These 17 SDGs encompass a total of 169 specific targets, categorized into three primary themes: economic sustainability, environmental sustainability, and social sustainability.
- A pivotal aim of the 2030 Agenda is to foster global partnerships for sustainable development, uniting governments, the private sector, civil society, and international organizations in this shared mission.

Why it Matters?

Promoting inclusive and sustainable industrialization, alongside fostering innovation and developing infrastructure, has the potential to ignite vibrant and competitive economic dynamics, leading to job creation and income generation. These factors are instrumental in introducing and advancing new technologies, facilitating global trade, and optimizing resource utilization.

The expansion of emerging industries not only enhances living standards but also, when prioritizing sustainability, can have a positive impact on the environment.

Why should I care about this goal?

In summary, caring about inclusive and sustainable industrialization, innovation, and infrastructure is essential for fostering economic growth, protecting the environment, promoting social development, and ensuring long-term global competitiveness

Why should I care about this goal?

Economic Growth: These factors contribute significantly to economic growth by fostering the development of industries, creating job opportunities, and increasing income levels. Inclusive industrialization ensures that benefits are spread across society, reducing inequality and promoting prosperity for all.

Environmental Sustainability: By prioritizing sustainability in industrial practices and infrastructure development, we can minimize negative impacts on the environment. Sustainable industrialization promotes resource efficiency, reduces pollution, and mitigates the effects of climate change, ensuring a healthier planet for current and future generations.

Why should I care about this goal?

Social Development: Inclusive industrialization and infrastructure development can improve access to essential services such as healthcare, education, and transportation, leading to enhanced quality of life for communities. Innovation plays a crucial role in addressing social challenges and finding creative solutions to improve well-being and equity.

Global Competitiveness: Investing in innovation and infrastructure development enhances a country's competitiveness in the global market. By staying at the forefront of technological advancements and adopting sustainable practices, nations can attract investment, drive productivity, and maintain a strong position in the global economy.

What can we do to fix these issues??

To address the challenges associated with inclusive and sustainable industrialization, innovation, and infrastructure, we can take several actions:

To address the challenges associated with inclusive and sustainable industrialization, innovation, and infrastructure, we can take several actions:

1. **Policy Development:** Governments can enact policies that incentivize sustainable industrial practices, innovation, and infrastructure development. This may include providing financial incentives, tax breaks, and subsidies for businesses that adopt sustainable technologies and practices.
2. **Investment in Research and Development (R&D):** Increasing investment in R&D can lead to the development of innovative technologies and solutions that promote sustainable industrialization and infrastructure. Governments, businesses, and research institutions can collaborate to fund R&D initiatives focused on sustainability.
3. **Capacity Building:** Providing training and capacity-building programs can empower individuals and organizations to adopt sustainable practices and technologies. This includes training programs for workers in sustainable industries, as well as workshops and seminars for businesses on sustainable business practices.

4. Public-Private Partnerships (PPPs): Collaboration between the public and private sectors can accelerate progress towards inclusive and sustainable industrialization and infrastructure. PPPs can leverage the resources and expertise of both sectors to fund and implement projects that promote sustainability.

5. Technology Transfer: Facilitating the transfer of sustainable technologies from developed to developing countries can help bridge the technological gap and promote sustainable industrialization and infrastructure development globally. This may involve establishing technology transfer agreements and providing technical assistance to support implementation.

6. Sustainable Financing: Encouraging investment in sustainable industrialization and infrastructure through sustainable financing mechanisms such as green bonds, impact investing, and sustainable development funds can provide the necessary funding for projects while promoting environmental and social objectives.

By implementing these strategies and working collaboratively across sectors and borders, we can make significant progress towards achieving inclusive and sustainable industrialization, innovation, and infrastructure, thereby contributing to economic development, environmental protection, and social progress.

Brainstorming



What are your ideas??

Formulate and deliver concrete strategies aimed at fostering Economic sustainability and realizing the objectives outlined in Economic Development Goals (SDGs) 9 across different facets of everyday existence.

Quiz

1. What are the primary objectives of inclusive and sustainable industrialization, innovation, and infrastructure?

- a) Maximizing profits for businesses
- b) Creating job opportunities and increasing income levels
- c) Minimizing environmental impact
- d) All of the above

Quiz

2. Which of the following is NOT a benefit of prioritizing sustainability in industrial practices and infrastructure development?

- a) Reducing pollution
- b) Increasing income inequality
- c) Promoting resource efficiency
- d) Mitigating the effects of climate change

Quiz

3. What role does innovation play in addressing challenges related to industrialization and infrastructure?

- a) It promotes the adoption of outdated technologies
- b) It creates new solutions to social and environmental issues
- c) It increases pollution and resource depletion
- d) It leads to economic stagnation

Quiz

4. How can governments promote inclusive and sustainable industrialization?

- a) By enacting policies that incentivize sustainable practices
- b) By ignoring environmental regulations
- c) By investing in outdated technologies
- d) By prioritizing profits over people

Quiz

5. What is the significance of public-private partnerships (PPPs) in achieving sustainable industrialization and infrastructure?

- a) They increase competition and hinder progress
- b) They leverage resources and expertise from both sectors
- c) They prioritize profits over sustainability
- d) They exclude the public sector from decision-making

Quiz

6. Which of the following actions can help bridge the technological gap between developed and developing countries?

- a) Encouraging technology hoarding
- b) Facilitating technology transfer agreements
- c) Ignoring the needs of developing countries
- d) Promoting isolationism

Quiz



7. How can individuals contribute to the promotion of inclusive and sustainable industrialization, innovation, and infrastructure?

- a) By advocating for policies that prioritize sustainability
- b) By engaging in wasteful consumption habits
- c) By ignoring environmental and social issues
- d) By promoting short-term profit over long-term sustainability

Quiz answers

1. d) All of the above
2. b) Increasing income inequality
3. b) It creates new solutions to social and environmental issues
4. a) By enacting policies that incentivize sustainable practices
5. b) They leverage resources and expertise from both sectors
6. b) Facilitating technology transfer agreements
7. a) By advocating for policies that prioritize sustainability

Case studies



Case Study analysis

Over the last decade, climate change and urbanization have placed immense pressure on cities, demanding resilient infrastructure and sustainable development. Many urban centers across the world face the dual challenges of protecting against natural hazards and facilitating balanced growth that accommodates affordable housing, industrial development, and community needs.

One such initiative took place in New York City, where the Resilient Neighborhoods Program (RNP) was launched to address both resilience and economic challenges, particularly in low-lying and vulnerable areas prone to flooding. The program utilized zoning and land-use regulations to create resilient infrastructure, ensuring both economic growth and protection against future climate impacts.

Case Study analysis

The Challenge:

New York City's coastal neighborhoods were disproportionately affected by Superstorm Sandy in 2012, exposing weaknesses in the city's infrastructure. Many low-lying areas, previously designated for industrial and residential purposes, were not adequately prepared for rising sea levels, storm surges, and other climate threats. As a result, the existing zoning laws created conflicts between the need for protective infrastructure and continued economic development, particularly in areas where light industries provided essential local jobs and affordable housing was critically needed.

The central challenge for the RNP was to strike a balance between safeguarding these vulnerable neighborhoods from climate risks and encouraging economic development. The program needed to ensure that new regulations did not stifle growth but rather allowed for both resilience and opportunity to coexist. This required careful coordination between local stakeholders, including residents, industry leaders, and urban planners.

Case Study analysis

The Resilient Neighborhoods Program (RNP):

In response, the RNP developed a zoning framework that prioritized both climate adaptation and sustainable development, with specific focus on the integration of affordable housing and light-industrial growth. The program restructured zoning laws to limit residential expansion in areas most prone to flooding, while designating other zones for mixed-use development, allowing for a balance between housing and industries that support local economies.

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Case Study analysis

Key components of the program included:

1. **Climate-Resilient Infrastructure:** New zoning laws required that any new developments in flood-prone areas be designed to withstand climate-related impacts, such as elevated construction and improved stormwater management systems.
2. **Affordable Housing:** The program set aside portions of newly zoned land specifically for affordable housing projects. These developments were required to meet climate resilience standards, ensuring that the city's most vulnerable populations were not left unprotected.

Case Study analysis

3. Light-Industrial Preservation: To preserve economic opportunities, particularly for small and medium enterprises (SMEs), the zoning framework protected certain areas for light-industrial development. This was crucial for maintaining employment and ensuring that industries critical to the local economy were not pushed out by rising land prices.

4. Stakeholder Engagement: The success of the RNP heavily relied on engaging the community and private sector stakeholders throughout the planning and implementation process. Public workshops, consultations, and collaboration with local businesses ensured that the diverse needs of the community were represented and balanced with the city's resilience goals.

Case Study analysis

[MORE INFORMATION](#)S



The Outcome:

The RNP's zoning reforms led to the creation of socially and economically balanced neighborhoods, with increased investment in climate-resilient infrastructure. The program also served as a model for other coastal cities facing similar challenges, demonstrating how land-use regulations can support both climate adaptation and economic development.

Case Study analysis

As a result, New York City saw significant growth in its affordable housing stock, particularly in previously underserved areas. Industrial zones were protected from residential encroachment, allowing local economies to thrive, even as new housing developments sprang up nearby. Overall, the RNP has been lauded as a successful example of how forward-thinking land-use regulations can drive resilient, inclusive, and sustainable urban development.

In conclusion, the Resilient Neighborhoods Program offers a blueprint for cities seeking to foster resilient infrastructure through zoning and land-use regulation. By prioritizing both economic growth and climate resilience, the program has helped ensure that vulnerable communities are better protected from future hazards, while also maintaining opportunities for housing and industry development.