ILSAMUN 2024

and a lot of a lot of

UNITED NATIONS DEVELOPMENT PROGRAMME

DISCUSSING THE CHALLENGES FACED BY WOMEN IN THE WORKPLACE



Table of Contents

- 1. Letter from the Secretary-General
- 2. Letter from the Under-Secretary-General
- 3. Introduction to the Committee, the United Nations Development Programme
- 4. Key Terminology
- 5. Sustainable Development Goals
 - 5.1. SDG #7 Targets, Indicators, and Statistics
 - 5.2. SDG #9 Targets, Indicators, and Statistics
- 6. Transition Towards Green Energy: Generalized Overview
 - 6.1. Recent Technological Advancements in Green Energy
 - 6.2. State Approach to Green Energy

7. Industrialization and Infrastructure: Generalized Overview

- 7.1. Historical Background on Recent Industrialization Efforts
- 7.2. Globalization of Markets and the Consumerism Dilemma
- 7.3. Deteriorating Infrastructure: What Can Be Done?
- 8. Sustainable Development and Green Economy Models
 - 8.1. Historical Background on Sustainability Efforts
 - 8.2. Financial Concerns Regarding Green Economy Models
- 9. Questions to be Answered
- **10.** Further Reading and References

1. Letter from the Secretary-General

Esteemed Participants,

I salute you on behalf of the ILSA Model United Nations Team of 2024 which shall be the fourth annual edition of ILSAMUN as its Secretary-General. It's of utmost pleasure to lead a team which struggles to gather up a Model United Nations Conference that we all hope and with great determination to schedule to be an intellectual gathering of minds that wish nothing but to become more sharpened rather than just a usual Model United Nations Conference.

Through relentless efforts, our aim has been to craft an enriching experience marked by intellectual exchange, robust debates, and indelible memories. It is a privilege to see this vision come to fruition with a team of dedicated individuals eagerly awaiting your arrival.

I truly believe that the Model United Nations Conferences shall be nothing but serve you to demonstrate the dynamics of the world with a different perspective, and provide a chance to expand your knowledge and awareness on the matters. Without you, our efforts would be meaningless. Therefore I invite you to find the common ground and generate sustainable solutions with your enthusiastic and active participation.

Finally, I as the Secretary-General of ILSAMUN, hereby welcome you all to this beginning of an unforgettable experience. I'm no one but the person who is looking forward to meeting you for your valuable contributions.

Sincerely,

Ömer Faruk CAN Secretary-General

2. Letter from the Under-Secretary-General

Honorable delegates,

Welcome to the fourth edition of ILSA Model United Nations Conference! I am delighted to have you as esteemed participants in the United Nations Development Programme. In this committee, we will collectively address a very pressing issue of our time – advancing the economic growth of underdeveloped and developing nations in alignment with the objectives outlined in Sustainable Development Goals 7 and 9.

Our committee's agenda item revolves around the complex and critical situation of delicately balancing economic growth and sustainable development practices.

I encourage you to actively participate, share diverse perspectives, and work collaboratively to formulate resolutions that address the challenges related to sustainable economic growth in developing countries.

GAMI

In I look forward to witnessing your contributions to a meaningful and impactful debate in UNEP.

Should you have any questions or need further clarification, please do not hesitate to reach out to me. You can contact me at your convenience via the provided e-mail address: emirelhatip@gmail.com.

Best regards,

Emir Elhatip Under-Secretary-General

3. Introduction to the Committee, the United Nations Development Programme

United Nations Development Programme (UNDP), United Nations (UN) organization formed in 1965 to help countries eliminate poverty and achieve sustainable human development, an approach to economic growth that emphasizes improving the quality of life of all citizens while conserving the environment and natural resources for future generations. The largest UN development assistance program, the UNDP is headed by an administrator who oversees a 36-member Executive Board representing both developing and developed countries. It is headquartered in New York City.[1]

The UNDP administers aid through five-year Country Programmes, which fund projects aimed at attracting investment capital, training skilled employees, and implementing modern technologies. The UNDP also makes experts available to help developing countries increase their capacity for good governance—by building political and legal institutions that are equitable, responsive, and open to public participation—and to expand the private sector of their economies in order to provide more jobs. Recent UNDP programs have focused on reducing poverty, developing strategies to treat and combat the spread of HIV/AIDS, promoting environmentally sound energy and economic policies, and expanding communications and technology infrastructure. UNDP resident representatives in more than 125 developing countries help to coordinate the local activities of other UN agencies and programs, as well as those of nongovernmental organizations.[2]



4. Key Terminology

- Camaraderie: Mutual trust and friendship among people who spend time together.
- **Transborder:** Relating to or involving crossing a border, especially a national one.
- **Equitable**: Fair and impartial; just and unbiased.
- **Resilient**: Able to withstand or recover quickly from difficult conditions.
- **Cyber-physical systems**: Integrated systems of computational algorithms and physical components.
- **Ceteris Paribus**: A Latin phrase meaning "all other things being equal," often used in economics to describe a situation where one factor is changed while all other factors are held constant.
- **Obsolescence**: The state of being outdated or no longer in use, typically due to the introduction of something new.
- **Bureaucratic red tape**: Excessive bureaucratic procedures or formalities that impede or delay progress.
- **Perovskite**: A type of material used in solar cells, characterized by a specific crystal structure and known for its potential for high performance and low production costs.
- **Hydropower**: Electricity generated by using the energy of moving water, typically from rivers, dams, or other water sources.
- **Tidal power**: Electricity generated by harnessing the energy of tides, typically through the use of turbines in tidal barrages or tidal stream systems.
- **Industrialization**: The process of developing industries in a country or region, typically characterized by the growth of factories, manufacturing, and mechanized production.
- **Globalization:** The process of interaction and integration among people, companies, and governments of different nations, driven by international trade, investment, and technological advancements.
- **Resilience:** The ability to recover quickly from difficulties or setbacks; the capacity to adapt to change and bounce back from challenges.
- **Sustainability:** Meeting the needs of the present without compromising the ability of future generations to meet their own needs, often applied to environmental, economic, and social contexts.
- **Infrastructure:** The basic physical and organizational structures and facilities needed for the operation of a society or enterprise, such as transportation systems, communication networks, and public utilities.
- **Misanthropy:** A general dislike, distrust, or contempt for humanity and human society, often characterized by cynicism, pessimism, or a lack of empathy towards others.

5. Sustainable Development Goals

In 2015, the United Nations adopted 17 interconnected global goals to achieve the 2030 Sustainable Development Agenda. These goals mainly have the intention of eradicating poverty, enabling the advancement towards a prosperous society, and preserving the natural resources of the planet.

Each goal comes with a set of targets to be achieved within a certain time frame.

Achieving these goals requires an immense display of global cooperation and camaraderie between nations, civil society elements, and the private sector.



As visualized above, the Sustainable Development Goals are quite multifaceted, yet all of them ultimately have the same intention, eliminating all sorts of inequalities across the board. Although they all are interconnected, it is in our best interest to focus on a select number of Sustainable Development Goals, which are SDG #7 – Affordable and Clean Energy, and SDG #9 – Industry, Innovation, and Infrastructure.



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL





SDG #7 has 5 main targets[3], which are as follows:

- Ensuring universal access to affordable, reliable and modern energy services.
- Substantially increasing the share of renewable energy in the global energy mix, doubling the global rate of improvement in energy efficiency.
- Enhancing international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology.
- Promoting investment in energy infrastructure and clean energy technology.
- Expanding infrastructure and upgrading technology to supply modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.



5.2. SDG #9 – Industry and Infrastructure: Targets, Indicators, and Statistics





SDG #9 has 8 main targets[4], which are as follows:

- Developing quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all, promoting inclusive and sustainable industrialization.
- By 2030, significantly raising industry's share of employment and gross domestic product, in line with national circumstances, and doubling its share in least developed countries, increasing the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.
- Upgrading infrastructure and retrofitting industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities, enhancing scientific research, upgrading the technological capabilities of industrial sectors in all countries, in particular developing countries.
- By 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.
- Facilitating sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States.
- Supporting 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.
- Significantly increasing access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2030.

6. Transition Towards Green Energy: Generalized Overview

6.1. Recent Technological Advancements in Green Energy

The development in green energy systems has been quite rapid, especially after the Paris Agreement. Newly emerging technologies proved themselves quite effective at reducing carbon emissions. Additionally, implemented systems turned out to be running much smoother as well, providing more power at reduced rates of fuel. These developments paved the way for better integration of green energy systems, dramatically increasing the amount of sustainable energy sources. Overall, it is evident that the energy scene went through a massive transformation, towards a brighter, greener future.

Solar Power: Improved Solar Panel and Solar Cell Designs

Halide perovskites are a family of materials that have shown potential for high performance and low production costs in solar cells. Perovskite solar cells have shown remarkable progress in recent years with rapid increases in efficiency, from reports of about 3% in 2009 to over 25% today.[5] Bifacial solar panels, the reversible fashion accessory of the solar industry, are double-sided panels that absorb solar energy from both sides. Tests by solar manufacturers have found these panels can generate 11% to 23% more energy than their monofacial or single-sided counterparts.[6]

Wind Energy: Offshore Wind Farms

The development of offshore wind farms, particularly in deeper waters, has expanded the potential for wind energy generation. Moreover, advanced wind turbine designs, such as vertical-axis turbines, are more efficient and can capture wind energy from any direction, increasing their usability in various environments.

Energy Storage: Redox Flow Batteries

Unlike conventional batteries (which are typically lithium-ion), in flow batteries the liquid electrolytes are stored separately and then flow (hence the name) into the central cell, where they react in the charging and discharging phase. The durability of the stored energy allows for periods of many hours - such as nighttime - to be covered without electricity production from any source. Furthermore, raw materials are used that are common or at least don't have particular supply problems: for example, the most mature technology, and currently the most

widely used industrially, features vanadium, of which there are significant known mineral reserves in Norway and Finland. The use of raw materials is further reduced on account of their easy recyclability, and this becomes a negligible issue in the case of emerging technologies based on iron, zinc or organic electrolytes. Last but not least, flow batteries can be compactly and modularly allocated, provide high safety as there is no risk of fire, and they have a service life of at least 20 years because there is minimal degradation.[7]

Hydropower: Flexible Production Rates on Hydropower Plants

Developing systems allow for hydropower to be harvested from even the smallest or the stillest water sources. Additionally, due to the utilization of advanced pumping techniques, hydropower plants are much safer and the electricity production per hour can be altered to serve for a wider variety of loads on the grid.

Geothermal Energy: Better Utilization of Underground Resources

Technological advancements allow for the utilization of low-temperature water reservoirs to be utilized for geothermal energy generation. Moreover, a new technique allowing the injection of heated water into rocks to create large fissures deep underground provides a much higher energy conversion rate for geothermal energy plants.

GAMI

Bioenergy: Developments in Algae Processing

Advances in algae cultivation and processing have made biofuels a more sustainable alternative to fossil fuels. Improved technologies for converting organic waste into biogas or electricity have made waste-to-energy systems more efficient and environmentally friendly.

Smart Grids: Better Integration of Renewable Energy Sources

Smart grids are electricity networks that use digital and other advanced technologies to monitor and manage the transport of electricity from all generation sources to meet the varying electricity demands of end users. Smart grids coordinate the needs and capabilities of all generators, grid operators, end users and electricity market stakeholders to operate all parts of the system as efficiently as possible, minimizing costs and environmental impacts while maximizing system reliability, resilience, flexibility, and stability. Most of the technologies involved have already reached maturity, and so tracking investments provides insights on levels of deployment.

Hydrogen Economy: Electrolysis and Liquid Hydrocarbons

Electrolysis using renewable energy sources to produce hydrogen is gaining traction as a clean fuel source for various applications, including transportation and industrial processes. Hydrogen may be the only link between physical energy from renewable sources and chemical energy. It is also the ideal fuel for modern clean energy conversion devices like fuel cells or even hydrogen engines. But hydrogen is not the ideal medium to carry energy from primary sources to distant end users, which is where liquid hydrocarbons come in. Liquid hydrocarbons allow a much-reduced loss of energy during transportation, therefore are much more efficient than their hydrogenic counterparts.

JR

6.2) State Approach to Green Energy

Governments use a variety of financial approaches to green energy systems.

Renewable Portfolio Standards

A renewable portfolio standard (RPS) requires electric utilities and other retail electric providers to supply a specified minimum percentage (or absolute amount) of customer demand with eligible sources of renewable electricity.

Many states have adopted RPS requirements because they are an efficient, cost-effective, market-based approach to achieving renewable electricity policy objectives. RPS requirements can be used in both regulated and restructured electricity markets. States have tailored their RPS requirements to satisfy particular state policy objectives, electricity market characteristics, and renewable resource potential. Consequently, there is wide variation in RPS rules from state to state regarding the minimum requirement of renewable energy, implementation timing, eligible technologies and resources, and other policy design details.

Public Benefits Funds for Renewable Energy

Public/system benefit funds are commonly supported through a very small surcharge on electricity consumption (e.g., \$0.002/kWh)[8] to ensure continued support for renewable energy and low-income energy programs. This charge is sometimes referred to as a "system benefits charge" (SBC). Public/system benefit funds commonly support rebate programs, loan programs, research and development, and energy education programs.

Output–Based Environmental Regulations

Output-based environmental regulations (OBR) regulate emissions in relation to the energy output of a process (e.g., electricity generation or steam production) rather than the material inputs used in the process (e.g., fuel burned). OBRs use units of measure such as pounds of pollutant emitted per megawatt-hour generated (lbs/MWh) or pounds of pollutant emitted per unit of steam generated, rather than pounds of pollutant emitted per unit of fuel burned (lbs/MMBtu) or pollutant concentration (ppm).

Interconnection Standards

Interconnection standards are processes and technical requirements that delineate how electric utilities in a state will treat renewable energy sources that need to connect to the electric grid. The establishment of standard procedures can reduce uncertainty and delays that renewable energy systems can encounter when obtaining electric grid connection in states that have not established interconnection standards.

Net Metering

Net metering is an electricity billing mechanism that allows consumers who generate some or all of their own electricity to use that electricity anytime, instead of when it is generated. This is particularly important with renewable energy sources like wind and solar, which are nondispatchable (when not coupled to storage). Monthly net metering allows consumers to use solar power generated during the day at night, or wind from a windy day later in the month. Annual net metering rolls over a net kilowatt-hour (kWh) credit to the following month, allowing solar power that was generated in July to be used in December, or wind power from March in August.

Feed-In Tariffs

A feed-in tariff is a policy mechanism designed to accelerate investment in renewable energy technologies by offering long-term contracts to renewable energy producers. This means promising renewable energy producers an above-market price and providing price certainty and long-term contracts that help finance renewable energy investments. Typically, FITs award different prices to different sources of renewable energy in order to encourage the development of one technology over another. For example, technologies such as wind power

and solar PV are awarded a higher price per kWh than tidal power. FITs often include a "digression": a gradual decrease of the price or tariff in order to follow and encourage technological cost reductions.

Property Assessed Clean Energy (PACE)

PACE is a financing option that attaches the obligation to repay the cost of renewable energy installations or energy efficiency retrofits to a residential property rather than an individual borrower. This mechanism encourages property owners to invest in clean energy improvements even if the payback period is longer than the owner intends to keep the property.

7. Industrialization and Infrastructure: Generalized Overview

7.1. Historical Background on Recent Industrialization Efforts

Recent industrialization efforts were shaped by both recent technological advancements and economic imperatives as well as historical legacies and societal concerns.

The First Industrial Revolution

The first industrial revolution began in Britain towards the end of the 18th century. The period marked a great transition from agriculture-dependent economies to industry-led economies. After the initial invention of the steam engine, various production processes shifted towards manned-machinery operations, with key innovations being in textile machinery and iron production techniques.

The Second Industrial Revolution

The second industrial revolution mostly resembled the former. This wave of sporadic industrial advancement bursts was sparked by the invention of electricity. With greater means of steel production and oil extraction via electricity and better machinery, urbanization and globalization thrived, and the concept of large-scale corporations was introduced to the economic scene.

Post-World War II Industrialization

After the Second World War, most countries experienced a surge of industrialization as they rebuilt their economies. No-competition markets, adaptation of military-grade technological advancement into everyday lives, and favorable government policies fuelled this growth. Additionally, due to a relatively-long period of peace, many new markets emerged and flourished such as aerospace, automotive, and electronics.

Digitalization and Industry 4.0

The fourth industrial revolution, dubbed as Industry 4.0, is the integration of digital technologies into means of production. This includes the Internet of Things (IoT), artificial intelligence, big data analytics, and cyber-physical systems. The main focus of Industry 4.0 is to greatly enhance efficiency and productivity of manufacturing systems with an additional emphasis on flexibility, customization, and responsiveness to alternating customer demands.

7.2. Globalization of Markets and the Consumerism Dilemma

Globalization of markets is a very multi-faceted topic that is open to interpretations, except one single fact. The ability to influence markets beyond a company's domestic borders turned competition in the worldwide market into a blood sport. Due to constant competition in the markets, corporations need to continuously improve both their goods and their customer service as stagnancy ends in obsolescence in the modern times.

The spotlight on research & development efforts in technology and behavioral psychology & big-scale data studies paves the way for better utilization of technology and creates a business model that intends to ensure customer satisfaction, at any cost. In turn, constantly evolving markets emerge. Nothing is stagnant anymore, all available products are "fresh out the oven", however, all upgrades are merely incremental. It's a ceteris paribus situation at all times. But that doesn't seem to matter, because the human condition simply asks for the novel, needs the novel. Therefore, companies get away with it.

This obsession with novelty creates a consumerism problem that bears catastrophic fallouts. Resources of our planet are already at an all-time low, and the decline rate is rapidly accelerating. So, in summation, globalization of markets brings forth a dilemma that is quite easy to miss: Is constant development actually as beneficial as it appears on the surface level?

7.3. Deteriorating Infrastructure: What Can Be Done?

In the early 20th century, modern infrastructure such as electrified railways, underground water pipes, suspended electric overhead wires became the norm for governments, especially in OECD countries. Although the infrastructure was designed to be quite resilient, especially when you take the technology at the time into account, a century is too much time for any man-made conformation to maintain its complete integrity, as the universe itself is an isolated system and tends towards inevitable, absolute chaos. Therefore, over time, old infrastructure elements obviously deteriorate. However, the level of deterioration varies greatly due to domestic policies. For example, the highways in the United States are in much worse shape compared to their motorway counterparts in the United Kingdom as the latter nation has stricter maintenance regulations which allows even the oldest infrastructure elements to be in utilizable condition for the decades to come.

Although deterioration has its levels due to different maintenance policies and daily use, most old systems need to be replaced with their newer counterparts. This is mostly due to a vast difference between the efficiency and the reliability of old infrastructure elements and present-day infrastructure designs. However, although groundbreaking on new infrastructure is relatively cheap, replacing previously-existing infrastructure is quite costly, which results in a financial lose-lose situation for governments. Therefore, governments employ a wide variety of solutions to maintain existing infrastructure to their best ability, and try to support the existing networks with additional, modernized infrastructural "arteries". These solutions include:

- Retrofitting newer infrastructural elements into existing infrastructural frames.
- Prioritizing investments in infrastructure and allocating funds to maintenance efforts.
- Providing proper asset management via regular inspections and preventive repairs.
- Modernizing and upgrading infrastructure elements that yield a positive cost-benefit analysis.
- Simplifying and streamlining complicated permitting and regulatory processes to reduce bureaucratic red tape hindrances to a minimum.

8. Sustainable Development and Green Economy Models

8.1) Historical Background on Sustainability Efforts

Sustainability is still a relatively-new topic in politics & economy, just like urbanization and industrialism, as they go hand-in-hand. The first concerns regarding rapid resource depletion and sustainability were raised during the early 20th century, in the form of environmental conservation movements. The movement mostly affected the United States, and focused on preserving natural resources, protecting wildlife and establishing national parks.

However, environmentalism as we know it today became the predominant norm in the mid-20th century. In the 1960s, modern environmentalism arose as both a social and a political movement. Environmentalists focused their efforts on raising public awareness, drawing attention to pollution, biodiversity loss, and ultimately rapid resource depletion.

JR.

Although past efforts were valiant and not in vain, environmentalism transcended from a "mere whimsical concern for the bourgeois" to a "global movement against a looming threat" when public displays of concerns garnered enough attention for governments to step in and take charge. Environmental governance, an array of policies adopted by most governments, became a key element to sustainable development, and allowed nations to pursue economic growth without harming the environment.

After environmentalist policies were enacted, sustainable technologies saw significant advancements. Renewable energy sources, such as solar, wind, and hydroelectric power, have become increasingly cost-competitive and widespread. Sustainable agriculture practices, green building standards, circular economy initiatives, and eco-friendly transportation solutions have also gained momentum.

Overall, we have come a long way in terms of sustainable economies, however, both governments and private practices will prioritize their bottom lines at the end, therefore it is important to realize that this change was sparked by a few concerned citizens coming together and this flame must be constantly tended to.

8.2) Financial Concerns Regarding Green Economy Models

Although green energy systems are bound to be for the greater good of both the public and the corporate scene, largely due to the environmental relief they provide over their fossil fuel counterparts, from a purely economic standpoint, they do not seem to be the optimal solution except if you only consider the very long run. This situation creates an imbalance in the interest in green energy systems as the public opinion largely favors the transition whereas governments and the private sector are far less enthusiastic in comparison to their civilian counterparts.

The first challenge in green energy models is that most systems require state-of-the-art technological infrastructure, which is extremely costly to implement. Moreover, after the initial cost, these systems are also much more costly to maintain in comparison to their fossil-fuel counterparts.

Another obstacle in the trend towards green energy models is that shifting from fossil fuels towards clean energy will completely disrupt the energy economy, as workers in the fuel supply-chain community will most likely lose their jobs and green businesses will struggle to replace this human capital as most tasks in green energy production require essential knowledge and training.

Finally, although green economy models seem to be the trend as of now, market uncertainty is also a key factor to consider. Fluctuations in government policies, subsidies, or carbon pricing mechanisms can affect the profitability and viability of green investments, leading to uncertainty for businesses and investors.

So overall, while it is certain that green economy models are a must for sustainable development, they do have their fair share of drawbacks.

9. Questions To Be Addressed

- What are the recent advancements in green energy systems and how can developing nations adapt them into their energy infrastructure without hindering their economic growth?
- What stage are most developing countries in in terms of infrastructure and industrialization efforts?
- What can the United Nations Development Programme provide to developing countries to positively accelerate the development process?
- What else does the international community need to provide to developing countries to ease their transition process?
- What advantages and drawbacks do green economy models have over their fossilfuelled counterparts?
- Why are accountability and transparency so important for sustainable economic growth?
- How can developing nations utilize a sustainable economy model without greatly sacrificing industrial growth?
- What can be done to prevent infrastructure deterioration in developing countries?
- How can infrastructure modernization be done so that the efforts yield a net-positive cost-benefit analysis without hindering economic growth in developing countries?
- How does the globalization of markets affect the economies of developing nations and how can they utilize the transitioning economic scene to their benefit?

10. Further Reading and References

- [1] https://www.britannica.com/topic/United-Nations-Development-Programme
- [2] https://www.britannica.com/topic/United-Nations-Development-Programme
- [3] https://sdgs.un.org/goals/goal7
- [4] https://sdgs.un.org/goals/goal9
- [5] https://www.energy.gov/eere/solar/perovskite-solar-cells
- [6] <u>https://www.energy.gov/eere/solar/perovskite-solar-cells</u>
- [7] https://www.enelgreenpower.com/learning-hub/renewable-energies/storage/flow-battery
- [8] https://www.nrel.gov/docs/fy24osti/85952.pdf