



**Comunidad
de Madrid**



2019-20 Background Guide Global Classrooms Madrid

United Nations Environmental Program (UNEP)

Finding the Balance between Economic
Growth & Resource Efficiency

Part One: Committee Simulation

Introduction to the Committee

The United Nations Environment Programme (UNEP), also known as United Nations Environment (UN Environment), is the United Nations (UN) agency preoccupied with all issues relating to the environment. Founded in June 1972 in the United Nations Conference on the Human Environment, UNEP is headquartered in Nairobi, Kenya and its work is executed through several divisions, regional, liaison, and out-posted offices in addition to numerous collaborating centres of excellence. It is led by a Senior Management Team and directed by Erik Solheim.

“If we all come together and work together, there is no limit to what we can achieve on planet Earth.”- Erik Solheim

The UNEP’s mandate is to “provide guidance to the world on environmental issues and assist with environmental best practices across the UN.” It does so by setting the global environmental agenda, helping nations to develop and implement sound environmental policies and practices, informing and enabling nations and people to better their quality of life without jeopardizing that of future generations, and coordinating the environmental activities across the UN agencies.

UNEP promotes and provides responsible leadership and encourages the development of partnerships both between nations and between the public and private sectors. In fact, UNEP interacts closely with member states, businesses, and civil society representatives, and it has given over 400 non- governmental organizations (NGOs) formal consultative status. This agency focuses its work around 7 thematic areas: climate change, ecosystem management, disasters and conflicts, chemicals and waste, environmental governance, environment under review, and resource efficiency. It has spearheaded international initiatives to assess environmental conditions and trends to pinpoint emerging issues in each area and supported scientific discoveries and projects to tackle them.

UNEP has contributed greatly to the development of international environmental conventions and treaties and hosts the secretariats of several multilateral agreements and research bodies to address current environmental challenges. These include:

- The Convention on Biological Diversity,

- The Vienna Convention for the Protection of Ozone Layer and the Montreal Protocol,
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora, and
- The Minamata Convention on Mercury.

UNEP prides itself on its overarching commitment to sustainability in all its work and has been committed to climate neutrality since the 1st of January 2008. It has put an Environmental Management System (EMG) into practice for all its operations worldwide and conducts staff awareness activities, including Green Week. Its sustainability work is coordinated by the Sustainable United Nations (SUN) facility in Geneva, Switzerland which helps UN agencies achieve climate neutrality and environmental sustainability.

As a matter of fact, most of the 17 Sustainable Development Goals (SDGs) are characterized by an integral environmental aspect or focus. That is why UNEP plays an essential role in the attainment of these goals as it is an advocate for environmental sustainability as a prerequisite for the health of the planet and its inhabitants. This environmental approach is particularly important for Goal #2 (Zero hunger), Goal #6 (Clean water and sanitation), Goal #7 (Affordable and clean energy), Goal #11 (Sustainable cities and communities), Goal #12 (Sustainable consumption and production), Goal #13 (Climate action), Goal #14 (Life below water), and Goal #15 (Life on land). It must come as no surprise that issues relating to these goals have been target areas for UNEP's work and that they line up with its thematic areas.

"We owe at least this much to future generations, from whom we have borrowed a fragile planet called Earth."- Maurice Strong, first Executive Director of UNEP

Part Two: Topic Briefing

Introduction to the Committee

Economic growth and development require the use of resources to provide goods and services. However, this growth has more often than not come at the expense of the environment and is gradually leading to the depletion of these resources, hence making them less available for future generations. Despite this abuse of resources, more than 10% of the world's population still lives in extreme poverty and industries have not been capable of providing for everyone. The solution to this dual challenge necessitates the

creation of innovative policies and plans, international cooperation and partnerships, capacity development programs, and eco-friendly technologies, all based on the concept of resource efficiency.

Defining Resource Efficiency

Resource efficiency encompasses several ideas, but it can be generally defined as the use of the Earth's limited resources in a way that maximizes function while minimizing waste and environmental impacts. In other words, it is the sustainable use of resources that accounts for long-term considerations regarding both the economy and the environment. This includes optimizing the relationship between inputs and outputs, minimizing waste and losses, and delivering competitive goods, in terms of quality and price, that satisfy needs, all the while diminishing ecological impact.



The Brundtland Commission (1987) defines sustainability as “the ability to meet the needs of the present generation without diminishing the opportunities of the next generation to enjoy the same quality of life and the benefits of enjoying nature as the current generation (and the previous one) have done”. It is a form of development that is not at the expense of someone or something else, be it future generations or the environment. It is evident why resource efficiency is crucial in attaining sustainable development, which is why it is explicitly included in different SDGs, namely:

→ **Target 8.4:** “Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead”;

→ **Target 9.4:** “[...] increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes [...]”;

→ **Target 12.2:** “By 2030, achieve the sustainable management and efficient use of natural resources”;

→ **Target 11.b:** “By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency [...]”.

Resources in this context are considered to be any physical element with the potential to supply or contribute to a good or service. This includes water, land, and air as well as minerals, metal ores, fossil fuels, biomass and food sources, and ambient energy. The supply of these can be massive, but so is the consumption, and the Earth’s capacity to keep providing is limited. In fact, 84 billion tons of materials were extracted for use in 2015 and a third of the planet’s land is cultivated to provide for humans’ needs and activities. In addition, 61% of commercial fish populations are fully fished, and 29% are overfished. With the projected population growth over the next few decades, demand will only increase. Thus, it is vital to regulate activities in order to conserve the Earth’s resources, for the sake of the ecosystem and that of future generations, especially since the global per capita use of natural resources is expected to increase by 70% by 2050 if business continues as usual. The demand for water, food, and fiber specifically are expected to grow by 55, 60, and 80-95 per cent respectively.

“Even the best policy planning for resource use and infrastructure can only succeed if we protect the true value of nature and ensure its benefits create a fairer and more prosperous society.”- Erik Solheim

The Drivers of Resource Inefficiency

The extent to which a resource is used or extracted inefficiently can be deduced based on different factors, including:

- Whether or not a renewable resource is extracted at a faster rate than the ecosystem’s regenerative capacity;
- The amount of losses or waste of non-renewable resources;
- The degree to which its use generates emissions greater than the ecosystem can manage;
- How much its use can be reduced without hindering economic development.

There are several direct and indirect drivers of resource inefficiency that exacerbate the problem and act as barriers to improved resource use. They can be subdivided into 6

main categories:

1. **Socioeconomic drivers:** These involve social and demographic trends in addition to economic factors such as other market failures, elevated costs, lack of funding, insufficient competition, and lack of incentives for efficient production and consumption. Consumers are also affected by distorted pricing of efficient products.

2. **Behavioral and informational drivers:** These include a low level of education, information, and awareness as well as personal or cultural values, preferences, and paradigms as simple as dietary, transportation, and housing preferences and as complex as consumerism. They affect consumers and influence the demand heavily.



3. **Policy and regulatory drivers:** These are due to neglect of resource efficiency in legal frameworks and policies which leads to poor regulation. This removes the obligation or incentives for institutions and consumers alike to adopt better approaches, attitudes, and actions in this field.

4. **Organizational and institutional drivers:** These refer to structures and processes on the macro-level including business management strategies, governance, decision making, and supply chain structures that are not aligned with efficiency principles. The interaction between policy-makers, producers, retailers, and consumers influences these factors as it can, if carried out properly with the required regulations and incentives, create accountability and responsibility for suppliers.

5. **Technological and infrastructural drivers:** By retrofitting or replacing equipment with new and more efficient technology, momentous improvement could be made possible. However, problems related to costs and availability of reliable technology, surrounding infrastructure, and limitations of materials and systems impede this process.

6. **Biophysical drivers:** These include a state's resource endowments, such as water supply and the amount of land suitable for exploitation, as well as environmental factors, such as climate.

It is essential to understand these drivers and the way in which they interact in order to formulate interventions targeting all fronts of the problem. By tackling each of these factors and finding long-term, effective solutions, states and the population as a whole can move towards a more efficient and green future.

History of the Topic

Historically, the focus has fallen on economic growth with resources regarded as a means to that end. However, unsustainable practices, along with the changes in population growth and consumption patterns, have led to significant scarcities and triggered severe environmental implications. This in turn has dire consequences both on the planet and its people, particularly its future generations.

Population Growth and Economic Changes:

The 20th century was the stage for drastic changes both from a population perspective with the rapid growth and an economic perspective with the industrial revolution. In fact, the world population increased from around 1.5 to 6.1 billion throughout the century - an increase which was 3 times greater than that in the history of humanity. The industrial revolution also resulted in a change in consumption patterns, predominantly in the wealthier sections of the population. The “consumer class” has more than doubled in the past 25 years, bringing with it an inevitable increase in purchasing power and hence demand for goods and services, especially in middle to low-income countries. This was essential to lift part of the population out of poverty and increase its quality of life, but it was accompanied by environmental degradation due to unsustainable practices. The repercussions include waste of resources, different forms of pollution, and the destruction of arable land and habitats. As a matter of fact, global resource extraction grew by 45% between 1980 and 2005 from 40 to 58 billion tons. The population is expected to reach 9.7 billion by 2050, and with that the global use of materials is projected to increase from 65 to 186 billion tons per year. Should that happen, the supply of natural resources needed to sustain current lifestyles would require the equivalent of almost 3 planets, according to the United Nations Development Programme (UNDP).

*"We must ask ourselves what the consequences of this pace of consumption and trajectory will be in a world that by 2050 will have to sustain up to nine billion people"-
Achim Steiner, UNDP Administrator*

Urbanization

As globalization helped disseminate knowledge and industry across the globe, urbanization gained momentum and reached its peak of growth during the 1950s, with the urban population expanding by more than 3% per year. Already, more than half of the world's population is living in cities and urban areas, and the proportion is expected to increase to 66% by 2050. The growth of urban populations will require the expansion of preexisting cities and the



building of new ones. Thus far, the world has witnessed many instances of rapid, unplanned growth which put a strain on resources, particularly land. Cities are responsible for 75% of global energy consumption and are expected to consume 90 billion tons of materials in 2050, which is more than the planet can sustainably provide. Cities also have a significant environmental footprint as they are accountable for 75% of carbon dioxide emissions. UNEP urges states to take the necessary precautions in formulating adequate policies and plans for future urban growth and consider the contributions of building and transportation to climate change and resource depletion.

The Concept of Sustainability

This concept appeared explicitly in the 1970s-1980s with the World Conservation Strategy (1980), the Brundtland Report (1987) and the United Nations Conference on Environment and Development in Rio (1992). However, its roots originated in the early 20th century as a reaction to the rapid industrialization that was taking place. An environmental movement began to try to safeguard the environment and limit the destructive effects of human activity. Organizations such as the International Union for Conservation of Nature (IUCN) were founded as early as the 1940s to ensure that resources were used equitably and sustainably. Later on, in 1972, The Club of Rome published a report titled *The Limits to Growth* which suggested that economic growth was limited by the availability of resources and could not continue indefinitely with the practices adopted at the time. Finally, in the United Nations Conference on the Human

Environment in Stockholm (1972), the concept emerged to show that economic development could be achieved without causing damage to the environment. This has become more mainstream and integrated into the principles and plans of many businesses, organizations, and states as a way to reconcile economic growth with environmental protection and social responsibility and commitment. However, sustainable growth is still far from being a concrete reality today and there is much that needs to be done.

The International Resource Panel

Launched in 2007 by UNEP, the International Resource Panel aims to contribute scientific knowledge and assessments of policies and plans in relation to the sustainable use of natural resources in order to provide a better understanding of and push towards the decoupling of economic development from environmental deterioration. The Panel's main focus is the efficient use of resources and it is formed of scientists who research and release reports related to global resource use. It also assists policy makers, industries, and communities in creating ways to improve resource management. The Panel's mission is to limit overconsumption, waste, and ecological damage and to shape how resources are used and re-used to their full potential. It evaluates the ways resources can be feasibly used and distributed to ensure environmental protection, economic efficiency, and social equity.

Green Economy and Decoupling

Simply put, green economy is the low carbon, socially inclusive, and resource efficient economy that states are encouraged to strive for. It is an economic model that ensures economic growth and individuals' well-being while reducing environmental risks. The concept arose in 2008 as a reaction to the global financial crisis, and UNEP launched the Green Economy Initiative (GEI). Thus far, 65 states are working towards an Inclusive Green Economy through targeted fiscal and social protection policies and institutions specialized to take on the social and ecological challenges.

One of the approaches required for green growth is decoupling - severing the link between economic growth and environmental degradation. An economy is considered to be decoupled when it is able to sustain GDP growth without negatively impacting the environment. In terms of resource use, decoupling means reducing the rate of resource use per unit of economic activity. The International Resource Panel has released two reports explaining decoupling and its different aspects. Its second report, decoupling 2, released in 2014, introduces existing technological opportunities and policy options that have been successful to a significant extent in different states that have applied them.

Decoupling requires these changes, but it is also reliant on a change in the attitudes of consumers and the business strategies and execution plans of producers. UNEP encourages this shift to more sustainable policies, industries, and lifestyles.

"Decoupling economic growth from resource consumption and environmental impacts is a way of addressing this challenge and a key concept in sustainable consumption and production"- Achim Steiner, UNDP Administrator.

Prominent Aspects of the Topic

The Rationale for Resource Efficiency

Policymakers have displayed a growing interest in resource efficiency over the past few years, and that can be attributed to the large number of long-term benefits it can lead to. These can be summarized in four main areas:

1. Ensuring resource availability: Resources will always be required for any kind of economic activity. However, with the current trends in production and consumption, rising average incomes, and the projected population growth, the threat of scarcity and depletion is more relevant than ever. In addition to the availability of resources, there are other concerns related to the declining quality of sources that industries will have to resort to as well as the investments that will be required to procure them. Implementing a more resource efficient approach could help reduce the demand for resources in 2050 by 28% relative to existing trends and therefore slow down this process.

2. Stabilizing resource prices: Resources are finite and geographically concentrated commodities; therefore, their supply can be unpredictable. This leads to price volatility which can be highly disruptive to both importing and exporting countries' economies. In addition, evidence points towards an increase in resource prices due to the projected increase in demand. These elevated and volatile prices can put a strain on all dependent economies, but they can particularly aggravate the situations of the poorest and the most vulnerable as they restrict market access, which can in turn affect investment due to uncertainty. Moving towards more resource efficient economies means relying less on the trade of resources and becoming more independent and secure.

3. Minimizing environmental damage: Tons of materials are extracted, processed, transported, and used every year. These processes can have serious environmental impacts such as pollution, land degradation, loss of biodiversity, and stock depletion. Even the use of resources can have an impact, such as the contribution of fossil fuel

combustion to climate change. This is also financially costly as the International Monetary Fund (IMF) estimated the external costs of air pollution and climate change as a result of fossil fuel combustion to be USD 4 trillion in 2015. Finally, the accumulation of wastes is aggravated when resources are not recycled and reused efficiently. Resource efficiency is therefore essential to limit environmental degradation.

4. Economic benefit: Applying resource efficient strategies and technologies can provide overall economic gain, both directly and indirectly by increasing competitiveness, generating job opportunities, encouraging innovation, and reducing costs in the long term. However, the macroeconomic models used so far do not account for the costs of the transition related to training, new technology and equipment, and so on, so there are no reliable, exact figures of the net gain.

"The potential positive impact of greater resource efficiency on tackling climate change is massive. But building a resource-efficient economy will require all countries to change the way natural resources are used, managed and conserved." - Achim Steiner, UNDP Administrator

Tourism

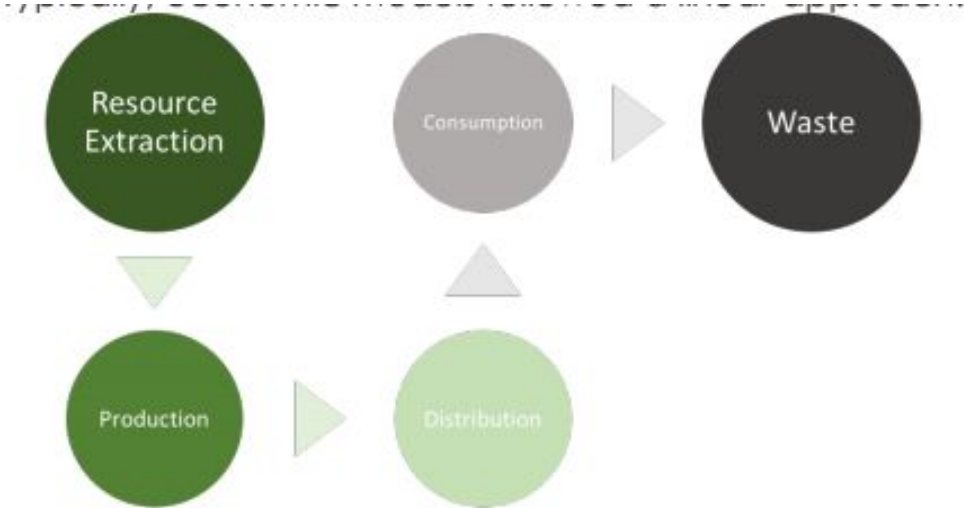
Industries are not the only sectors in the economy that contribute to economic growth. Tourism is a vital sector for many states' economies and contributes 10% of global GDP. It also accounts for 7% of global exports and 1 in 10 jobs worldwide. It is a true pillar for development, especially for least developed countries (LDC) and small island developing states (SIDS).

However, like all other sectors, tourism has its impacts. International tourist arrivals have grown from 527 million in 1995 to 1.32 billion in 2017, and they are expected to increase to 1.8 billion by 2030. UNEP research has demonstrated that the sector's consumption of major resources, including water, land, energy, and materials, is increasing proportionally with its generation of solid waste and sewage, contribution to loss of biodiversity, and greenhouse gas (GHG) emissions. For instance, the average luxury hotel room uses 1800 litres of water a day. By 2050, this could result in an increase of 152% in water consumption, 131% in GHG emissions, and 251% in solid waste disposal. This does not only cause problems for the environment. In fact, climate change and environmental degradation could cause significant damage to the tourism sector, specifically for states that rely on their natural assets - such as natural landmarks and rare or exotic species - to attract tourists. Climate change could contribute to the extinction of 30% of species, 90% of coral reefs, and almost half the amazon rainforest by 2050 in a business-as-usual scenario.

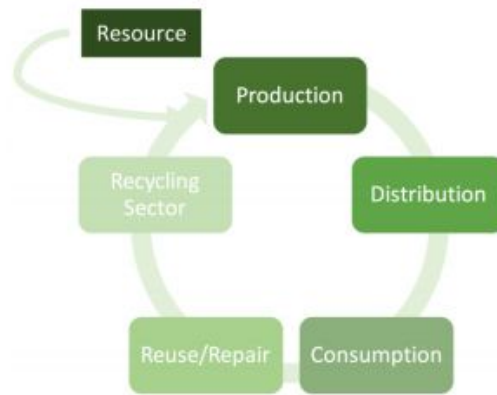
That is why the concept of sustainable tourism has gained more attention in recent years. The World Tourism Organization (WTO) defines it as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities". It involves more responsible and sustainable management and planning as well as improved behavior of tourists.

Circular Economy

Typically, economic models followed a linear approach:



However, this take-make-consume-dispose approach is far from sustainable as it assumes that resources are readily available, cheaply sourced, and easily disposed of with no serious consequences. It also generates significant amount of waste and offers slim opportunities for the reuse or repurposing of materials to their full extent. Circular economies were suggested as a more sustainable alternative that is restorative rather than wasteful. It involves the flow of materials through a closed, circular pathway with several phases to extend their lifetime:



This model mimics the logic of the natural flow of energy and matter in nature - life cycles. Resources are recycled and reused continuously to limit the need for new extractions and the generation of waste and to decrease their anthropogenic harm to the environment.

The benefits to the environment are clear. If less waste is generated, less materials end up in incinerators or landfills, which are notorious for their contributions to environmental degradation. Moreover, the emissions and pollution resulting from the extraction and processing of materials will be reduced and the depletion of resources will be significantly slowed down.

The circular model also has several economic benefits, such as:

- Decreased dependency on extractions and imports which would decrease industries' sensitivity to scarcity, geopolitical factors, and price volatility of international commodities;
- Increased efficiency of resource consumption as material wastes could return as secondary raw materials through high-quality recycling;
- Minimizing the cost of procurement and disposal of materials. In fact, if this approach were to be implemented in the manufacturing of complex durable goods with medium lifespans, it could result in net material cost savings of USD 340-630 billion per year in the European Union (EU);
- Creation of job opportunities in the fields of eco-design, repair, refurbishment, remanufacture, and waste recycling. As a matter of fact, based on the European Commission's assessment of a recent legislative proposal, up to 178,000 direct new jobs could be created in the EU by 2030.

The circular economy could also promote social innovation and lead to increased awareness and responsible, sustainable consumer behavior. Currently, the question for many states and businesses is not why they should apply a circular economy model - it is how to apply it in a way that fits their needs, goals, and capacities while managing the costs of shifting to new technology, specialized staff, and unfamiliar organizational strategies.

“By making better use of our planet’s natural gifts, we will inject more money into the economy to create jobs and improve livelihoods. At the same time, we will create the necessary funds to finance ambitious climate action.”- Erik Solheim.

International Actions

UNEP’s Global Initiative for Resource Efficient Cities (GI-REC)

Launched in June 2012 by UNEP, the GI-REC is a cooperation platform that aims to connect governments, the private sector, and civil society in order to build resilient, low-carbon, and resource efficient cities. It works to do so by promoting research on sustainable consumption and production and resource efficiency, creating a network for cities to share experiences and peer-review projects, and helping city decision-makers with advice on capacity building, technical expertise, and funding opportunities for their green projects.

The Life Cycle Initiative

Hosted by UNEP, the Life Cycle Initiative is a public-private multi-stakeholder partnership that ensures a science-based process aiming to build consensus and support policies related to sustainability by bringing life cycle thinking to decision makers around the world. The initiative was launched in 2002 and now has over 240 institutional or individual members from nearly 50 countries across the world. It strives to find holistic solutions to the environmental and social problems resulting from human activity that do not result in trade-offs or burden shifts. This initiative has enabled the global use of credible life cycle knowledge through its conferences, reports, and databases to push forward with the attainment of sustainable development goals.

“Only effective international cooperation can accelerate the transition to a resource-efficient future, which in turn will create new jobs and drive sustainable development.” - Achim Steiner, UNDP Administrator

UNEP's One Planet Network

The One Planet Network is a multi-stakeholder partnership formed to implement the 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP), which is a global commitment adopted in the 2012 World Summit on Sustainable Development. The network operates via six programmes whose work promotes sustainable development in the following areas:

- Public procurement;
- Buildings and construction;
- Tourism;
- Food systems;
- Consumer Information; and
- Lifestyles and education.

The network's strategic objective is to become the leading implementation mechanism for SDG #12, which includes decoupling economic development from resource use and environmental degradation.

The World Resources Institute (WRI)

The WRI is a global research organization that spans over 50 countries. It was created in 1982 as a science- and evidence-based organization that aims to improve the management of natural resources to create a more equitable and prosperous planet and future. Their work is centered around six issues that combine development and the environment: climate, forests, food, water, energy, cities, and transport. The institute collects data and conducts independent research to share with decision makers in order to achieve change. It also holds workshops and summits related to its topics and has launched the Building Efficiency Initiative, in collaboration with Johnson Controls (JCI), to provide expertise and advice on technologies, practices, and policies for buildings and energy systems characterized by efficiency and high performance.

Recommendations

- Delegates are encouraged to understand the drivers of resource efficiency and the barriers in its way to come up with pragmatic, multidimensional resolutions that cover all aspects of the topic.
- Extensive extracting, planting, building and manufacturing are not effective

solutions - they only worsen the situation in the future. Delegates are asked to think of long-term, efficient solutions.

- Delegates are urged to assess not only the role of the government but also that of businesses, the general population, civil society, and the international community.
- Delegates are encouraged to consider the role of partnerships and to think about how the different economic models and approaches mentioned can be adapted to different countries' abilities.
- Delegates are advised to consider the environmental aspect of the issue without neglecting the need for economic growth and development.
- Delegates are expected to research the topic and the role of their country in depth to understand whether or not it is working towards finding this balance and what it could do to improve further.

Questions to Consider

- What resources is your country an importer or an exporter of and what are the threats to those resources today?
- Is your country considering the different types of resources - including land, water, air, biomass, energy, and subsoil resources - or are its policies limited to specific targets?
- Does your country have policies or plans related to green economy, recycling, decoupling, and circular economy? What are some creative but realistic ways to apply these models?
- What is the level of awareness in your country's population and how can it be improved?
- How can your country and the international community make use of resource efficient technologies to stimulate economic growth and development?
- What are the measures your country has taken or could take to limit the drivers of resource inefficiency?
- What are the groups that are most vulnerable to fluctuations in resource supply and price? How can these vulnerabilities be limited?
- Is your country's and its businesses' infrastructure capable of adapting to new technologies and programs?
- What are the ideal business models to tackle this issue? Have your country's industries adopted any of them?

Part Three: Further Reference Links

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