MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY STATE UNIVERSITY
Educational and Research Institute of Business, Economics and Management
Department of International Economic Relations

«Admitted to the defense»
Head of the Department
_____ _____
(signature) (full name)
____ _____ 20__ p.

QUALIFICATION PAPER
It is submitted for the Bachelor's degree

Specialty 292 "International Economic Relations"
on the topic "GLOBAL ENVIRONMENTAL PROBLEMS AND THEIR IMPACT ON INTERNATIONAL BUSINESS"

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Qualifying Bachelor's paper contains the results of own research. The use of the ideas, results and texts of other authors has a link to the corresponding source

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Sumy, 2024

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
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TASKS FOR BACHELOR'S DEGREE QUALIFICATION PAPER

(specialty 292 "International Economic Relations")
student 4 course, group ME-02a.ан
(course number) (group's code)
Bohdana Lisniak
(student's full name)

1. The theme of the paper is GLOBAL ENVIRONMENTAL PROBLEMS AND THEIR IMPACT ON INTERNATIONAL BUSINESS.
approved by the order of the university from « 10 » May 2024 № 0484-VI
2. The term of completed paper submission by the student is «25» May 2024
3. The purpose of the qualification paper is to determine the extent of global environmental problems and their implications for international business. To investigate the interconnectedness between environmental challenges and their effects on various aspects of international business operations. To analyze the strategies employed by businesses to mitigate environmental risks, capitalize on emerging opportunities, and contribute to sustainable development in the face of global environmental challenges.
4. The object of the research is the environmental issues and how they affect international businesses.
5. The subject of research is the study of how global environmental problems impact international business and how it can contribute to their solutions.
6. The qualification paper is carried out on materials from the electronic sources.
7. Approximate qualifying bachelor's paper plan, terms for submitting chapters to the research advisor and the content of tasks for the accomplished purpose is as follows:

Chapter 1 General characteristics of modern environmental issues: 23.04.2024
(title, the deadline for submission)

Chapter 1 covers the main global environmental problems and their reason, trend and consequences. It finds relationship between ecological challenges and international business.
(the content of concrete tasks to the section to be performed by the student)

Chapter 2 Analysis of modern solutions of global environmental problems: 10.05.2024
(title, the deadline for submission)

Chapter 2 deals with contribution of government legislations and policies to solving environmental problems. It dives into the role of international environmental organizations and movements. It finds the place of private enterprises and businesses in dealing with ecological concerns.

(the content of concrete tasks to the chapter to be performed by the student)

Chapter 3 Impact of environmental problems on international business 15.05.2024

(title, the deadline for submission)

Chapter 3 exposes the influence of environmental problems on international business. It talks about sustainability challenges and opportunities for international business. Challenges and prospects of sustainability for Ukrainian business.

(the content of concrete tasks to the chapter to be performed by the student)

8. Supervision on work:

Chapter	Full name and position of the Advisor	Date, signature	
		task issued by	task accepted by
1	Maryna Domashenko, Ph.D., Associate professor	23.04.2024	23.04.2024
2	Maryna Domashenko, Ph.D., Associate professor	10.05.2024	10.05.2024
3	Maryna Domashenko, Ph.D., Associate professor	15.05.2024	15.05.2024

9« Date of issue of the task: « 05 » April 2024

ABSTRACT

on bachelor's degree qualification paper on the topic

«GLOBAL ENVIRONMENTAL PROBLEMS AND THEIR IMPACT ON INTERNATIONAL BUSINESS»

student Bohdana Lisniak

(full name)

The main content of the bachelor's work is laid out on 69 pages, including the list of used sources from 55 titles, which is placed on 6 pages. The work contains 6 figures.

Global ecological problems have a significant impact on international business. In recent times, the imperative to tackle global environmental issues has surged to unprecedented heights, leading to stricter governmental regulations and heightened consumer demand for eco-friendly products and services. Within the sphere of international business, firms are under increasing pressure to adjust their practices to address environmental concerns and seize opportunities in the growing green economy.

The purpose of the bachelor's degree qualification paper is to determine the extent of global environmental problems and their implications for international business. To investigate the interconnectedness between environmental challenges and their effects on various aspects of international business operations. To analyze the strategies employed by businesses to mitigate environmental risks, capitalize on emerging opportunities, and contribute to sustainable development in the face of global environmental challenges.

The purpose of the work is realized by performing the following tasks:

- to analyze the interdependence between ecological concerns and international business processes.
- to study the extend in which government, international environmental organizations and private enterprises contribute to solving ecological problems.
- explore the opportunities of sustainability, including increased operational efficiency and productivity, positive relationships with stakeholders, enhanced competitiveness and image.

- identify the challenges that international business faces due to environmental concerns such as diminished supplies, operational and workforce disruptions and profit loss.
- to analyze sustainable business approaches in Ukraine, its limits, prospectives and foreseen future.

The general scientific research method was applied in the theoretical part of the work. This method was used for the purpose of theoretical analysis and clarification of theoretical aspects related to the selected research topic. Using this method, the main business strategies and legislations were investigated.

The analysis of sustainable business practices was carried out, in particular, international regulations and related international organizations. It has been established that envirovmental issues create new opportunities for both Ukrainian and international companies, in particular in terms of gaining trust, attraction of investments and expansion of sales.

According to the results of the study the following conclusions are formulated:

1. The correlation between environmental problems and business processes is studied. It was found that how trade dynamics, investment flows, financial operations, marketing strategies, and supply chain management profoundly affect ecological conditions, offering both risks and opportunities for sustainability efforts.

2. The opportunities that international businesses can explore due to ecological degradation have been determined. It was found that improved operational efficiency and productivity, strengthened stakeholder relationships, and heightened competitiveness and reputation are key opportunities that contribute to the Ukrainian and international business.

3. The challenges that international businesses face during the integration processes are reduced inventory, operational and workforce interruptions, and financial losses, are investigated. Ukrainian business alreadt experience source scarcity and lack of governmental and economic support.

4. The main obstacles of the sustainable future of Ukrainian business, such as reforms and support needed, to ensure the successful transition to sustainable practices are considered.

The results developed in this work can serve as a basis for informed decision-making and strategic planning in the field of international business. The results of the approbation of the main provisions qualification paper were considered at:

1. Bohdana Lisniak, Maryna Domashenko Global environmental problems and their impact on international business // Mechanisms for combating modern challenges and threats: lessons from the EU for Ukraine: materials of the International Scientific and Practical Conference, Sumy, February -28-29, 2024 / by General ed. V.Yu. Shkola, M.D. Domashenko - Sumy: Sumy State University, 2024.

2. Bohdana Lisniak, Larisa Andreyko Online Businesses During a Pandemic // First Step in Science: materials of the Student Conference, Sumy, March 18-19, 2021. P. 215-216.

3. Bohdana Lisniak, Larisa Andreyko Impact of Website Design on Online Business // Functions of Design in the Modern World: Dimensions 2021: materials of the IV International Scientific and Practical Conference, Sumy, April 27-28, 2021. P. 37-39.

4. Bohdana Lisniak, Iryna Marekha The Importance of Automotive Industry for the Economy of Sweden // Actual Problems of the Functioning of the Economic System of Ukraine: materials of the XXVII International Scientific Conference, Lviv, May 14-15, 2021

5. Bohdana Lisniak, Anna Rosahota Tourism Marketing During a Pandemic // Managing the Development of Tourism and Hotel and Restaurant Business in the Circular Economy: materials of the I International Internet Conference, Lutsk, May 18, 2021. P. 98-101.

Keywords: sustainability, environmental problems, international business, governmental regulations, green approaches, ecology, international trade.

The year of qualifying paper fulfillment is 2024

The year of paper defense is 2024

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INTRODUCTION

In this work, we will examine the interconnectedness of environmental challenges and international business as a critical aspect of global economic dynamics. In this thesis, we delve into the multifaceted relationship between global environmental problems and their impact on international business operations.

The actuality of the topic: In recent years, the urgency of addressing global environmental problems has reached unprecedented levels. This heightened awareness has not only prompted governments to implement stricter regulations but has also spurred consumer demand for environmentally sustainable products and services. In the realm of international business, companies are facing mounting pressure to adapt their operations to mitigate environmental impacts and capitalize on emerging opportunities in the green economy. As stakeholders across various industries grapple with the complexities of sustainability, understanding the interconnectedness between environmental challenges and international business has become paramount for navigating the evolving global landscape.

Level of the studied problem: Today, the study of global environmental problems and their ramifications on international business stands at the forefront of academic inquiry, reflecting the urgent need to address pressing environmental challenges in the context of global economic activities. By delving into the multifaceted interactions between environmental issues and international commerce, this work can provide valuable insights into the complexities and implications of sustainable business practices in an increasingly interconnected world.

The main goal: to determine the extent of global environmental problems and their implications for international business. To investigate the interconnectedness between environmental challenges such as climate change, deforestation, and pollution, and their effects on various aspects of international business operations. To analyze the strategies employed by businesses to mitigate environmental risks, capitalize on emerging opportunities, and contribute to sustainable development in the face of global environmental challenges.

Tasks of the qualification work: to find out the paramount ecological problems as well as their reasons and consequences, their relation with international business. To find the relationship between environmental issues and international business. To provide modern solutions and the paramount players in them. The main issues and prospects for international business. Sustainable practices in Ukrainian enterprises.

Subject of the research: is the study of how global environmental problems impact international business and how it can contribute to their solutions.

Methods of the research: The research employed various methods, including general scientific techniques for the theoretical section. This involved analyzing theoretical aspects, fundamental concepts, specificities, and forms. Through this approach, a fundamental analysis of the challenges and opportunities of sustainable practices in international business was conducted.

The practical part of the work was investigated using a general scientific, analytical, and statistical method. The general method was carried out by analyzing the specifics of global environmental problems. Analysis of possibilities and problems of international business was conducted in relation to these environmental challenges.

The scientific novelty of the study lies in its complex analysis of the intricate relationship between global environmental issues and international business dynamics. Through an in-depth examination of various environmental challenges such as climate change, deforestation, pollution, and biodiversity loss, this research explores their multifaceted impacts on the operations, strategies, and decision-making processes of international businesses. The study will cover not only the direct effects of environmental problems on business activities but also the emerging opportunities and challenges they present in the global marketplace, shedding light on novel approaches to sustainability, innovation, and corporate responsibility in an increasingly interconnected world.

Information base: The primary information sources for this work included the Internet, research by domestic and foreign scientists on global environmental issues, domestic publications, and international reports, and their impact on the global

business landscape. The study also drew from the results of empirical studies, as well as expert opinions and assessments from renowned business professionals and experts in international business.

Practical meaning of the results of the scientific work: The study's findings can serve as a foundation for informed decision-making and strategic planning in the field of international business. By understanding the challenges posed by global environmental problems, businesses can anticipate potential risks and opportunities associated with these issues. Additionally, insights gained from the study can inform investment decisions, helping businesses, governments or international organizations allocate resources effectively and capitalize on emerging markets and technologies that address environmental concerns.

The trends provided in the third are the growing awareness and recognition of environmental issues among businesses worldwide: companies are increasingly acknowledging the importance of sustainability and adopting environmentally friendly practices to mitigate their impact on the planet. A rising trend of consumers demanding eco-friendly products and services: it prompts businesses to incorporate sustainability into their operations to remain competitive. Regulatory frameworks addressing environmental concerns are becoming stricter: it imposes compliance requirements on businesses operating internationally.

This work and all the results provided in it have not been used on any scientific forums, conferences or published anywhere.

1. Bohdana Lisniak, Maryna Domashenko Global environmental problems and their impact on international business // Mechanisms for combating modern challenges and threats: lessons from the EU for Ukraine: materials of the International Scientific and Practical Conference, Sumy, February -28-29, 2024 / by General ed. V.Yu. Shkola, M.D. Domashenko - Sumy: Sumy State University, 2024.

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1 GENERAL CHARACTERISTICS OF MODERN ENVIRONMENTAL ISSUES

1.1 The main global environmental problems and their reasons

There are a number of environmental issues that accumulated over billions of years of our planet existence. Among them are protection of the oceans, the energy transmission and renewables, protecting biodiversity, land use, deforestation, waste management, global warming, soil, air and water pollutions, energy scarcity, plastic pollution, fast fashion etc. However, in this chapter we will focus only on the most important ones and subsequently uncover other ones in the next chapters [1].

The primary driver of climate change is the greenhouse effect. Certain gases in the Earth's atmosphere function similarly to glass in a greenhouse, trapping the sun's heat and preventing it from escaping back into space, thus causing global warming. While many of these greenhouse gases happen naturally, human activities have significantly increased their concentrations in the atmosphere. Carbon dioxide produced by human activities is the biggest contributor to global warming [2]. As illustrated in Figure 1.1, carbon dioxide emissions from global fossil fuel combustion and industrial processes have dramatically increased since the onset of the industrial revolution. By 2020, CO2 masses in the atmosphere had risen to 48% above pre-industrial levels (before 1750) [3].

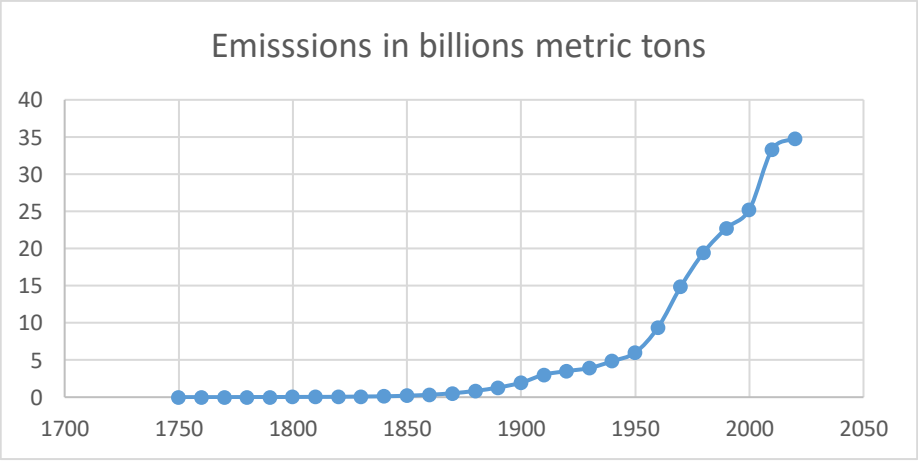


Figure 1.1 - Historical carbon dioxide emissions from global fossil fuel combustion and industrial processes from 1750 to 2020 [3]

We produce greenhouse gases through various activities:

1. Burning fossil fuels – Fossil fuels like oil, gas, and coal contain carbon dioxide that has been trapped underground for millennia. Extracting and burning these fuels releases the stored carbon dioxide into the atmosphere.

2. Deforestation – Forests remove and store carbon dioxide from the atmosphere. When forests are cut down, the carbon dioxide they would have absorbed remains in the atmosphere. Additionally, burning trees releases the carbon they stored.

3. Agriculture – Farming activities release various greenhouse gases. Animals produce methane, which is 30 times more potent as a greenhouse gas than carbon dioxide. Fertilizers release nitrous oxide, which is nearly 300 times more potent than carbon dioxide.

4. Cement – The process of producing cement contributes to climate change, accounting for 2% of global carbon dioxide emissions [4].

5. Transportation – Most vehicles run on fossil fuels, making transportation a major source of carbon dioxide emissions. Transportation accounts for nearly one-quarter of global energy-related carbon dioxide emissions, with an increasing trend in energy use for transport.

6. Private consumption – Our lifestyle and consumption of goods like clothing, electronics, and plastics contribute to greenhouse gas emissions. The wealthiest individuals bear the greatest responsibility: "the richest 1 percent of the global population combined account for more greenhouse gas emissions than the poorest 50 percent" [5].

Deforestation, the deliberate clearing of forested land, is another significant environmental problem. Forests have historically been cleared for agriculture, grazing, fuel, manufacturing, and construction. This has significantly altered landscapes worldwide. About 2,000 years ago, 80 percent of Western Europe was forested; today, that figure is just 34 percent [6].

Today, the greatest amount of deforestation is occurring in tropical rainforests, aided by extensive road construction into regions that were once almost

inaccessible. Building or upgrading roads into forests makes them more accessible for exploitation. Slash-and-burn agriculture is a big contributor to deforestation in the tropics. With this agricultural method, farmers burn large swaths of forest, allowing the ash to fertilize the land for crops. The land is only fertile for a few years, however, after which the farmers move on to repeat the process elsewhere. Tropical forests are also cleared to make way for logging, cattle ranching, and oil palm and rubber tree plantations [7].

Another environmental problem that we will discover is air pollution. Contamination of the indoor or outdoor environment occurs when chemical, physical, or biological agents alter the natural characteristics of the atmosphere [8]. The rising number of air pollutants has made breathing fresh, clean air next to impossible. As pollutants in the air cannot be seen with our naked eyes, we don't realize the sources of the increasing pollution levels. In order to understand the sources of air pollution, we need to first go through the basic causes of air pollution.

Most of the air pollution takes place due to the incomplete burning of fossil fuels. The main sources of it we discovered above. What is interesting that such human activities as transportation, cement, and agriculture are the same main causes of air pollution as well as deforestation. Besides, the use of wood stoves or space heaters is capable of increasing the humidity level which can directly affect the health of a person in no time. Talking about air pollution, we always consider outdoor air pollution dangerous for our lives but never talk about indoor air pollution. Household products cause indoor air pollution which is 10 times more harmful than outdoor air pollution. We spend more than 90% of our lives indoors, which makes the indoor air pollution impacts more serious and concerning [9].

Rising temperatures and unsustainable farming practices have exacerbated water and food insecurity. Annually, over 68 billion tonnes of topsoil are eroded at a rate 100 times faster than natural replenishment. This soil, often laden with biocides and fertilizers, contaminates drinking water and protected areas downstream. Exposed and lifeless soil becomes more vulnerable to wind and water erosion due to the absence of root and mycelium systems. Over-tilling, which mixes surface

nutrients, is a major contributor to soil erosion. While it boosts productivity in the short term, it physically damages soil structure, leading to compaction, loss of fertility, and increased topsoil erosion over time.

The global population is expected to reach 9 billion by mid-century, with the Food and Agriculture Organization (FAO) projecting a 70% increase in food demand by 2050. Currently, over 820 million people are undernourished. Additionally, one-third of food intended for human consumption—about 1.3 billion tons—is wasted or lost annually, enough to feed 3 billion people. Food waste and loss account for roughly one-quarter of global greenhouse gas emissions. If food waste were a country, it would be the third-largest emitter, following China and the US.

Food waste occurs at different stages in developing and developed countries: 40% of waste in developing countries happens at post-harvest and processing levels, while in developed countries, it occurs at retail and consumer levels. In the US, over 50% of produce is discarded due to aesthetic standards, amounting to about 60 million tons of fruits and vegetables, contributing to food insecurity [1].

Over the past five decades, rapid human consumption, population growth, global trade, and urbanization have led to significant biodiversity loss. Biodiversity encompasses the variety of life on Earth, its biological organization, genetic variability, and ecosystem patterns. In mid-2019, the United Nations (UN) and IPBES reported that one million out of eight million species are at risk of extinction, indicating a potential sixth mass extinction [10].

A 2020 WWF report highlighted a 68% decline in populations of mammals, fish, birds, reptiles, and amphibians from 1970 to 2016, mainly due to habitat conversion for agriculture. Illegal wildlife trade further threatens species like pangolins, sharks, and seahorses, with pangolins critically endangered [1].

The surge in disposable plastic production has heightened plastic pollution, exceeding global waste management capabilities. This issue is particularly severe in developing Asian and African countries with inadequate waste management infrastructure and in developed nations with low recycling rates. In 1950, global plastic production was over 2 million tons per year; by 2015, it had surged to 419

million tons annually, exacerbating environmental plastic waste. According to a study in Nature, an estimated 14 million tons of plastic enter the oceans each year, threatening marine habitats. Without intervention, this could escalate to 29 million metric tons annually by 2040, potentially resulting in a cumulative ocean plastic load of 600 million tons, including microplastics. International efforts, including a UN-led global treaty, are underway to address this crisis [1, 11].

Alarmingly, research by National Geographic highlights that a staggering 91% of all plastic ever produced remains unrecycled, underscoring a significant market failure and one of the most formidable environmental challenges of our time. With plastic taking up to 400 years to decompose, the long-term repercussions of plastic pollution on the environment remain uncertain and potentially irreversible [11].

From big pieces of garbage to invisible chemicals, a wide range of pollutants ends up in our planet's lakes, rivers, streams, groundwater, and eventually the oceans. Water pollution—along with drought, inefficiency, and an exploding population—has contributed to a freshwater crisis, threatening the sources we rely on for drinking water and other critical needs.

Water pollution can come from a variety of sources. Pollution can enter water directly, through both legal and illegal discharges from factories, for example, or imperfect water treatment plants. Spills and leaks from oil pipelines or hydraulic fracturing (fracking) operations can degrade water supplies. Wind, storms, and littering—especially of plastic waste—can also send debris into waterways [12].

In conclusion, our examination of the environmental challenges facing our planet underscores the urgency of addressing pressing issues such as climate change, deforestation, air and water pollution, plastic pollution, and biodiversity loss. These problems are intricately interconnected and stem largely from human activities, including the burning of fossil fuels, deforestation, unsustainable agricultural practices, industrial processes, and inadequate waste management.

1.2 Trends and consequences of the global environment degradation

Humanity is facing dire consequences as a result of undervaluing nature and natural resources within the global economy. Not only has there been a prolonged lack of investment in biodiversity protection, but numerous economic activities actively contribute to its degradation, akin to a wholesale theft of invaluable communal assets. The destruction of natural habitats poses a significant threat to countries and society at large, endangering resources that currently contribute to roughly half of the global GDP, estimated at around US$44 trillion. Losing essential ecosystem services such as wild pollinators, marine fisheries, and timber from tropical forests could result in a substantial annual reduction of global GDP, projected to reach $2.7 trillion by 2030. The economic outlook of our current relationship with nature is grim, as highlighted in the influential Dasgupta report on the economics of biodiversity, which underscores the unsustainable demands placed on nature, leading to immense pressure on biodiversity and posing extreme risks for future generations [13].

According to the World Bank's projections, 51 countries, comprising a total population of 1.6 billion individuals, are anticipated to witness a significant decline in gross domestic product (GDP) ranging between 10-20% by the end of the decade if essential ecosystem services deteriorate. Sub-Saharan Africa and South Asia are particularly vulnerable, facing potential annual GDP contractions of 9.7% and 6.5% respectively, primarily due to their reliance on pollinated crops and, in the case of sub-Saharan Africa, forest products. Additionally, these regions have limited capacity to transition to alternative resources less susceptible to the adverse impacts of climate change, pollution, and land degradation [14].

Thus, we are hurtling towards a looming resources crisis, the severity of which will only escalate without immediate intervention. Projections from the United Nations Environment Programme's Global Resources Outlook, as reported by the UN's International Resource Panel, indicate a staggering 60% increase in global

natural resource consumption by 2060 compared to 2020 levels, following a more than threefold surge in material use over the past five decades.

These resources encompass essential elements such as food crops, energy wood, fossil fuels, various metals including iron, aluminum, and copper, non-metallic minerals, as well as land and water. According to Janez Potocnik and Izabella Teixeira, co-chairs of the International Resource Panel (IRP), the imperative is no longer whether a transition to global sustainable resource consumption and production is necessary, but rather how to urgently enact this transformation.

The rate at which we're depleting Earth's resources is intricately linked to nearly every facet of our existence. This exploitation stands as the primary catalyst for what the United Nations has termed the triple planetary crises: the climate crisis, biodiversity loss, and the pollution crisis [15].

Climate change, the most complex environmental issue, affects every region worldwide. Polar ice caps are melting, sea levels are rising, and regions are experiencing more extreme weather events, including increased rainfall, heatwaves, and droughts. This serious threat impacts numerous aspects of life, with some of the most severe consequences being:

- Rising temperatures: Climate change has led to higher average global temperatures, resulting in more frequent heatwaves. These higher temperatures can increase mortality, reduce productivity, and damage infrastructure. The most vulnerable populations, such as the elderly and infants, are most at risk. Additionally, higher temperatures are shifting the geographical distribution of climate zones, altering the distribution and abundance of many plant and animal species already under pressure from habitat loss and pollution.
- Biodiversity: The rapid pace of climate change makes it difficult for many plant and animal species to adapt. Biodiversity is already responding to climate change, with changes observed in species behavior, lifecycles, abundance, distribution, community composition, habitat structure, and ecosystem processes. Climate change also indirectly impacts biodiversity through altered land and resource use.

- Marine environment: Climate change affects the marine environment through increasing sea surface temperatures, ocean acidification, and shifts in currents and wind patterns, significantly altering the physical and biological makeup of oceans. These changes can modify fish distribution and allow alien species to invade new regions, impacting coastal and marine ecosystems and resulting in major socio-economic consequences.
- Drought and wildfires: Many regions, including parts of Europe, are experiencing more frequent, severe, and prolonged droughts due to climate change. These droughts affect transport infrastructure, agriculture, forestry, water supplies, and biodiversity, reducing water levels, stunting crop growth, increasing pest attacks, and fueling wildfires.
- Water availability: As the climate warms, changes in rainfall patterns, increased evaporation, glacier melt, and rising sea levels affect fresh water availability. More frequent and severe droughts and rising water temperatures can decrease water quality, promoting the growth of toxic algae and bacteria. Extreme weather events can cause untreated sewage to enter surface water, leading to temporary water shortages that affect inland shipping and hydroelectric power production, particularly in Europe, where 40% of fresh water comes from the Alps [16,70].
- Social threats: Climate change poses significant threats to both human and animal health. While it may not create many new health threats, it exacerbates existing ones, making them more pronounced. People in low-income urban areas with poor infrastructure are more exposed to climate impacts and have less capacity to cope with them [16].
- Health impacts: Climate change is linked to various health issues, including heat-related illnesses like heat exhaustion and heatstroke, particularly affecting vulnerable groups such as the elderly and outdoor workers. Poor air quality due to higher temperatures and increased pollution can worsen respiratory conditions like asthma and allergies. Changes in climate can also affect the distribution and behavior of disease-carrying vectors like mosquitoes and ticks, leading to the spread

of diseases such as malaria, dengue fever, and Lyme disease. Additionally, altered precipitation patterns and extreme weather events can impact water quality, increasing the risk of waterborne illnesses like diarrheal diseases and cholera. Changes in temperature and precipitation can also influence food safety, promoting the growth of bacteria and toxins in food and raising the risk of foodborne illnesses. Climate-related disasters such as hurricanes, floods, and wildfires can cause psychological distress, anxiety, depression, and PTSD among affected populations. Addressing climate change and implementing adaptation measures are imperative to protect public health and mitigate climate-related health issues [17].

- Infrastructure: Climate change poses significant risks to buildings and infrastructure due to their long lifespan, high initial cost, and critical role in society and the economy. They can be vulnerable to various climate-related hazards such as storms, floods, landslides, and extreme temperatures, leading to damage or inoperability. These impacts will vary by region [16,67].
- Energy: Climate change poses increasing threats to the European energy system. It is projected to alter energy demand patterns, with reduced heating needs in northern Europe and increased demand for cooling in the south, leading to higher electricity demand during summer peaks. Heatwaves will disrupt energy supply and demand, potentially limiting cooling water availability for power generation while increasing the need for air conditioning. Extreme weather events will also endanger physical energy infrastructure, including transmission lines, substations, and transformers [16, 68].
- Employment: Workforce availability may decrease due to population health declines and increased occupational health constraints, such as higher temperatures and natural hazards. Certain sectors, like agriculture and tourism, are particularly vulnerable to climate variability, potentially prompting production shifts. Investing in adaptation measures, such as reinforcing coastal defenses and water management, could create job opportunities, but the net effect on employment remains uncertain [16, 69].

- Business: Climate change poses a threat to all businesses since they operate within the environment. Small and medium-sized enterprises (SMEs) are particularly vulnerable, facing disruptions in business operations, property damage, supply chain interruptions, and infrastructure challenges, all of which lead to increased costs and higher prices. Despite these challenges, climate action presents new opportunities for businesses to innovate and develop products and services aimed at reducing emissions and adapting to climate changes. This topic will be explored further in the subsequent chapters [16].

One of the most alarming effects of deforestation is the loss of animal and plant species due to habitat destruction. Forests are home to 70% of land animals and plant species. Deforestation not only threatens known species but also those yet to be discovered. Forest trees provide shelter and help regulate temperature. Without them, temperatures can fluctuate drastically, similar to desert conditions, which can be fatal for many species.

Additionally, deforestation contributes to increased greenhouse gas emissions. Healthy forests act as carbon sinks, absorbing carbon dioxide from the atmosphere. When forests are destroyed, their ability to absorb carbon is lost, and more carbon is released. Other effects of deforestation include soil erosion and coastal flooding, as trees help retain water and topsoil, which are vital for sustaining forest life.

The destruction of forests also threatens indigenous communities who depend on them for their livelihood. These communities rely on forests for food, medicine, building materials, and cultural resources. The loss of these resources poses significant challenges to their health and wellbeing [6].

Air pollution significantly impacts human health. Exposure to high levels of air pollutants can cause eye, nose, and throat irritation, wheezing, coughing, breathing problems, and increased risk of heart attacks. It can also exacerbate existing lung and heart conditions, such as asthma. Smog, in particular, can irritate the eyes and throat and damage the lungs. Children, the elderly, and individuals who work or exercise outdoors are at higher risk. Those with asthma or allergies are especially vulnerable, as pollutants can worsen their symptoms and trigger asthma attacks. Globally, air

pollution contributed to 11.65% of deaths in the most recent year. Figure 1.2 illustrates the share of deaths attributed to air pollution worldwide [18].

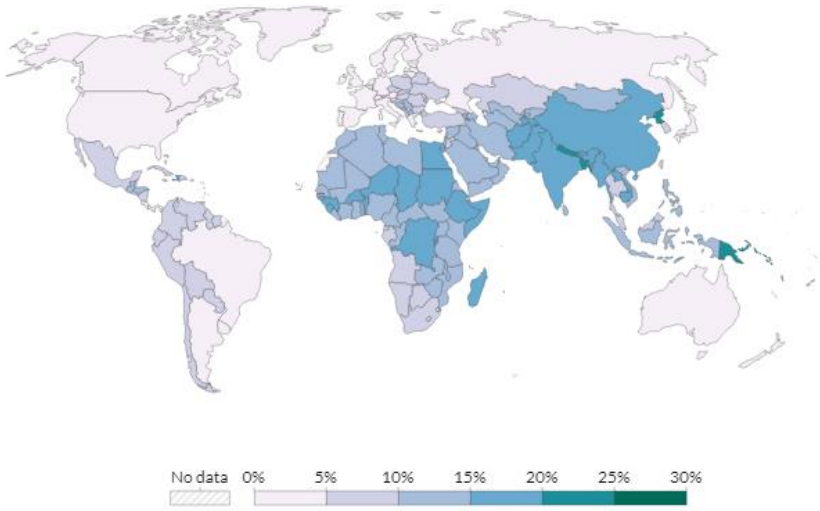


Figure 1.2 – Share of deaths attributed to air pollution, 2019 [18]

In conclusion, humanity's failure to adequately value nature within the global economy has led to dire consequences, including biodiversity loss, climate change, and pollution crises. Climate change poses significant risks to human health, biodiversity, infrastructure, energy systems, and business operations, while deforestation exacerbates habitat loss and carbon emissions.

1.3 Relationship between environmental challenges and international business

In this section, we explore the intricate relationship between international business practices and environmental considerations. Specifically, we delve into how trade dynamics, investment flows, financial operations, marketing strategies, and supply chain management intersect with ecological conditions. Furthermore, we examine how these business functions reciprocally influence the environment.

The expansion of global trade and the growing integration of global value chains raise questions about the interaction between international business and the environment. Economic growth resulting from expanded trade can directly impact the environment by increasing pollution or depleting natural resources. Additionally, trade liberalization may lead to specialization in pollution-intensive activities in

certain countries, particularly if environmental regulations vary across borders—a concept known as the pollution haven hypothesis.

However, increased trade can also support economic growth, development, and social welfare, ultimately enhancing the capacity to manage the environment more effectively. Open markets can facilitate access to new technologies that improve local production processes, thereby reducing the use of energy, water, and other environmentally harmful substances.

Similarly, trade and investment liberalization can incentivize firms to adopt stricter environmental standards. As a country becomes more integrated into the global economy, its export sector faces environmental requirements set by major importers. This encourages the adoption of cleaner production processes and technologies throughout the supply chain to meet these standards [19,66].

The impact of climate change on trade may be evident through an increased frequency of extreme weather events and rising sea levels. Infrastructure for supply, transport, and distribution chains may become more susceptible to disruptions due to climate-related factors. Maritime shipping, which constitutes approximately 80% of global trade volume, could face challenges such as more frequent port closures due to extreme events. Furthermore, climate change is anticipated to reduce the productivity of all factors of production, leading to output losses and a decline in global trade volume. Conversely, there may be positive economic effects on maritime shipping with the potential expansion of Arctic shipping routes, although this could come at the expense of environmental harm [19, 57].

Moving on to investment processes, pollution prevention, energy efficiency, emission reduction, and compliance with environmental safety regulations are paramount environmental considerations integrated into the investment analysis process. These factors not only reflect a commitment to environmental stewardship but also play a crucial role in assessing the long-term sustainability and viability of investment opportunities [20].

Investors increasingly recognize the importance of evaluating environmental risks and opportunities when making investment decisions. Pollution prevention

measures, such as implementing clean production techniques and waste minimization strategies, not only mitigate environmental harm but also enhance operational efficiency and cost-effectiveness. Companies that prioritize energy efficiency initiatives can reduce operational expenses, enhance competitiveness, and contribute to greenhouse gas emission reductions, aligning with global sustainability goals [21].

Reducing emissions, particularly of pollutants and greenhouse gases, is a critical aspect of sustainable investing. Investors evaluate companies' efforts to minimize emissions through cleaner technologies, renewable energy adoption, and carbon footprint reduction strategies. By adhering to environmental safety and regulatory standards, companies mitigate legal and reputational risks while fostering trust and credibility among stakeholders [22, 60].

Furthermore, the integration of environmental factors into investment analysis extends beyond risk mitigation to encompass opportunities for value creation and innovation. Investments in renewable energy, sustainable infrastructure, and green technologies present lucrative opportunities for financial growth while promoting environmental sustainability. Companies that demonstrate a commitment to environmental responsibility are often rewarded with enhanced market valuation, access to capital, and investor confidence.

Incorporating environmental considerations into the investment analysis process aligns with the principles of Environmental, Social, and Governance (ESG) investing, which emphasizes the integration of non-financial factors into investment decision-making. By assessing environmental performance alongside financial metrics, investors can achieve better risk-adjusted returns and contribute to a more sustainable and resilient global economy [20].

When discussing the intersection of ecology and finance, the concept of green financing encapsulates it aptly. Green financing aims to increase the flow of financial resources towards sustainable development goals, involving sectors such as banking, micro-credit, insurance, and investments from public, private, and non-profit entities alike. Central to this effort is the enhanced management of environmental and social risks, leveraging opportunities that yield both financial returns and environmental

benefits, and promoting greater transparency and accountability throughout the process.

UN Environment has collaborated with nations, financial regulators, and the finance sector to synchronize financial systems with the 2030 sustainable development agenda, aiming to channel financial resources towards achieving the Sustainable Development Goals. At the heart of the contemporary global economy lie financial markets, where banks and investors distribute capital across various sectors. The allocation of capital today will profoundly influence ecosystems and future production and consumption patterns [23].

Similar to the green financing, the term “green marketing” becomes more and more used. Green marketing contributes to ecology by promoting and encouraging the adoption of sustainable and eco-friendly products and practices. By raising awareness about environmental issues, green marketing encourages consumers to make more sustainable choices, such as purchasing products with lower carbon footprints or made from recycled materials. This shift in consumer behavior leads to reduced environmental impact, including lower levels of pollution, resource depletion, and waste generation. Furthermore, green marketing encourages companies to adopt more sustainable business practices, stimulates the development of innovative eco-friendly products and technologies, and fosters a culture of environmental responsibility within society. Overall, green marketing plays a crucial role in promoting ecological sustainability and mitigating the negative impact of human existence on the ecology.

Notably, the rise of green marketing can also be credited to technological advancements that have streamlined and made sustainable practices more economical for businesses to implement. Consequently, it has become more feasible for companies to partake in green marketing and showcase their environmental initiatives to customers [24].

Lastly, we will discover the business function that has the closest correlation with the environment – supply chain. The extraction of raw materials, manufacturing processes, transportation, and distribution activities within supply chains can have

significant environmental impacts, including greenhouse gas emissions, habitat destruction, pollution, and resource depletion. Additionally, supply chains rely on natural resources such as water, land, and energy to produce goods and deliver them to consumers. Any disruption or depletion of these resources due to unsustainable practices can directly impact supply chain operations, leading to delays, increased costs, and reduced efficiency.

On the other hand, the ecological health of ecosystems can also affect supply chain operations. For example, climate change-related events such as extreme weather events, natural disasters, and shifts in temperature and precipitation patterns can disrupt transportation networks, damage infrastructure, and interrupt the flow of goods along supply chains.

Figure 1.3 shows supply chain factors influencing environmental impact. Looking on intensity effect, we can conclude negative shifts in consumer demand or production processes affect environmental impact, regardless of efficiency improvements. Technology effect shows innovations in production, transportation, energy, and waste management reduce environmental footprints. And scale effect says about in production volume or market expansion impact resource consumption and emissions.

Embodied carbon emissions refer to the greenhouse gas emissions associated with the production, transportation, and disposal of goods and services across the supply chains of multinational enterprises (MNEs). These emissions represent a significant portion of a company's overall carbon footprint and are increasingly becoming a focal point for sustainability efforts.

MNEs, due to their global operations and extensive supply chains, often have complex and far-reaching carbon footprints. They source raw materials, components, and finished products from various regions worldwide, each with its own carbon intensity of production and transportation. As a result, the embodied carbon emissions in their supply chains can have a considerable environmental impact [25].

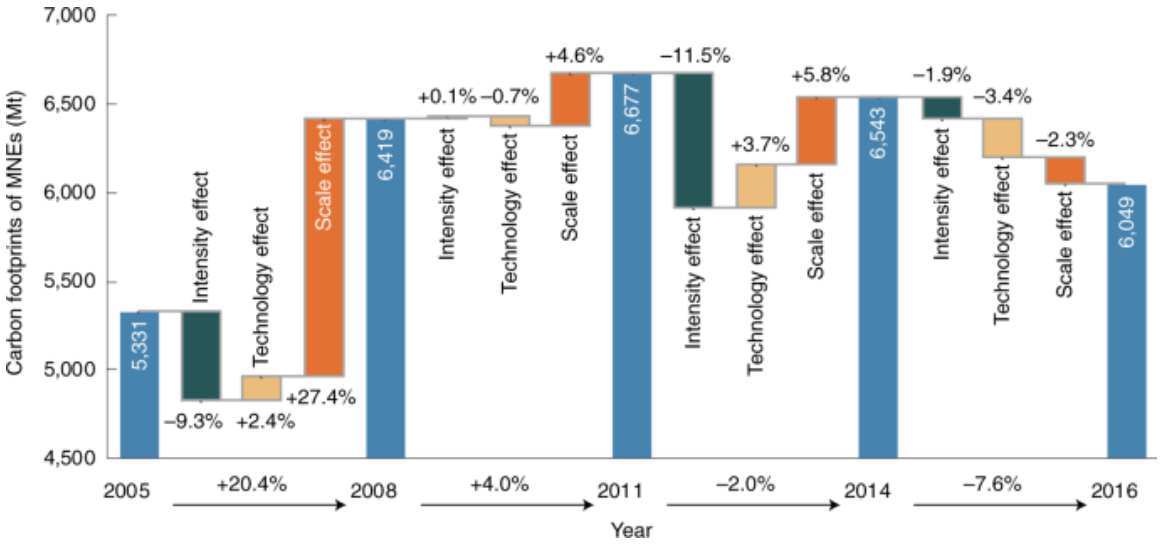


Figure 1.3 - Changes in CO2 emissions embodied in supply chains of multinational enterprises [25]

In conclusion, our exploration of the intricate relationship between international business practices and environmental concerns reveals the profound impact of trade dynamics, investment flows, financial operations, marketing strategies, and supply chain management on ecological conditions. While economic growth resulting from expanded trade may contribute to environmental degradation, trade liberalization also presents opportunities for companies to adopt sustainable practices and drive positive change. Similarly, investment processes increasingly prioritize environmental considerations, integrating pollution prevention, energy efficiency, and emission reduction strategies to mitigate risks and capitalize on opportunities for value creation and innovation. Green financing initiatives and the rise of green marketing further underscore the importance of aligning financial systems and business practices with sustainability goals. Finally, supply chains play a critical role in shaping environmental impact, with factors such as intensity, technology, and scale influencing resource consumption and emissions.

2 ANALYSIS OF MODERN SOLUTIONS OF GLOBAL ENVIRONMENTAL PROBLEMS

2.1 Contribution of government legislations and policies

In this subchapter, we discuss the pivotal role played by government legislations and policies in addressing environmental challenges. As custodians of public welfare and stewards of natural resources, governments around the world have implemented a diverse array of regulations, laws, and policies aimed at mitigating environmental degradation, promoting sustainability, and fostering eco-friendly practices across various sectors. These governmental interventions range from setting emission standards and regulating pollutant discharges to establishing protected areas and incentivizing renewable energy adoption. By examining the evolution, effectiveness, and impact of these legislative and policy measures, we aim to elucidate their contributions to environmental conservation and their implications for sustainable development agendas on both local and global scales.

Amidst growing globalization, international environmental policy plays a crucial role as many environmental challenges transcend national boundaries, necessitating collaborative efforts on a global scale. Addressing a spectrum of issues including climate protection, sustainable energy, biodiversity preservation, and the conservation of vital ecosystems like forests, seas, and soils, international environmental policy also encompasses concerns such as desertification, sustainable waste management, and safeguarding against hazardous substances. Effective solutions to these challenges often require comprehensive strategies that integrate environmental considerations into various policy domains, including cooperation initiatives with developing nations.

However, climate change and biodiversity loss stand as two of the foremost challenges of the 21st century. The Kyoto Protocol represents a pivotal milestone in international climate policy, serving as the primary instrument for emissions reduction. It mandated industrialized nations to decrease emissions by a minimum of

5 percent by 2012 compared to 1990 levels, marking the first legally binding international commitment of its kind.

Likewise, the global community committed to substantial reductions in biodiversity loss by 2010 at the global, regional, and national levels during the World Summit on Sustainable Development in Johannesburg in 2002. However, the "3rd Global Biodiversity Outlook" report released by the UN in May 2010 revealed that this target had not been met, with biodiversity continuing to decline at an alarming rate.

The United Nations established the United Nations Environment Program (UNEP) in 1972, marking the onset of a series of environmental agreements facilitated by the organization. Among the earliest agreements was the "Montreal Protocol on Substances that Deplete the Ozone Layer". The 1992 Earth Summit in Rio de Janeiro heightened global attention on environmental issues, leading to the adoption of key conventions such as the Framework Convention on Climate Change, the Convention on Biological Diversity, and the Kyoto Protocol. Additionally, agreements such as the Convention on International Trade in Endangered Species, the Basel Convention on the Control of Transboundary Movements of Hazardous Waste, and the Stockholm Convention on Persistent Organic Pollutants have furthered international efforts to tackle environmental challenges.

The G8, comprised of Germany, Japan, the United Kingdom, the United States, France, Italy, Canada, and Russia, consistently includes environmental issues on its agenda. These issues encompass climate protection, biodiversity, forest conservation, combating environmental crimes, and safeguarding oceans. In 2007, during the German G8 Presidency, initiatives were launched to establish a long-term global climate protection goal, aiming to halve global greenhouse gas emissions by 2050. In the run-up to the 2009 climate conference in Copenhagen, the G8 acknowledged the necessity of limiting global warming to 2 degrees Celsius.

Subsequently, the G20, consisting of the G8 countries plus China, India, Brazil, Mexico, South Africa, Australia, South Korea, Indonesia, Argentina, Saudi Arabia, Turkey, and the EU, gained prominence in global governance, particularly in

response to the economic and financial crisis. Germany advocates for the G20 to broaden its focus beyond financial policy to encompass environmental and development issues, though the group must first define its role in addressing these matters [26].

The Treaty on the Functioning of the European Union (TFEU) encompasses Articles 11 and 191 to 193, which delineate the EU's authority to address various environmental issues including air and water pollution, waste management, and climate change. However, the EU's jurisdiction is circumscribed by the principle of subsidiarity, and unanimity in the Council is mandated for certain areas such as fiscal matters, urban planning, land use, water resource management, energy source selection, and energy supply structure.

The EU's environmental policy is grounded in key principles such as precaution, prevention, and the 'polluter pays' principle. The precautionary principle serves as a risk management tool for addressing uncertainties surrounding potential risks to human health or the environment from specific actions or policies. Under this principle, if doubts persist regarding the harmful effects of a product after a thorough scientific evaluation, it should be removed from the market until further scientific information is available.

Similarly, the 'polluter pays' principle, enforced through the Environmental Liability Directive, aims to prevent or remedy environmental damage caused by certain industrial activities. Operators engaged in activities like transporting dangerous substances or discharging pollutants into waters must take preventive measures to avert environmental harm. If damage occurs, they are responsible for remediation and covering the associated costs.

Over time, EU policy has evolved to integrate environmental considerations across various sectors, with notable progress seen in energy policy, exemplified by initiatives like the EU's climate and energy package and the roadmap for a competitive low-carbon economy by 2050. More recently, the European Green Deal, launched in December 2019, aims to position Europe as the world's first climate-

neutral continent, with the EU Climate Law adopted in 2021 setting ambitious targets for reducing greenhouse gas emissions [27].

Since 1998, Ukraine and the EU have collaborated to address environmental challenges, focusing on monitoring pollution, improving environmental conditions, preventing air and water pollution, promoting sustainable energy production, enhancing industrial environmental security, and addressing various environmental issues such as waste management, agriculture impact, forest protection, and climate change. This cooperation is now governed by the Association Agreement between Ukraine and the European Union, aimed at promoting sustainable development and the green economy. The agreement includes Chapter 6 "Environment," which outlines strategies for institutional reforms, division of environmental administration responsibilities, decision-making procedures, integration of environmental concerns into other policy areas, resource allocation, and development of sector-specific strategies for air and water quality, waste management, and more [28].

As we reflect on the past fifty years of global environmental efforts, it becomes evident that significant progress has been made, yet many challenges persist. These truths remain as relevant today as they were in the past, underscoring the ongoing need for further action. Over the past fifty years, significant environmental milestones have been achieved, yet much remains to be accomplished.

1. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) stands as a crucial international agreement, offering protection to over 37,000 species from trade exploitation. Despite its status as binding international law, estimating populations for many species presents challenges, complicating efforts to establish sustainable trade practices.

2. The Montreal Protocol on Substances that Deplete the Ozone Layer emerged as a landmark multilateral agreement, regulating nearly 100 chemicals, including ozone-depleting substances like CFCs. This treaty marked a significant milestone in global environmental cooperation, serving as a blueprint for future agreements.

3. The Sendai Framework for Disaster Risk Reduction 2015-2030 represents a pivotal agreement in the post-2015 development agenda, offering concrete actions for Member States to safeguard development gains from disaster risks. Oversight of the Framework's implementation falls under the United Nations Office for Disaster Risk Reduction (UNDDR).

4. The Paris Agreement, a product of the United Nations Climate Change Conference (COP21), constitutes a historic global climate accord. Adopted by 195 countries, this legally binding treaty aims to limit global warming to well below 2˚C, preferably 1.5˚C, compared to pre-industrial levels.

5. Named after the Japanese city where mercury pollution inflicted severe harm in the mid-20th century, the Minamata Convention on Mercury addresses human activities contributing to widespread mercury pollution. Implementation of this agreement is vital to reducing global mercury pollution in the years ahead.

6. Signed at the recent UNEA-5.2 conference in Nairobi, the Ending Plastics Resolution aims to combat plastic pollution and establish an international legally binding agreement by 2024. Addressing plastic's entire lifecycle, including production, design, and disposal, is crucial, given the exponential rise in plastic production, expected to double by 2040 [29].

In summary, significant progress has been made in environmental governance over the past fifty years, with key agreements facilitated by the United Nations Environment Program and initiatives from forums like the G8 and G20 advocating for climate protection goals.

The Treaty on the Functioning of the European Union emphasizes principles such as precaution and the 'polluter pays' principle, driving the evolution of EU policy towards integrating environmental concerns. Initiatives like the European Green Deal demonstrate ambitious targets for reducing greenhouse gas emissions. Collaborative efforts between Ukraine and the EU further highlight the growing recognition of the necessity for integrated approaches to environmental management.

2.2 Role of international environmental organizations and movements

There is a myriad of both international and regional environmental organizations and movements that make contribution to the preservation of our planet on different levels and spreading awareness of its problems all over the globe. We will encompass only the most powerful and recognizable ones.

The largest international non-governmental organization in this realm is the World Wide Fund for Nature (WWF), established in 1961. It focuses on wilderness preservation and mitigating human impact on the environment. WWF stands as the world's largest conservation organization, boasting over five million supporters globally and operating in more than 100 countries. Over the years, it has backed approximately 3,000 conservation and environmental projects, with investments exceeding $1 billion since 1995. Funding primarily comes from individuals and bequests (65%), government sources like the World Bank, DFID, and USAID (17%), and corporations (8%) as of 2020.

WWF's mission is to "halt the degradation of the planet's natural environment and create a future where humans coexist harmoniously with nature." It publishes the Living Planet Report biennially since 1998, which incorporates the Living Planet Index and ecological footprint calculations. Notable global campaigns by WWF include Earth Hour and Debt-for-nature swaps. Its ongoing work revolves around six core areas: food, climate, freshwater, wildlife, forests, and oceans. [30].

Greenpeace, recognized as the preeminent environmental movement worldwide, operates as an independent global campaigning network dedicated to safeguarding Earth's ability to sustain life in all its diversity. Focusing on pressing global issues such as climate change, deforestation, overfishing, and anti-nuclear advocacy, Greenpeace utilizes direct action, lobbying, research, and ecotage to advance its objectives. Comprising 26 independent national and regional organizations across over 55 countries, alongside a coordinating body, Greenpeace International, headquartered in Amsterdam, the Netherlands, the network sustains

itself through individual supporters and foundation grants, refraining from government, corporate, or political funding.

Greenpeace's impactful actions have elevated environmental concerns to public consciousness, influencing both private and public sectors. However, the organization has faced criticism, notably regarding its stance on genetically modified organisms (GMOs) and the repercussions of its direct actions, such as legal actions against activists. Despite challenges, Greenpeace maintains a general consultative status with the United Nations Economic and Social Council and remains committed to fostering transparency and accountability within the international non-governmental organization community [31].

The United Nations Environment Programme (UNEP), founded in 1972 by Maurice Strong, serves as the coordinating body for addressing environmental issues within the United Nations framework. With a mandate to provide leadership, scientific expertise, and solutions across various environmental domains, including climate change and ecosystem management, UNEP also facilitates international environmental agreements and supports national governments in achieving environmental targets. As a member of the United Nations Development Group, UNEP aligns its efforts with the 17 Sustainable Development Goals, registering notable achievements such as the 1987 Montreal Protocol and the 2012 Minamata Convention. Additionally, UNEP promotes green economic development and facilitates innovative initiatives like solar loan programs to promote renewable energy adoption [32].

Regarding Europe region, The EEB is the largest network of environmental citizens' organizations in Europe. It currently consists of over 180 member organizations in 40 countries, including a growing number of networks, and representing some 30 million individual members and supporters. The EEB stands as Europe's largest coalition of environmental grassroots organizations, boasting over 180 member groups spanning 40 nations, with a collective constituency of approximately 30 million individuals. It actively addresses pressing environmental

challenges by shaping agendas, monitoring developments, and advocating for impactful policies within the European Union and beyond.

These efforts encompass a wide array of concerns, including climate change, biodiversity loss, circular economy initiatives, pollution mitigation, and sustainable development practices, while also promoting principles of good governance and participatory democracy at regional and global levels. Additionally, the EEB collaborates with Eastern European environmental groups, aiding in their alignment with European regulations to bolster national environmental frameworks [33].

While these organizations are indeed making significant strides, there exists a group of concerned individuals deeply troubled about the welfare of future generations. Termed environmentalists, these individuals are passionate advocates for environmental protection. An environmentalist is someone who actively supports the goals of the environmental movement, which aims to enhance and safeguard the natural environment by addressing environmentally harmful human activities. Engaging with the philosophy of environmentalism or related ideologies, environmentalists are dedicated to preserving the planet for generations to come.

Within the environmental movement, diverse subcommunities have emerged worldwide, each with distinct approaches and ideologies. Environmentalists can be categorized into various groups:

- Climate activists. With the onset of the climate crisis in the early 21st century, a unique cohort of activists known as Climate Activists has emerged. Initiatives like the School Strike for Climate and Fridays for Future have catalyzed a global youth climate movement, spearheaded by figures like Greta Thunberg, Jamie Margolin, and Vanessa Nakate.

- Conservationists. Rooted in the philosophy of the conservation movement, conservationists strive to leave the environment in a better state than they found it, independent of human interaction. They oversee natural habitats such as parks, forests, and rangelands, often referred to as conservation scientists or soil and water conservationists.

- Environmental defenders. These individuals safeguard the environment from various threats, including resource extraction, hazardous waste disposal, infrastructure projects, and land appropriation.
- Green parties. Environmentalism's integration into a distinct political ideology has given rise to "green parties," which typically adopt a leftist approach to environmental and social well-being issues. These political entities prioritize principles such as social justice, environmentalism, and nonviolence.
- Water protectors. Advocates, organizers, and cultural workers focused on safeguarding the world's water systems. Rooted in an indigenous cultural perspective that views water and land as sacred, they go beyond ensuring access to clean drinking water, emphasizing the importance of treating water with reverence. [34, 65]
- Individual and political action. Activism aimed at reducing greenhouse gas concentration and mitigating the effects of climate change. Activists in this category advocate for climate justice and work towards legislative changes directly addressing climate change.
- Environmental Grassroots Activism. Led by individuals exercising fundamental rights such as freedom of speech and expression, grassroots environmental activism operates independently of political affiliations. NGOs, social enterprises, and communities often lead these movements, exemplified by organizations like Earth5R [34, 64].
- Eco-terrorism. An extreme form of activism involving violence in support of environmental causes. This radical approach emerged from ideologies such as deep ecology, ecofeminism, social ecology, and bioregionalism [34].

Thus, the environmental movement encompasses a myriad of international and regional organizations and movements, including prominent entities like the World Wide Fund for Nature, Greenpeace, the United Nations Environment Programme, and the European Environmental Bureau. These groups collectively represent various sub-communities within the broader environmental movement.

2.3 The place of private enterprises and businesses

The role of private enterprises and businesses in addressing environmental challenges has been garnering significant attention and scrutiny. As key drivers of economic activity, they wield significant influence over resource consumption, pollution levels, and ecosystem degradation. In the recent years there has been a growing recognition of the need for businesses to adopt environmentally responsible practices and integrate sustainability into their operations. This shift is driven by various factors, including increasing consumer demand for eco-friendly products, regulatory pressures, and a growing understanding of the long-term risks posed by environmental degradation.

The private sector is widely acknowledged as the primary driver of economic progress, having fueled technological innovations in vital sectors like energy and transportation, improved healthcare leading to longer life expectancies, and lifted over a billion individuals out of extreme poverty. Obviously, this engine of growth has also inflicted significant damage on the Earth's ecological balance and exacerbated social disparities. Research reveals that 100 companies are responsible for 71% of industrial greenhouse gas emissions since 1988. Additionally, despite the alarming deforestation rate, more than half of the major timber and pulp companies, which oversee vast tropical forests equivalent to the size of England, have yet to commit to biodiversity protection or zero-deforestation initiatives [35].

Critics have long condemned private enterprise, particularly industry, for prioritizing profits over environmental conservation. The image of the polluted industrial city, characterized by factories depleting natural resources and emitting harmful pollutants, serves as a poignant symbol of this disregard for the environment. While de-industrialization and stricter environmental regulations in developed regions have mitigated these issues, many cities in the Global South continue to suffer from unregulated industrialization, leading to significant air, water, and land pollution. In such cases, the environmental degradation is frequently attributed to the perceived greed of private enterprise.

Business and finance must play a central role in addressing climate change, as indicated by the 2021 Edelman Trust Barometer's findings, which revealed that two-thirds of respondents believe that businesses should step in where governments fall short. While this may seem unconventional, trust in business often surpasses that in government or NGOs, a trend bolstered by the emergence of universal owners who invest in globally diversified portfolios. Consequently, shareholders are increasingly focused on how companies collectively address global challenges like climate change, rather than individual performance. Despite this shift, there remains a gap between the private sector's potential as custodians of long-term global interests and their current level of engagement. To bridge this gap, businesses must recognize their responsibilities in addressing societal and environmental issues, working alongside governments and supportive legislation to tackle global challenges effectively [36, 62].

The prevailing approach to sustainability has largely revolved around mitigating the adverse impacts of corporations, aiming to make their practices "less bad" by addressing issues such as carbon emissions, deforestation, child labor, social inequality, and plastic pollution while still pursuing profitability and economic growth. However, given the urgent environmental challenges we face, there's a valid concern that this approach might only delay the inevitable decline of the natural and social systems vital for human existence on Earth.

Merely striving to minimize harm and hoping for growth to solve our environmental challenges is insufficient. This approach fosters a narrative of sacrifice and scarcity, which is uninspiring and exacerbates polarization and apathy. Instead, we must transition to an economic system that is regenerative, equitable, and operates within the limits of our planet.

There are compelling arguments suggesting that the current economic system, driven by the pursuit of continuous growth, is fundamentally unsustainable, disregarding its impact on nature and human well-being. Achieving absolute decoupling of growth from greenhouse gas emissions is deemed essential to meet the objectives of the Paris Agreement and the Sustainable Development Goals (SDGs).

However, current trends indicate that achieving such decoupling remains distant and possibly unattainable [35, 63].

Thus private sector involvement in advancing green growth should prioritize a thorough comprehension of the private sector's needs for development cooperation assistance. This entails addressing barriers hindering companies from seizing market opportunities for green technologies, products, and services in developing nations. Effective private sector engagement should aim to establish sustainable business models for environmental conservation that not only yield positive environmental impacts but also prove financially viable and generate employment opportunities.

The effectiveness of mechanisms for harnessing private investment in green initiatives relies heavily on the presence of supportive policy frameworks in partner countries. To expand successful project models into sustainable programs or markets, a comprehensive approach to engaging the private sector in climate change and green growth is essential. This entails advocating for various policy reforms and regulations that facilitate climate change mitigation, adaptation, and enhanced environmental performance - creating an enabling policy environment conducive to private climate investments, alongside the strategic allocation of limited public funds to leverage green private investment mechanisms [37].

Exploring the realm of corporate social responsibility (CSR), one encounters a concept that is increasingly gaining traction. CSR embodies a business ethos wherein companies incorporate social and environmental considerations into their operational frameworks and engagements with stakeholders. This encompasses endeavors aimed at benefiting society beyond profit-driven motives, including ethical labor standards, environmental sustainability endeavors, philanthropic ventures, and community development initiatives. In essence, CSR entails businesses acknowledging and assuming responsibility for the impacts of their activities on customers, employees, communities, and the environment, actively striving to foster positive outcomes in these domains.

In the realm of business and industry, corporate social responsibility plays a pivotal role in advancing environmental sustainability. Enterprises embracing CSR

often institute policies and endeavors geared toward curbing their environmental footprint and fostering eco-conscious practices. This may entail initiatives such as carbon emissions reduction, energy and water conservation, waste minimization, utilization of sustainable materials and resources, and support for environmental conservation endeavors. By integrating environmental considerations into their operational paradigms and decision-making processes, CSR enables businesses to contribute to the preservation of natural resources, safeguarding of ecosystems, and mitigation of climate change [38, 61].

Hand in hand with corporate social responsibility goes green technology. It refers to the use of innovative solutions to address sustainability challenges and reduce the environmental impact of business operations. This can include technologies and practices aimed at conserving energy, reducing greenhouse gas emissions, minimizing waste generation, and promoting resource efficiency. Examples of green technologies in business include renewable energy systems such as solar panels and wind turbines, energy-efficient lighting and appliances, green building materials and construction techniques, waste recycling and composting systems, and sustainable transportation solutions like electric vehicles and fuel-efficient fleets. Adopting green technology not only helps businesses minimize their environmental footprint but also often leads to cost savings, regulatory compliance, and enhanced corporate reputation, which we will expose more in the following chapter [39].

Following the EPA's mandate for companies to disclose pollution prevention activities (PPAs) since the enactment of the Pollution Prevention Act of 1990, we can shed light on the prevalent strategies employed by industries to minimize pollutant generation and enhance environmental stewardship. Following the enactment of the Pollution Prevention Act of 1990, the EPA mandated companies to disclose information on pollution prevention activities aimed at reducing toxic releases, aiming to disseminate effective environmental practices. PPAs encompass corporate strategies that minimize or eliminate pollutant generation through resource efficiency enhancements, conservation efforts, and responsible handling of residual pollution. In

2018, 1270 industrial facilities out of over 21,000 reported a total of 3120 PPAs, with 737 chemical plants out of 3454 reporting 2803 PPAs, highlighting the prevalence of these initiatives. Among the EPA's identified PPA categories, common practices include good operating procedures, process adjustments, and spill prevention, often facilitated through internal management, employee engagement, and internal audits, which typically require minimal investments.

Figure 2.1 shows that good operating practices constituted over 35% of reported pollution prevention activities, involving actions like increased maintenance frequency, optimized batch scheduling, and reducing scrap through enhanced technical training. Following closely were process modifications, such as altering production processes to minimize toxic material usage or enhancing solvent recovery efficiency. Additionally, PPAs encompassed raw material modifications. Honeywell's just-in-time inventory system exemplified inventory control, reducing lead usage by 22%. Other activities like surface preparation and finishing, cleaning and degreasing, and product modifications were also integral, showcasing efforts to improve environmental performance across various aspects of operations [40].

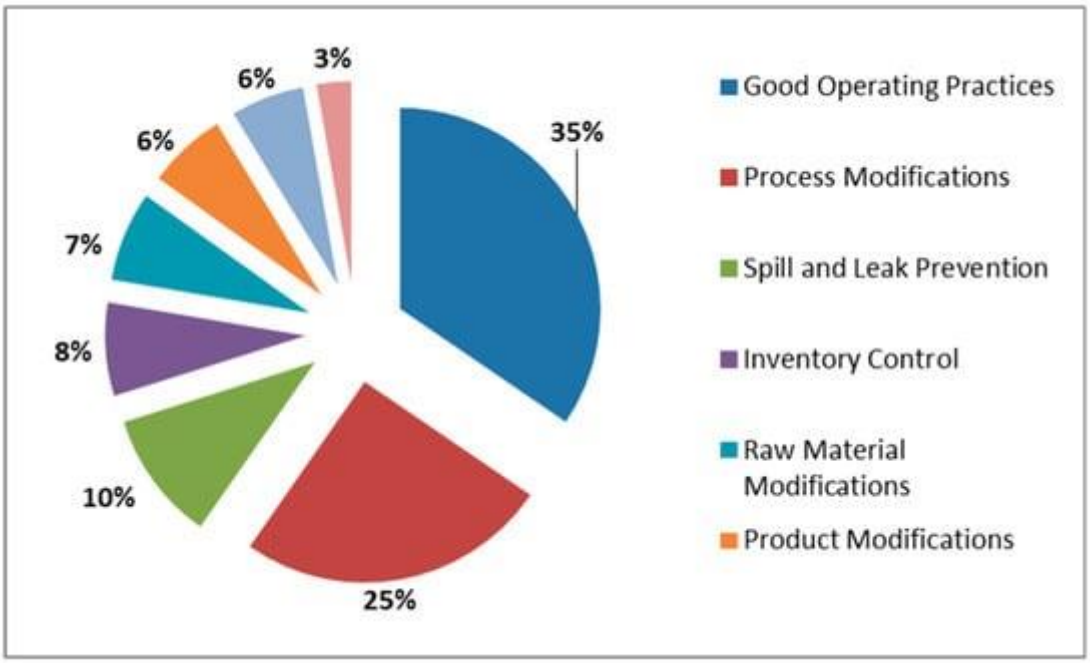


Figure 2.1 - Types of pollution prevention activities [40]

To sum up, the role of private enterprises and businesses in addressing environmental challenges is increasingly recognized as crucial, given their significant influence on resource consumption, pollution levels, and ecosystem degradation. Initiatives like corporate social responsibility and the adoption of green technology play pivotal roles in promoting environmental sustainability within businesses. Through strategic measures and collaborative efforts, businesses can contribute meaningfully to environmental preservation and sustainable development.

3 IMPACT OF ENVIRONMENTAL PROBLEMS ON INTERNATIONAL BUSINESS

3.1 The influence of environmental problems on international business

The influence of environmental problems on international business has become an increasingly pressing concern in the global economic landscape. Environmental issues such as climate change, pollution, resource depletion, and biodiversity loss are not only affecting ecosystems and communities worldwide but also impacting businesses and industries across borders. Understanding the interplay between environmental challenges and international business dynamics is crucial for shaping strategies that promote both economic growth and environmental sustainability on a global scale.

These are the main ways that environmental factors can impact businesses:

1. Workforce productivity decline: Pollution and habitat destruction contribute to health issues among employees, leading to increased absenteeism, higher healthcare costs, and reduced productivity. According to the World Health Organization (WHO), air pollution alone causes 4.2 million deaths globally each year, significantly affecting workforce health and efficiency. Habitat destruction compounds this problem as families relocate due to destroyed homes and increased insurance rates, reducing the available workforce and impeding production.

2. Resource depletion challenges: Pollution, habitat destruction, and the depletion of natural resources pose significant challenges for businesses. Pollution results in the depletion of valuable resources such as freshwater, with only 0.5% of the planet's total freshwater being drinkable. Continued pollution of water sources further diminishes the availability of this vital resource, presenting operational challenges for businesses reliant on clean water for their operations. Additionally, depletion of natural resources leads to increased costs and complexities in manufacturing products that depend on those resources, making production more expensive and intricate [41].

The impact of climate change on international business could materialize through more frequent extreme weather events and rising sea levels. Infrastructure related to supply, transportation, and distribution chains may become increasingly vulnerable to disruptions due to climate change. Maritime shipping, which accounts for roughly 80% of global trade volume, could face adverse effects such as more frequent port closures due to extreme events. Moreover, climate change is expected to diminish the productivity of all factors of production (including labor, capital, and land), resulting in output losses and a decrease in global trade volume. However, there is the potential for positive economic impacts on maritime shipping, particularly through the potential opening of Arctic shipping routes, although this may be accompanied by environmental degradation [42].

Among the main ways that climate change can impact businesses are:

1. Workforce Disruption: Climate change contributes to workforce disruptions as individuals relocate due to the impacts of natural disasters exacerbated by climate change. Increased sick leave requests also lead to decreased productivity, with legislation enacted in response to events like the California wildfires to safeguard employees' rights when requesting sick leave.

2. Operational Disruptions: Climate change results in significant disruptions to business operations, including the destruction of warehouses, damage to natural resources, and interruptions to transportation schedules due to natural disasters [41].

3. Insurance: Increasing insurance costs represent another sector affected by climate change. Unlike some industries, insurance has a broader impact on global consumers rather than just companies. As the frequency of extreme weather events rises, premiums for flood and storm protection are expected to increase to offset the heightened risk for insurance companies. Consequently, many businesses may face higher insurance expenses, ultimately affecting their profitability adversely.

4. Diminished supplies: The environmental consequences of climate change are expected to reduce the accessibility of food and water. While this poses a significant threat to impoverished nations, it is also anticipated to lead to increased expenses for both consumers and businesses. Moreover, resource scarcity may prompt countries to

adopt more protective measures over natural resources, complicating the process for companies to acquire the essential raw materials necessary for production [43].

The agriculture sector serves as a notable illustration of these consequences. As climate change disrupts the water supply crucial for agriculture, the industry faces reduced productivity and increased expenses. While some may perceive this issue as distant from their personal lives, fluctuations in the agriculture sector profoundly impact the health, safety, and overall well-being of the global population [44].

Among the primary ways that improper waste disposal can affect business are:

1. Profit Loss: Improper waste disposal can lead to significant financial losses for businesses due to government policies holding companies financially accountable for their environmental effects. For example, in 2020, Walgreens was fined USD 3.5 million for improper waste disposal practices.

2. Employee Impact: Improper waste disposal poses serious health consequences for employees and nearby residents, leading to increased sick leave requests and workforce reductions as individuals relocate to avoid contaminated areas [41, 58].

A significant aspect of environmental concerns and their impact on contemporary business management revolves around consumer preferences. Business owners not only bear a moral responsibility to align company policies with environmentally friendly initiatives but also recognize the economic imperative to do so. With heightened public awareness, consumers across diverse sectors increasingly seek to engage with companies that uphold positive environmental values. Even seemingly minor policy adjustments, such as waste reduction and the adoption of sustainable alternatives to plastic utensils, can significantly bolster long-term customer loyalty. This trend is observable across both multinational corporations and small-scale family businesses. For instance, a customer may choose to patronize a local coffee shop due to its eco-friendly practices, such as eschewing plastic straws. Therefore, developing marketing strategies that highlight a company's environmental efforts proves instrumental in gaining a competitive edge, irrespective of its size or industry. Ultimately, businesses aiming to foster high levels of employee engagement

and productivity must proactively address the multifaceted challenges posed by the current environmental crisis [44, 59].

Figure 3.1 depicts the ongoing internal conflict within the United States populace regarding the prioritization of either environmental conservation, even at the potential expense of economic growth, or economic development, even if it entails environmental degradation. Analysis of Gallup survey data reveals that during the 1980s and 1990s, the environment held a clear advantage in this ethical quandary on a national scale. However, this trend began to shift with the dawn of the new millennium. The infographic vividly portrays the intensification of this struggle, particularly as the repercussions of the 2008 financial crisis unfolded. By March 2009, the economy had surged to the forefront of public consciousness, with a majority (51 percent) prioritizing economic concerns over environmental considerations (42 percent). Although there was a resurgence of environmental awareness between 2015 and 2019, the onset of the Covid-19 pandemic in 2020 onwards narrowed the divide between those advocating for conservation and those advocating for economic progress [45].

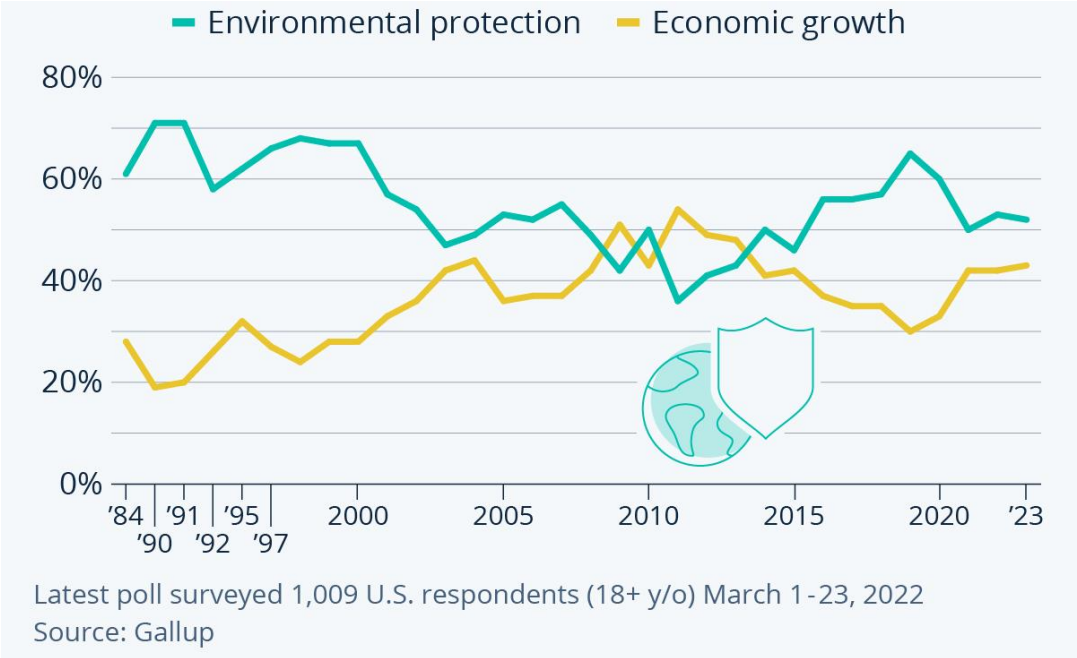


Figure 3.1 - Share of U. S. adults that think the environment should be prioritized over economy and vice versa [45]

As society grapples with these competing interests, finding a sustainable equilibrium between environmental stewardship and economic prosperity remains a pressing challenge for policymakers and citizens alike.

Moving on to regulatory compliance, almost every business faces some form of environmental regulation, whether it's controlling emissions from factories, handling hazardous waste, or considering the ecological impact of construction projects on delicate habitats. Compliance with environmental regulations typically raises operational costs as businesses invest in new technologies and processes to meet the standards. Non-compliance can result in fines or penalties, further burdening finances. Additionally, these regulations may create barriers to entry for new ventures due to the high costs of compliance, giving established businesses a competitive advantage.

Nevertheless, environmental regulations also spur businesses to improve efficiency and spur innovation. Meeting these standards often requires reducing environmental impact, which prompts companies to optimize resource and energy usage. This drive towards sustainability can lead to cost savings and less harm to the environment, as companies may adopt eco-friendly practices and materials, fostering innovation and giving them a competitive edge.

Moreover, environmental regulations can open up new markets. Enforcement of such rules often creates demand for pollution control equipment and services, providing opportunities for businesses specializing in these areas. Additionally, these regulations can spark the growth of entirely new industries, exemplified by the rise of the renewable energy sector, driven by government initiatives promoting sustainable energy sources [46].

In conclusion, the influence of environmental issues on international business is undeniably significant, shaping strategies for economic growth and environmental sustainability worldwide. Environmental factors affect workforce productivity, operational efficiency, supply chains, insurance costs, and consumer preferences. Despite the regulatory complexities and financial burdens associated with

environmental compliance, businesses are incentivized to innovate, optimize resources, and capitalize on emerging market opportunities.

3.2 Sustainability challenges and opportunities for international business

Many businesses recognize the importance of mitigating any adverse environmental effects stemming from their operations. Beyond personal ethical considerations, company owners must also take into account the interests of stakeholders. In numerous nations, there is a societal expectation for companies to proactively protect the environment beyond mere legal requirements. While corporate responsibility may entail investments of time and financial resources, research consistently demonstrates that environmental stewardship is closely linked with superior growth and profitability. Enterprises have reaped various benefits from such initiatives, including:

- Improved business performance. Enhanced business efficacy is observed with the adoption of environmental management methodologies, contributing to superior overall business administration characterized by enhanced operational efficiency and productivity. These practices encompass waste reduction, pollution prevention, fewer accidents, decreased cleanup expenditures, and diminished liability. Moreover, within technologically advanced enterprises, augmented business performance extends to long-term prospects. Environmental endeavors frequently coincide with the pursuit of innovative technologies, potentially amplifying profitability by harnessing "front-runner" advantages.
- Gaining market access. Achieving market entry is facilitated by certain companies through the adoption of environmental methodologies, particularly those validated by an accredited third party, aiming to bolster their presence in markets where adherence to specific environmental criteria is anticipated. Furthermore, an increasing array of multinational enterprises (MNEs) mandate that their suppliers possess a certified environmental management system, highlighting the expanding significance of environmental standards in the business landscape.

- Engaging with stakeholders. Implementing environmental strategies yields "reputational advantages" by demonstrating to customers, investors, governmental bodies, and civil society a dedication to ethical practices. Additionally, it can foster improved rapport with regulatory authorities, offering assurance that the company is earnestly striving to fulfill compliance requirements or exceed them [47].

- Operational cost reduction. Utilizing energy-efficient equipment and technologies presents a straightforward method for reducing energy consumption, thereby lowering day-to-day operational expenses. Although the initial investment in replacing old equipment with energy-efficient alternatives may seem significant, the subsequent long-term savings justify it as a prudent investment. Moreover, adopting renewable resources like photovoltaic technology and solar panels typically results in cost offsets within a few years, ultimately leading to enhanced profit margins.

- Increase in productivity. Adopting green practices can significantly enhance company's efficiency. Embracing these practices encourages innovation and the integration of state-of-the-art technologies and streamlined processes. Consequently, this not only increases productivity but also improves overall operational efficiency, thereby enhancing company's competitiveness in the market.

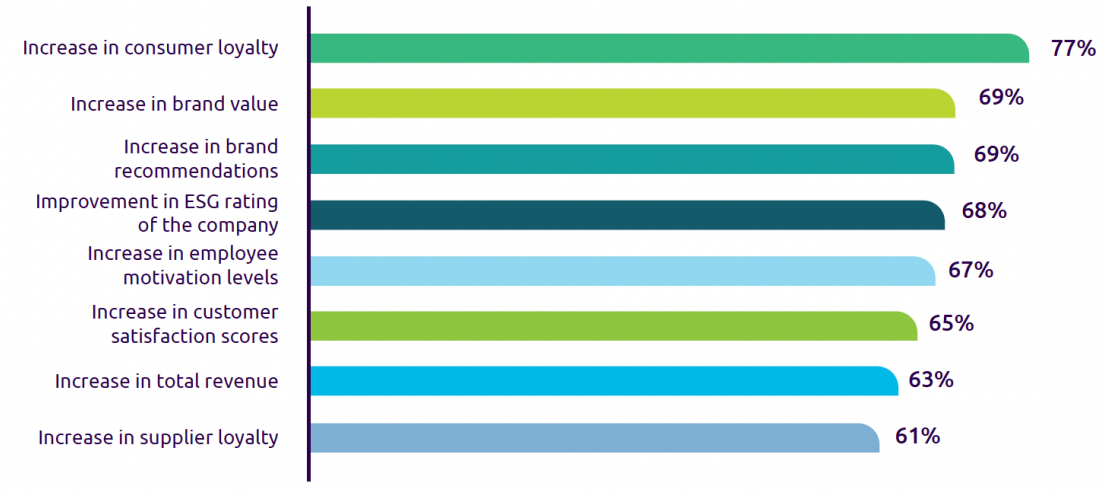
- Boosting company’s competitive advantage. In recent years, consumers have become increasingly aware of the environmental impact of their purchasing decisions. This shift in consciousness has led to a rising demand for eco-friendly products, such as refillable and recyclable water bottles, in favor of single-use plastic alternatives. When your business incorporates environmental considerations, it not only creates a positive image among current and potential customers but also conveys a strong message of commitment to community well-being and responsible practices. Consequently, consumers are more inclined to trust your company, aligning with research indicating a preference for businesses that share their values. By highlighting the environmental dedication, a company gains a competitive advantage, fostering customer loyalty and ultimately driving sales.

- Investment attraction. The environmental sustainability stance of a company could significantly impact its attractiveness to investors. This is because

investors are drawn to companies that integrate green practices or provide eco-friendly products or services. Investors generally seek out promising prospects and businesses capable of thriving despite resource scarcity and climate change challenges. Similar to consumers, investors prefer to support companies that reflect their values and make positive contributions to the environment and society [48].

- Talent attraction and retention. There's a rising trend among employees to seek out opportunities with environmentally responsible companies. Embracing sustainability not only allows businesses to appeal to and retain top talent but also elevates the quality of their workforce. Prospective employees recognize that aligning with a sustainable organization can resonate with their personal values and offer a greater sense of purpose. Furthermore, a green workplace cultivates a positive company culture, fostering employee engagement, satisfaction, and ultimately, boosting productivity [49].

Figure 3.2 summarizes key benefits derived from sustainability initiatives. We can see that 77% of companies say their sustainability initiatives increase customer loyalty and 63% have seen growth in sales. Notably, brand value and loyalty see substantial increase [50].



Source: Capgemini Research Institute, Sustainability in Consumer Products and Retail Survey, April–May 2020, N=750 consumer products and retail organizations.

Figure 3.2 – Key benefits derived from sustainability initiatives and percentage of organizations agreeing to the benefits [50]

Nonetheless, to harness these advantages, enterprises must surmount various obstacles, ranging from direct expenses to organizational hurdles. Among the most prevalent challenges include:

- Viewing environmental strategies as cost centers rather than revenue generators. This perception is widespread, necessitating the persuasion of managers and employees that environmental initiatives yield a net benefit rather than imposing a net cost.

- Management and employee resistance, coupled with limited experience and entrenched company culture, can impede the adoption of environmental tools within business operations. Similar to any innovation, the integration of environmental strategies may encounter obstacles due to organizational inertia and a lack of familiarity. Establishing a culture conducive to learning can significantly facilitate this process; some companies demonstrate greater adaptability and innovation than others. Additionally, the distribution of management responsibilities plays a crucial role, particularly the extent to which environmental efforts are intertwined with overarching objectives.

- Siloing of environmental departments presents another hurdle. Implementing environmental practices often requires dismantling traditional compartmentalization within management structures. Success in environmental management endeavors is typically contingent upon environmental managers' ability to influence other pivotal departments within the enterprise [47].

Achieving success in transitioning to a green economy demands a holistic approach from businesses, encompassing sustainable practices, stakeholder engagement, and ongoing innovation. This entails conducting thorough assessments of current operations, establishing ambitious sustainability objectives, and investing in the research and development of green technologies. Collaboration with suppliers, customers, and industry peers is imperative to drive collective action and establish a sustainable value chain.

Moreover, businesses should prioritize the integration of sustainable principles across all facets of their operations. This includes sourcing materials sustainably,

implementing energy-efficient manufacturing processes, reducing waste and promoting recycling, and practicing responsible supply chain management. By embracing sustainability comprehensively, companies can secure long-term viability and resilience in an evolving green economy [51, 56].

Environmental management systems (EMS) are created to overcome the challenges and take the most of the opportunities given by environmental issues. The primary objective of an environmental management system is to assist organizations in achieving their environmental objectives by maintaining consistent control over their operations, similar to how internal accounting controls ensure the effectiveness of financial management systems. Although EMS implementation varies based on organizational needs, the underlying premise is that enhanced environmental management leads to improved overall business performance. While there are no standardized benchmarks, most EMSs typically include key components, often summarized as "Plan-Do-Check-Improve." These elements typically involve conducting an initial environmental review, defining an environmental policy, devising an action plan, assigning environmental responsibilities, providing internal training, auditing the EMS, and conducting management reviews.

Companies have a variety of Environmental Management Systems (EMS) to consider, typically falling into two primary categories: "externally certified" and "performance-driven." Externally certified EMS are structured to meet certification standards, while performance-driven EMS are customized to suit the specific operational requirements of the company, often with the aim of gaining a competitive edge. Additionally, sector-specific EMS are emerging to address industry-specific environmental impacts and drive further improvements in performance.

Externally certified EMS encompass ISO 14001 and EMAS. ISO 14001, developed by the International Organization for Standardization (ISO), serves as the leading international standard for EMS design and content. It is part of the ISO 14000 family, which provides generic tools for developing, implementing, and evaluating environmental policies. This family includes standards for EMS, environmental auditing, performance evaluation, labeling, and life-cycle assessment.

EMAS, the European Union's Eco-Management and Audit Scheme, is a management tool for organizations in the EU and EEA. EMAS offers an external "seal of approval" through registration, requiring companies to fulfill six key requirements: environmental review, establishment of an EMS, environmental audit, environmental performance statement, verification by an accredited EMAS verifier, and public disclosure of relevant information. While EMS requirements for EMAS are similar to ISO 14001, EMAS mandates additional steps such as providing an environmental performance statement and public disclosure, which are not required by ISO 14001.

Performance-based EMS integrates tailored environmental management systems with core business practices, including strategic planning, investment, financial management, product development, and marketing, with robust support from senior management. These systems are not mutually exclusive from ISO-based systems; indeed, ISO 14001 often forms the foundation for performance-driven EMS. Efforts to standardize tailored systems are ongoing, with initiatives such as the Multi-State Working Group on Environmental Performance (MSWG) in the US developing guidelines for a performance-based "External Value EMS." This framework aims to bolster stakeholder confidence in EMS implementation by emphasizing legal compliance, stakeholder engagement, and transparent external communications [47].

In conclusion, businesses are increasingly recognizing the importance of implementing environmentally sustainable practices for both ethical reasons and the numerous benefits they bring. Enhanced business efficacy, achieved through environmental management methodologies, leads to increased operational efficiency and productivity, while gaining market entry becomes more accessible through certified environmental methodologies. Engaging with stakeholders fosters positive relationships and reinforces the company's commitment to ethical practices. Additionally, the operational cost reduction achieved by utilizing energy-efficient equipment and technologies, along with the boost in productivity from embracing green practices, enhances the company's competitiveness. To overcome challenges and maximize opportunities, businesses must adopt a holistic approach to

sustainability, integrating environmental principles across all operations. Environmental management systems offer valuable frameworks to navigate this transition, providing structured approaches to achieving sustainability goals effectively. Through concerted efforts, businesses can mitigate environmental impacts and thrive in a sustainable future.

3.3 Challenges and prospects of sustainability for business in Ukraine

As Ukraine navigates economic reforms and seeks to align with global environmental standards, Ukrainian businesses encounter various hurdles in adopting sustainable practices. Amid the ongoing war, geopolitical tensions and economic uncertainties, Ukrainian enterprises must grapple with issues ranging from environmental degradation to resource scarcity. However, amidst these challenges, there are opportunities for businesses to embrace sustainability as a driver of innovation, competitiveness, and long-term growth.

The State Environmental Inspection reported that as of November 30, 2022, due to armed aggression, 291,826,950 square meters of Ukrainian land were contaminated and 8,099,793,440 square meters were littered, resulting in damage totaling 448.9 billion UAH. Fighting for environmental cleanliness is a noble goal, but unfortunately, the eco-monitoring system is far from ideal. The State Environmental Inspection continues to monitor and report on the amounts of claims and lawsuits filed against violators. However, the business has always been skeptical of inspections by the State Environmental Inspection because of the lack of transparency in this system. Mind, the legal advisor of the Committee on Industrial Ecology and Sustainable Development of the European Business Association, advisor to Asters, head of the Construction, Environmental Protection, and Sustainable Development Practice, Angelika Livitska, explains what needs to be changed in the eco-monitoring system in order to detect violators and avoid accusations of corruption [52].

Over the past two years, Ukraine, its society, and economy have been living under constant attacks from Russian hostile missiles. Although environmental issues may seem secondary against the backdrop of the suffering brought by the war to Ukrainians, environmentalists are already warning of inevitable negative consequences for the environment for decades to come. In particular, due to constant shelling by Russia of oil depots, large industrial facilities, and energy units of nuclear power plants. Moreover, heavy metals from shells and military equipment are getting into the soil and groundwater [53].

The State Environmental Inspection actively assists in assessing environmental damage and eliminating its consequences.

Instead of purely control functions, issues such as proper disposal of war waste, documenting environmental crimes committed by the Russian armed forces (ecocide, pollution, destruction of natural systems and infrastructure objects such as dams, leading to catastrophic consequences for the natural environment, significant landmining), holding accountable individuals who commit violations even in wartime related to illegal use of natural resources (illegal logging, illegal fishing, etc.) have come to the forefront.

In this context, it is worth noting the work of the State Environmental Inspection employees, who, together with representatives of the State Land Cadastre and local self-government bodies, have documented and calculated the quantitative indicator of the damage caused by the war and occupiers on the territory of Ukraine.

Currently, 7,155,689 square meters of objects, including critical infrastructure, have been destroyed; 182,880 square meters of land have been contaminated with hazardous substances; 2,365,129 square meters of land have been littered with remnants of destroyed objects and munitions; 680,618 tons of oil products have burned during shelling, polluting the atmospheric air with hazardous substances [52].

In addition to the negative consequences of war (including environmental ones) that will need to be addressed in line with the principles of the European Green Deal and using advanced environmental tools, Ukraine must undergo a comprehensive reform of its state environmental control [54].

Unfortunately, historically, the State Environmental Inspection, due to its broad powers, has been one of the levers of pressure on businesses. According to research on the business climate in the regions, in recent years, the State Environmental Inspection has received the most complaints from businesses. Therefore, the main focus of the reform is to eliminate corruption and increase the efficiency of the agency's work, including its relaunch.

Moreover, companies - members of the European Business Association, within the framework of the White Paper on deregulation of legislation during wartime and reforms for European integration, propose a number of aspects to be taken into account in legislative acts on the renewal of state environmental control. Among them are:

- Fixation and calculation of environmental damage inflicted.

- Conducting explanatory work and increasing interaction with businesses and local authorities.

- Increasing the efficiency of work by establishing the level of appropriate requirements for candidates for inspector positions, as well as establishing responsibility for damage to businesses caused by official negligence or abuse of their powers.

- Introduction of EU standards during the implementation of the control function (i.e., transition from the Soviet standard of a "punitive-corrupt" body to a model of business support and transparent interaction with business).

- Development of voluntary environmental audit and environmental insurance practices to facilitate the transition from a control to a monitoring approach in the field of state environmental regulation.

According to the results of the latest survey of the European Business Association, despite the massive rocket attacks, 83% of business respondents are ready to participate in the post-war reconstruction of the country, although in April there were only 67%. And our task now is to create conditions for doing business that would allow attracting foreign capital and improving the investment image of post-war European Ukraine [52].

The European Bank for Reconstruction and Development (EBRD) stands as a prominent institutional investor in Ukraine, committing 2 billion euros to the country's economy in just the last two years. Across various sectors, including infrastructure, energy efficiency, energy security, agriculture, industry, and support for small enterprises, the EBRD plays a pivotal role in financing projects. Moreover, it offers personalized business guidance to small-scale enterprises to enhance their productivity and foster growth.

Despite the EBRD's focus on promoting green initiatives, a mere 9% of entrepreneurs, particularly small and medium-sized businesses, express concern regarding their business's environmental impact. Recognizing the importance of nurturing the green economy, the EBRD prioritizes educational initiatives to bolster environmental consciousness and resource efficiency. These endeavors aim not only to curtail costs for small and medium-sized enterprises over the long term but also to safeguard the environment.

In alignment with its commitment to environmental stewardship, the EBRD backs projects targeting energy efficiency and environmental management. These projects encompass initiatives to enhance the efficiency of energy, water, fuel resources, waste reduction, and similar endeavors. Presently, green projects constitute approximately 10% of all consulting initiatives supported by the EBRD and donors in the direction of micro, small, and medium-sized enterprise (MSME) development.

A notable illustration of such a green endeavor in Ukraine is the Pastiralla dry-cleaning network, which actively champions extending the lifespan of items, advocating for sustainable development, and implementing eco-friendly solutions. Natalia Hrushevska, the founder of Pastiralla, highlights their commitment to eco-conscious practices, such as crafting biodegradable hangers from recycled cardboard, transitioning to digital receipts, and instituting waste sorting protocols. Additionally, the company has invested in innovative mycelium and hemp-based hangers, eliminated paper usage, and implemented water recirculation systems, all contributing to substantial resource conservation and environmental preservation [55].

In conclusion, Ukraine faces a complex landscape of challenges and opportunities in its pursuit of sustainability for business. Despite the ongoing war, geopolitical tensions, and economic uncertainties, Ukrainian enterprises must confront environmental degradation and resource scarcity. Efforts by the State Environmental Inspection to assess environmental damage and mitigate its consequences are commendable, yet reforms are necessary to enhance transparency and efficiency. Moreover, initiatives by organizations like the European Bank for Reconstruction and Development (EBRD) to support green projects and foster environmental awareness among businesses offer hope for a more sustainable future.

CONCLUSIONS

Our analysis of the environmental dilemmas confronting our planet emphasizes the critical need to address urgent issues such as climate change, deforestation, air and water pollution, plastic contamination, and biodiversity loss. These challenges are intricately linked and primarily stem from human activities, including fossil fuel combustion, deforestation, unsustainable agricultural practices, industrial processes, and inadequate waste management.

The failure of humanity to adequately recognize the value of nature within the global economy has resulted in severe consequences, including biodiversity decline, climate change, and pollution crises. Climate change poses significant risks to human health, biodiversity, infrastructure, energy systems, and business operations, while deforestation exacerbates habitat loss and carbon emissions.

Our examination of the complex interplay between international business practices and environmental issues reveals the profound influence of trade dynamics, investment flows, financial operations, marketing strategies, and supply chain management on ecological conditions. While expanded trade may contribute to environmental degradation, trade liberalization also presents opportunities for companies to adopt sustainable practices and drive positive change. Similarly, investment processes increasingly prioritize environmental considerations, integrating pollution prevention, energy efficiency, and emission reduction strategies to mitigate risks and capitalize on opportunities for value creation and innovation. Green financing initiatives and the rise of green marketing further underscore the importance of aligning financial systems and business practices with sustainability goals. Finally, supply chains play a critical role in shaping environmental impact, with factors such as intensity, technology, and scale influencing resource consumption and emissions.

Considerable progress has been achieved in environmental governance over the past five decades, with key agreements facilitated by the United Nations Environment Program and initiatives from forums like the G8 and G20 advocating for climate

protection goals. The Treaty on the Functioning of the European Union emphasizes principles such as precaution and the 'polluter pays' principle, driving the evolution of EU policy towards integrating environmental concerns. Initiatives like the European Green Deal demonstrate ambitious targets for reducing greenhouse gas emissions. Collaborative efforts between Ukraine and the EU further highlight the growing recognition of the necessity for integrated approaches to environmental management.

There is a multitude of both international and regional environmental organizations and movements, with notable entities such as the World Wide Fund for Nature, Greenpeace, the United Nations Environment Programme, and the European Environmental Bureau. The environmental movement encompasses various sub-communities such as climate activists, water protectors, conservationists, environmental defenders, green parties, eco-terrorism, and individual and political action.

The role of private enterprises and businesses in addressing environmental challenges is increasingly acknowledged as crucial, given their significant influence on resource consumption, pollution levels, and ecosystem degradation. Initiatives like corporate social responsibility and the adoption of green technology play pivotal roles in promoting environmental sustainability within businesses. Through strategic measures and collaborative efforts, businesses can contribute meaningfully to environmental preservation and sustainable development.

The influence of environmental issues on international business is undeniably significant, shaping strategies for economic growth and environmental sustainability worldwide. Environmental factors affect workforce productivity, operational efficiency, supply chains, insurance costs, and consumer preferences. Despite the regulatory complexities and financial burdens associated with environmental compliance, businesses are incentivized to innovate, optimize resources, and capitalize on emerging market opportunities.

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