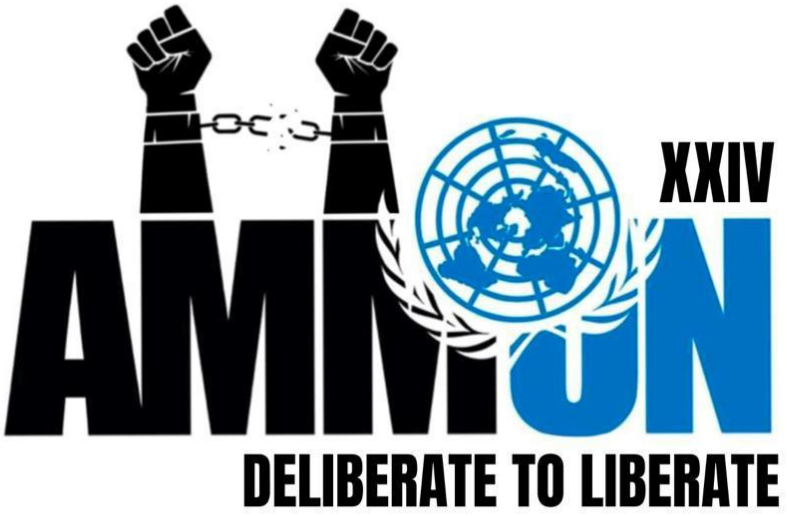

Forum: Environmental Commission

Topic: The Global Transition to a Circular Economy and Waste Management

Aya Zoumot / Khader Abu Khader

Introduction

In today's world, we are consuming and depleting natural resources at an alarming rate. Our current production model, which follows a "take, make and dispose" structure, is unsustainable and is driving climate change and environmental degradation. This is causing a rapid growth in global waste and is pushing our environment to its limits. If left unaddressed, landfills will continue to overfill, communities poisoned by waste and our oceans filled with plastic, leaving us with an unlivable future. The need for a transformative change and call to action against this linear economic model has never been more vital, which is where a circular economy and waste management falls into place. The theme of this year's Amman Model United Nations conference, "Deliberate to Liberate", outlines the urgent need to release the generations to come from the consequences of environmental degradation. This can be done by redesigning and transitioning our global systems to be more sustainable.

To be able to take a step forward in sustainability, and decrease our waste production, we must rethink how our goods are manufactured, how long they're used, and how they are disposed of. A circular economy is a model that not only changes how we produce and consume our products, but also, it faces the systems that generate waste in the first place. The structure of a circular economy follows the base "reuse, repair, refurbish, recycle", ensuring that materials are used to their fullest extent before being discarded. This will allow us to view waste as a source that can be reintegrated into the production system, rather than an inevitable byproduct. However, this transition comes with challenges that are important to highlight. Developing countries often lack the funding and infrastructure needed to manage their waste. Governments, businesses, and consumers must also learn to adapt to new structures. For governments, they should establish assisting mechanisms, and businesses and consumers must familiarize to new production/consumption patterns while also incorporating extended producer responsibility (EPR).

For a circular economy to be put into action, there are factors and industries that should be addressed and taken into consideration. The fast fashion industry is responsible for a large number of emissions and waste, as they mass produce cheap and affordable clothing that usually ends up being disposed of incorrectly. These products are largely overconsumed, and cheap materials and textiles fill up landfills quickly. E-waste that comes from disposal of electronics has become one of the largest waste streams in the world, due to rising technological innovation. E-waste is extremely

hazardous and harmful, as it can contain chemicals that contaminate the air, soil, and water, leading to environmental degradation. Finally, single-use plastics are one of the most harmful waste streams as well, as small micro-plastics can enter the food chain, disrupting the food chain and wildlife. This causes long-term damage to ecosystems. By regulating waste and addressing this topic, the global community has the power to move towards a sustainable future and transform our consumption patterns.

Definition of Key Terms

Sustainability

Sustainability is the ability to meet the needs and wants of the present without compromising future generations from meeting their needs as well. This means preserving natural resources, reducing waste, and protecting our ecosystems.

The United Nations (UN)

The UN is an international organization that was founded in 1945, aimed at promoting peace and security globally. The UN plays a vital role when it comes to sustainability across the world, which is why the developed the sustainable development goals (SDGs). These goals include responsible consumptions and waste reduction protocols.

United Nations Environmental Program (UNEP)

The UNEP is a UN agency that coordinates environmental activities and ensures that countries have policies that align with environmental sustainability. The UNEP has stressed the importance of transitioning to a circular economy multiple times, and the need for sustainable consumption.

Extended Producer Responsibility (EPR)

EPR is an environmental policy that encourages producers to create products that are eco-friendly and to consider the mindful disposal of products.

Linear Economy

A linear economy is the traditional model of production and consumption that most countries follow. A linear economy follows the flow take, make, dispose. This leads to high use of natural resources as well as waste creation.

Circular Economy

A circular economy aims to reduce waste, and instead of disposing of products, to reintroduce them into the production system and extend their lifetime. This model follows the structure reuse, repair, refurbish, recycle. It is the opposite of a linear economy and emphasizes sustainability.

General Overview

The global economy has relied on linear economic systems for a long time. This model has created industrial growth and development for the past decades. However, this has come at a great environmental cost. Today, our biggest issue when it comes to this topic is that the world is consuming natural resources at a rate much faster than our planet can regenerate them. Raw materials are being highly overconsumed, causing issues such as deforestation, soil degradation, water scarcity, and loss of biodiversity and ecosystems.

On the other hand, this is causing large amounts of waste, causing landfills to overfill and contaminate oceans and land with toxic and non-biodegradable waste. Since they aren't biodegradable, these materials take hundreds of years to break down and release harmful chemicals into the environment as they decay. This poses risks on both humans and wildlife in terms of health. And while they consume the least, developing countries often end up facing the deepest consequences when it comes to waste contamination. These countries do not have any policies or infrastructure to protect them from imported waste and face inequalities. This pattern is extremely unsustainable, and if not changed, our economies and environments are going to face extreme impacts.

A circular economy offers a transformative model that will counteract the impacts that

linear economies have caused to our environment. Instead of discarding products after use, which piles up waste in landfills and other areas, circular economies promote reintroducing material back into the production process. This is done through recycling and reusing materials for as long as possible, to be able to use them to their full potential. The aim of a circular economy is to reduce waste and make the most out of already existing resources to reduce greenhouse gas emissions and preserve natural resources.

Circular economies don't solely focus on recycling, but also encourage rethinking product design, production processes, consumption habits, and waste systems. This makes both businesses and consumers more aware of the production system and the impacts that they are leaving on the ecosystem. Businesses will also push to make their products more durable and easier to repair, as well as use materials that are environmentally friendly and can be easily reused. However, to be able to transition to this on a global scale, collaboration is necessary not only between countries, but also between the different sectors. This includes governments, businesses, and consumers.

To truly be able to achieve a circular economy, effective waste management needs to be implemented. Economies need to view waste not only as a byproduct, but also as a resource that can be reintegrated into the production system and economy. This can be done through practices such as composting organic waste to use as fertilizer, recycling plastics and metals, reusing electronic devices, and promoting EPR. Promoting EPR is necessary to ensure that manufacturers take accountability for the life cycle of their products and ensure that they are following sustainable protocols.

Mismanaged waste in the form of plastic, electronic or textiles contribute heavily to pollution and pose many health hazards. This waste can often end up in water ways or natural environments, where they can contaminate water and food sources. This can impact humans and their health or animals by impacting the food chain. Developing countries often face this problem as they do not have the proper infrastructure to deal with waste, and instead of disposing of it properly, they leave waste in informal dumping grounds.

Despite its benefits, transitioning to a circular economy also has a few challenges that are important to keep in mind. Most industries are reliant on linear supply chains as they are cheaper and are already deeply connected to global trade systems. This means that attempting to change them would receive resistance from a lot of industries as they would oppose moving towards

circular systems. Additionally, many consumers are unaware of the impacts that their consumption and waste methods are having on the environment. This is also because they lack access to both information on the topic and sustainable alternatives that are accessible and cheap.

In many regions, the infrastructure that is needed to move towards a circular economy is not developed or available. This includes recycling facilities or repair hubs. Low/middle-income countries often lack necessary investments, policies, and technical expertise to be able to install or maintain such infrastructure. And, even if these countries had access to such technology, they would not be able to operate them without the possible safety risks due to weak safety regulations. Additionally, there is a lack in clear regulatory frameworks and enforcement policies to support the transition from a linear to a circular economy. Unless these issues are addressed, along with the cultural resistance and technological gaps that come with it, a global shift to a circular economy will be very challenging.

Subtopic 1: International Regulations on Fast Fashion

The fast fashion industry is one of the largest growing industries in the world. However, it shows the vital need for a transition to a more sustainable economic system globally. Textile production in the fast fashion industry is responsible for almost 10% of global carbon emissions. In this industry, most unsold or returned items are disposed of. And since most of these clothes are made of cheap materials or follow trends, consumers dispose of them quickly. Growing cotton, which is a primary material, requires a large amount of water and pesticides which increases environmental degradation. This also poses a risk to workers, as these practices mostly occur in developing countries where they don't have adequate safety regulations. Since fast fashion is cheap, it relies heavily on synthetic fibers that are very slow to decompose. Textile recycling systems are either inaccessible or underdeveloped in most parts of the world, making it difficult to access proper disposal or recycling systems.

Subtopic 2: E-Waste Management

The proliferation of electronic devices from smartphones and laptops to televisions and daily electronics that we use in our lives has created one of the fastest growing and toxic streams of waste seen in the world today, e-waste. This challenge is particularly seen due to the fact that as of today, these devices have been made to have much shorter life spans to cut costs, however, are met

with even more cheap yet harmful decisions when the common methods of disposing of these electronic appliances are done in the quickest and cheapest ways possible usually leading to extreme harm towards our environment. As well as expensive and more importantly extremely hazardous materials like mercury, lead, cadmium, and gold are discarded, and with time passing on recycling these devices has become somewhat challenging and often costly for countries and private sectors to take on. Creating a complex global issue that will further impact peoples health and even natural resources, the discarded electronic devices continue to overwhelm existing recycling practices, especially in developing nations which might find it difficult to tackle such issues with the limited resources that they have, some of the more dire consequences that we will face include exposing children to dangerous chemicals without adequate protection, and therefor this not only will contaminate ecosystems but will also contribute to poverty and illness. Further more the loss of key resources could be a gamechanger for less developed and more developed countries to further evolve, and will ultimately effect the environment positively.

Subtopic 3: Single-Use Plastic and Plastic Waste

The rise of single use plastics bottle bags and cutlery designed for one time use and quick and cheap ways to discard the remains, however the aftermath of these plastics lead to the escalation of pollution and harms the environment on a large scale, these materials derived from fossil fuels are often used for a matter of minutes but persist in the environment for centuries. The UNEP estimates that humans produce over 400million metric tons of plastic waste annually. And with a significant portion being single use. This stream of plastic waste chokes landfill, pollutes oceans and harms wildlife in general, destroying ecosystems and creating long term effects on the planet. This poses risks for both environmental and human health. The challenge that plastic waste brings is multifaced, extending from production and consumption to disposal and pollution. And so, a circular economy could allow for a change from a disposable culture to a system that values and retains plastic as a resource. Offering a crucial pathway to mitigating plastic pollution, therefor fostering a clear sustainable future that the planet and it’s inhabitants will be able to thrive on, furthermore it necessitates a fundamental change in consumer behavior, encouraging consumers to promote reused and recycled products which would go a long way in contributing to a long term goal for this global crisis. And so, such a dire need for this systematic change is crucial in order stop the impact that microplastics has on the planet, ultimately effecting the planet and all of it’s inhabitants.

Major Parties Involved

The United States of America (USA)

While it supports the idea of a treaty, its position in negotiations has historically been more cautious, focusing more on recycling and waste management, and with it being one of the largest producers and consumers its participation in the issue is deemed far from acceptable, On a world scale.

Saudi Arabia:

A major oil producer, Saudi Arabia has often cooperated and aligned with countries that preferred to focus on downstream solutions like recycling rather than oppose legally binding limits on plastic production, however their vast oil production has made them a key party in this issue.

China:

As the world's largest producer and consumer of plastics, China is a critical party in this topic, as despite it implementing its own significant policies like its ban on plastic waste imports, which has also led a ripple effect on global trade, its decision on possible upcoming treaties is very decisive.

Fiji:

Being an island nation and despite being low emitters and low plastic producers, they are countries most vulnerable for plastic pollution, as it impacts their countless ecosystems, tourism and their fisheries, they are strong advocates for a strong treaty and a mechanism to help deal with a problem that they did not create yet still face consequences to till today.

The World Bank Group:

The largest financer of solid waste management in developing countries and so the world bank plays a critical role in funding necessary infrastructure and policy reforms.

Timeline of Events

Date	Event
March 22, 1989	The Basel convention on the control of transboundary movements of Hazardous wastes and their disposal was adopted in Basel, in response to developed countries dumping waste into less developed countries
May 5, 1992	The Basel convention enters into force.
December 2, 2025	The European commission adopts its first circular economy action plan, designed to boost the circular economy across the EU.
June 5, 2019	The EU single use plastics directive is adopted setting a framework for bans and consumption reduction methods and later enters force on July 2
January 1, 2025	Amendments to the Basel convention expanding control over the transboundary movement of e-waste become effective.

Attempts to solve the issue

"Amendments to Annexes II, VIII and IX to the Basel Convention" (Date: 2019/4/29-2019/5/10) (COP-14)

Adopted at the 14th meeting of the conference of parties to the Basel convention, this decision fundamentally changed the ruled governing the international trade of plastic waste and further addressed the issue of plastic dumping by extending the conventions control system. Which also meant that plastic could no longer be sent to another country without explicit permission of the importing country, also the resolution shifted the responsibility to exporting countries t ensure that this waste is managed in an environmentally sound manner.

UNEA: "End plastic pollution: Towards an international legally binding instrument" (Date: March 2, 2022) (Resolution Number: 5/14)

Adopted at the fifth session of the UN environment assembly, this resolution is an important landmark because it created the mandate for a global plastics treaty, which would address the plastic pollution from its source to its disposal. It attempted to solve the issue by also mandating a holistic, lifecycle approach. Which covered the entire lifecycle of the plastics and sampling regulating plastic production.

“Promoting zero-waste initiatives to advance the 2030 Agenda for Sustainable Development” (Date: December 14, 2022) (Resolution number: 77/161)

This resolution recognizes waste generation across all sectors, focusing on plastic pollution, it explicitly encourages Member states to implement zero waste initiatives at all levels. This also means promoting waste reduction and prevention, recycling and reusing. And so this resolution approaches the issue of plastic waste through a multi-pronged approach that aims to emphasize prevention and reduction. It establishes the international day of zero waste being March 30th, which aims to educate users and to raise global awareness, it also requests the establishment of an advisory board in order to collect and share strategies for waste management.

Possible Solutions

Subtopic 1:

To address the fast fashion industry when shifting to a circular economy, it is important to address both the producers and consumers. Governments can propose regulations that ensure

fashion industries are transparent with their production processes to ensure that environmental standards are being met. Globally, regulations on textile trade should be placed, to limit the export and import of unsustainable materials and products. This will promote the use of sustainable materials and support the growth of environmentally friendly fashion industries. Investment in textile recycling infrastructure and ensuring that it is accessible to everyone will also encourage proper disposal amongst consumers. Encouraging people to invest in higher quality clothes that are longer lasting will also shift the market towards more sustainable practices. Finally, supporting developing countries develop their textile infrastructure to aid them in manufacturing more sustainable textiles will create a positive shift in the global fashion market.

Subtopic 2:

Some solutions that could impacts E-waste is that governments could enact and enforce right to repair laws which would require manufacturers to provide consumers and independent repair ships with access to affordable spare parts, also countries should start taking into account actually prioritizing recycling these waste, and so by doing so despite the possible costs that might come with it this will have a large scale effect on the environment that could help decrease the waste emitted annually, also multiple points could be brought up suggesting that countries decrease in the electronics that they produce keeping in mind how much waste can they deal with annually, as to make sure that the numbers of this waste depletes countries should be ready and able to deal with these large amounts of waste while it also not serving as unfair to their economies and manufacturers. Also investing in increasing the lifespan of these devices could go a long way in decreasing the amount of waste that is produced. Furthermore, international cooperation is key in order to address the global nature of E-waste, facilitating the transfer of environmentally sound technologies and best practices for E-waste management across borders. Promoting consumer awareness about the environmental impacts of electronic consumption and encouraging responsible disposal and designed collection points and tack-back programs could be a crucial step needed for limiting E-waste, also expanding and fostering innovation in material science to be able to develop and create sustainable and recyclable components will significantly contribute to a long-term solution to the growing crisis.

Subtopic 3:

Now for addressing other issues like the solutions for the single use plastic and plastic

waste some ideas could be explored being firstly governments should have a combination of policies including bans on problematic and unnecessary plastics like bags straws and stirrers which can easily be replaced without harming the business owners and private sectors. These bans and restrictions could be a clear signal for both consumers and producers on the topic of plastic production and use and give them drive to try and find alternatives. Also investing in long term infrastructure and logistics could be essential for creating reuse systems, like reusable packaging and industrial cleaning facilities, and so to go further into detail what this solution tries to establish is that instead of throwing away a plastic bottle, reusing it by professionally cleaning it and refilled could be a smart option to not only decrease waste but to also stay away from being forced to recycle, as usually countries often try to avoid it due to it being sometimes very high in cost and also requires high amounts of energy. Moreover, promoting innovation in biodegradable and compostable materials can offer a variety of alternatives to applications where reuse is not practical. Encouraging businesses to adopt circular economy principles is crucial, and so many methods can be adopted such as a service model, which means that instead of buying and owning a product you pay for systems and services regarding the product, which would lead to less resources being wasted and longer lasting products, as it becomes the company's responsibility to repair and restore these products. Furthermore, adopting closed loop manufacturing which works in a way of using waste of products to create new products similar to the old ones, which could be beneficial in plastic use and even making paper as this means that less materials are being thrown out, but rather companies start using used raw materials capable of being reused, in making their new products. Both of these mechanisms are significant in order to limit the reliance on plastic. And so finally keeping in mind that international cooperation is key to address plastic pollution at a global scale and to be able to make a bigger impact on this growing crisis.

Guiding Questions

1. What is a circular economy and how is it different from how we use things now?
2. Why is plastic waste a big problem?
3. What are single use plastics?

4. What are the possible long-term effects of plastic waste?
5. What are simple ways countries are trying to avoid using plastic?
6. How can we get more people to recycle and reuse plastic and if so, have countries already used methods in doing so?
7. How can nature-based solutions help with waste and climate change?
8. Who are the countries that advocate the use of plastic and what are the reasons that make them turn to the use of plastic despite its effect?
9. What are some advantages that circular economies would have outside of their effect on reducing plastic pollution?

Appendix

- https://unfccc.int/process-and-meetings/the-paris-agreement
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Contact Information

President: Aya Zoumot

aya_zoumot@abs.edu.jo

+962795486072

Chair: Khader Abu Khader

khader_abukhader@abs.edu.jo

+962792229228