

# HSINMUN XIV 2018

**Committee:** Advisory Panel (APQ)

**Expert Chair:** Alex Chuang (International Bilingual School at Hsinchu-Science-Park)

**Issue: (902) The question of how to best promote responsible consumption and production of energy (SDG 12 and 7)**

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## General Overview of the Topic

In 2018, the rate of natural resource consumption is faster than ever. The demand for electricity, agricultural production, water usage, etc. is growing at an unprecedented speed. Even if our current rate of consumption remains constant, by UN's estimation, we as a species would need three times of Earth's current amount of natural resources in order to maintain our current lifestyles by 2050. However, the United Nations Environment Programme (UNEP) estimates that by 2050, humans' consumption of natural gas, mineral ores, fossil fuels, and biomass would reach 140 billion ton per year, three times of today's rate of consumption. Simply put, our speed of consumption cannot sustain ourselves in the near future. Evidently, Earth does not naturally multiply, and change is in order.

While some may desperately scrounge for alternative energy sources as our current ones are slowly depleting, we as a global community must reexamine our relationship between energy production and consumption. We may be full of resources, but we have yet to learn to be resourceful - a large part of the issue is a result of the misallocation and wasteful consumption of resources. Although the demand for energy cannot be reduced, the production and processing of energy could be made less wasteful. Unsustainable practices of energy production and consumption, such as heavily relying on nonrenewable resources like fossil fuels or water-consuming agricultural farming also show ties with other environmental issues such as pollution, climate change, loss of biodiversity, and resource depletion. Further, many resources are often controlled by certain countries and groups while other parts of the world do not have equal access to them, reflecting an issue distribution. At its core, the problem boils down to our efficiency in utilizing and distributing energy sources and their continuous sustainable development, which ties to the UN Sustainable Development Goals number seven and number twelve (see more at Background of the Topic).

Yet despite the recognition of the issue by the global community, few measures that have been made prove to be effective toward the alleviation of the problem of unsustainable energy production and consumption. In the context of a growing global population, micromanagement of businesses may prove to be inadequate rather than reforming behavioral changes of consumers and long-term intergovernmental collaboration to establish new standards and investing in lasting programmes.

With certain feasibility in mind, delegates should consider incentives of consumers, governmental executive abilities, international collaborations, and do not hesitate to be creative in their approach to the issue.

## **Definition of Key Terms**

### ***Consumption***

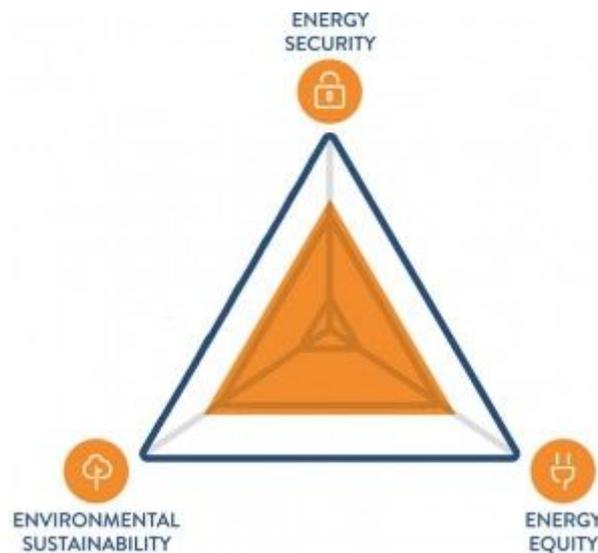
Beyond its dictionary definition as the depletion of a resource, consumption relates to the energy depletion behind every social-economic movement within society. It could be the cost of energy surrounding the production of goods and throughout its product life-cycle, such as its manufacturing, advertising, distribution, usage of energy, and recycling etc. In regards to the issue at hand, it is easier to measure energy consumption through a macroscopic scale - measuring the energy per capita (average energy usage per person) to access each nation's consumption. This allows for a quick estimate to the amount of energy accessible to an average citizen, accounting for electricity, light, fuel, food, etc. However, while energy per capita can provide a general implication for the national average, it is equally important to monitor and consider consumption at a more commercial and local level. Factors such as nation-specific consumer habits, corporate versus citizen's usage of energy, and consumption to waste efficiency should be considered to see how they influence the bigger picture of consumption in a specific nation. Nations can conduct market research or common household surveys to get a better sense about these more nuanced aspects of consumption.

### ***"Responsible" production of energy***

Under the definition from the World Energy Council, the meaning of sustainable production of energy should follow the "energy trilemma", or a set of three core goals that nations should adhere to in whatever mean of energy production they adopt. The three dimensions include energy security, energy equity, and environmental

sustainability. Energy security relates to national security as well as resource availability, the safety in storing and processing a specific energy source. Energy Equity considers the humanitarian aspect and relates to energy cost and accessibility to the public. Environmental Sustainability relates to the impact dealt to the environment, whether it proves itself a sustainable way of energy production further into the future and whether it respects environmental integrity. Together, these three goals constitute a complex web of social, economic, and environmental factors that accesses a sustainability of an energy production source.

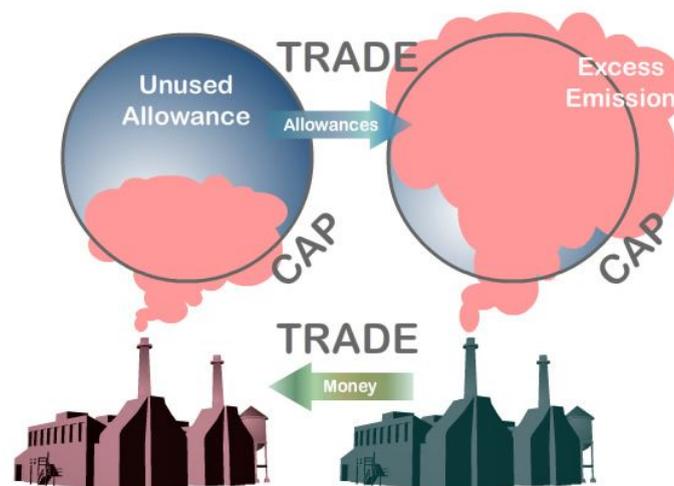
The Energy Trilemma Index is a great tool to reference each nation's ranking in regards to the three aspects of sustainable energy production. The higher the ranking, the higher a specific nation scores towards responsible energy production. Using the visual representation of the three aspects such as the one below, delegates can better navigate which branch of the three should his/her country focus to improve and achieve a more responsible mean of energy production.



### ***Cap and Trade System***

The Cap and Trade system is an economic scheme adopted by certain countries that offers economic incentives to reduce harmful environmental impacts in the process of production of goods. The “Cap” refers to an environmental standard or a limit which the government places regarding the emission of a particular substance across an industry. The government then splits up their total amount of permitted emission into allowances that are distributed and traded among businesses, thus the “Trade” aspect. As time passes, the government would reduce the amount of “allowances”, or total

permission to emission given out, increasing the competition within the market of the industry to bid for the diminishing amounts of allowances. This provides economic incentives for businesses to become more efficient and leave less ecological footprints over time while allowing the market to operate freely and cost effectively. A possible drawback about this system is how it does not immediately reduce pollution and does not necessarily grant success in sustainability overtime. Essentially, the system is based on creating a new market out of pollution credits and allowances, so whether the government can successfully reduce these emissions is hard to predict.



## Background of the Topic

In September 2015, world leaders from over 190 countries agreed upon a set of 17 goals to push for sustainability while respecting the integrity of social progress, economic growth, and environmental protection. These leaders wished to make drastic progress towards these goals by the year 2030. These new Sustainable Development Goals (SDGs) strive to build on the success of its predecessor, the Millennium Development Goals (MDGs), established in 2001. The MDGs were set out to be achieved by 2015, focusing on ending all extreme poverty and abridging the distance between countries to encourage collaboration and interconnectedness. Furthering the goals of the MDGs in the context of a rapidly growing international population, the SDGs aim to “end poverty, protect the planet and ensure that all people enjoy peace and prosperity”. The SDGs invite all nations, developed or developing, to elevate the quality of living for all of their citizens - granting basic education, access to resources and energy, and a safe and sustainable environment to live in.

Specifically, goals number seven and twelve relates more to the issue at hand. Goal seven is to achieve “affordable clean energy”, emphasizing the equal access of cheaply produced,

widely available access to energy and electricity, especially for developing countries. Energy is a key to progress by providing light, food, technology, and warmth. Equally important is the “clean” aspect, leaving very little ecological footprints in the production. The global economy today is still largely dependant on the burning of fossil fuel as an energy source, which has been made relatively cheap, yet is depletable and leaves significant carbon footprint behind that contributes to climate change. Therefore, our global community must also slowly transition into investing, developing, and relying on more renewable, eco-friendly energy sources in the near future. (eg. solar, wind, thermal energy sources)

Goal twelve is achieving responsible consumption and production, emphasizing changing the nature of modern consumption and production to reduce the ecological footprint. With the main objective of low cost, businesses around the world compromise in regards to the environment when producing their products, and consumers further encourage these businesses by purchasing and supporting their products. Practices such as agricultural irrigation and the unsustainable usages of plastic epitomize the actions goal twelve wish to reduce. Supplies are going to waste on the end of more economically developed countries (MEDCs), while some people live without meeting their basic access to food and water in less economically developed countries (LEDCs). Goal twelve, like its logo that symbolizes infinity, strive to create sustainability between producers and consumers through minimizing negative environmental effects and fostering efficiency in our energy use.

## **Major Countries and Organizations Involved and Their Positions**

### ***China***

As the manufacturing giant it is, China’s production and exportation of goods constitute 26% of its GDP. As much as the world sees the “Made in China” label on their products, China is fueled for rapid economic growth. As China’s average standard of living increases and society prospers from their rise in manufacturing, simultaneously, their natural resources and environmental integrity are put into question. The rise of urbanization and city renovation has created more construction waste than ever, yet China’s recycling rate falls to an all-time low of just below 10 percent (Japan 20%, South Korea 59%). China’s environmental issues extends to make a direct impact on citizens daily lives: take the capital Beijing for example, where the atmospheric particulate matter (air pollutants) commonly reaches 600 micrograms per cubic meter, which is 24 times the safe standard of 25 micrograms provided by the World Health Organization. Therefore, China is now a strong proponent to the goal of sustainable production to minimize the byproducts of concentrated manufacturing such as chemical pollutants in

the atmosphere or water sources. With China's long-standing battle with environmental issues, the government has since been eagerly promoting green development and concepts such as "ecological civilisation" and "eco-marxism". These concepts reexamine the environmental destruction exacerbated by the pursuit of capitalism and push for building a co-existing harmonious relationship between man and nature, which may include granting legal rights to nature, shifting resources ownerships away from corporates, and valuing nature's integrity over wealth and profit.

## *Japan*

Japan's consumption rate has been low relative to other more economically developed countries: with its recycling rate of 20.6% of all raw materials consumed (Japanese Ministry of Environment) and 9.47 tons of raw material used per capita in 2013. The situation of Japan is an example of positive promotion of sustainable production and consumption through a healthy producer-consumer dynamic and citizen education. The government promotes a strong sense of unity and duty upon citizens to help minimize environmental impacts through common education and advertisements. Many industries from Japan also do not hesitate to take initiative towards sustainability. For example, many tourism agencies collaborate to promote sustainable tourism, maximizing the usage of public transportation and minimizing trash and waste production. Other major tech companies such as Sony's "Road to Zero" campaign and Toyota's "Environmental Challenge 2050" set out to eliminate all environmental footprints in the future.

However, the country faces new challenges after its 2011 Fukushima earthquake and nuclear meltdown, pushing the country to search for newer, safer means of clean energy production.

## *France*

As one of the permanent members of the UN security council and a member of the more economically developed countries, France promotes policies towards achieving SDG numbers seven and twelve. In France's national report for the 18th session of the United Nations Commission on Sustainable Development, they updated several of their implementations towards sustainable consumption. France's very own Grenelle Environment Green Table is an open debate that invites many national and local officials to attend, aiming to unify a position on particular environmental issues. Further, French officials highlight how the broad dissemination of information is key to

altering consumer habits towards higher sustainability. Thus, the findings and discussions the the Grenelle Table along with other relevant information is available for free access to the public. France further reinforces public promotions by adopting large scale awareness campaigns and collaborating between the Ministry of Energy, Ecology, Sustainable Development, and the Sea (MEEDDM) and France's National Environment and Energy Control Agency (ADEME). These campaigns raise awareness towards themes of eco-friendly consumption behaviors via TV, radios, and written press promotions. The same inviting spirit towards environmental sustainability of France is exemplified in the Paris Agreement of 2015, where nations congregated officially for the first time to tackle climate change. The participating 196 member states came to a close consensus about setting new goals about limiting climate change in the context of the next century. France played an important role as a facilitator and host for the conference and contributed to its speedy ratification in the following year (2016).

### *Other P-5 Nations*

Much like France, other permanent members of UN (USA, UK, Russia) are also in the lead in regards to experimenting and tackling sustainable consumption and production. The P-5s are among the most active in the Organisation for Economic Co-operation and Development (OECD) countries to constantly update on their newest implementation to the sustainable development platform in the UN. These nations are also the most inventive and extensive in their approaches towards the issue, combining multiple elements of social awareness, governmental implementations, and education. Their governments strive to understand consumer behaviours and biases and initialize new campaigns that would instill sustainable habits into the market. (Ex: The United Kingdom supports the climate change communication initiative that uses the latest multimedia methods to reach out to the public, such as interactive websites, films, highly visited blogs etc.) Other strategies include enumerating new environmental standards and providing economic subsidies and incentives towards corporate cooperation. (Ex: Russia strives to reduce their use of chemicals in agricultural practices and encourage combination of social/economic resources to traditional agriculture to increase eco-friendliness and profitability. The United States also has several laws regarding the mandatory proper labelling on processed food with tags like organic and possible nutrient-linked diseases (not including genetically modified organisms). These actions holistically hope to institutionalize sustainable consumption and production by creating a new norm between corporations and the general consumer public for other countries

to follow.

A side note regarding the US is its recent announcement by president Trump in 2017 to cease all of its participation in the Paris Agreement of 2016. As a part of one of his promises in his presidential campaign, Trump has stated that the Paris Agreement impedes economic growth and puts the nation under permanent disadvantage. However, this action cannot be taken into effect until at least November 4th of 2020 as a part of the binding agreement in Article 28. Therefore, as of now, the United States is still under the effect of the Paris Agreement.

## ***OPEC***

OPEC, or the Organization of the Petroleum Exporting Countries is an international cartel of nations with the purpose to “coordinate and unify” the petroleum market among its member states. As OPEC’s 14 member states control 80% of the world’s crude oil resources, (with over 65% in the Middle East) OPEC can greatly influence the global oil trade market. OPEC can dramatically control global prices by deciding the oil production (Barrels per Day) among its members and limit the supply of oil available to the world. OPEC, like many other monopolies and oligopolies in energy industries, holds great power over their market and can manipulate prices to their best interests. A sudden rise in oil prices can stifle economic growth, as oil as a fuel is crucial to so much of the production and transportation of commodities, which in turn adds to the cost of other goods and resources. Generally, OPEC supports sustainable production goals, emphasizing that stability is key to sustainability as stated by Mohammad Sanusi Barkindo, OPEC Secretary General. As seen in 2016, OPEC members agreed with non-OPEC member states to reduce oil production by 1.2 million barrels per day to 32.5 million B/D, regulating the falling market prices and reducing global reliance on petroleum. However, OPEC would nevertheless consider the benefit of its own member as a top priority.

## ***UNDP***

The UNDP, or the United Nations Development Programme, is arguably the greatest proponent for the topic of promoting responsible consumption and production. The UNDP derives its agenda and funding from the Sustainable Development Goals since 2016 (and until 2030), and they continue to guide the 170+ countries involved in the SDGs to better integrate them into their national agenda and plans. As the largest development agency under the UN, UNDP remains positive towards achieving the SDGs

by 2030 with their extensive collaborations with inter-governmental agencies, past experience with MDGs, and expertise with policies.

## **Timeline of Events**

**June 1992** – Publication of the Agenda 21, a comprehensive plan towards global sustainable development, presented at the 1992 UN Earth Summit in Rio de Janeiro

**1994** – Hosting of the Oslo Symposium, defining sustainable consumption and production as “the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations”

**December 1999** – UN General Assembly incorporates sustainable consumption into the United Nations Guidelines on Consumer Protection in the 54th session

**September 2000** - The UN Millennium Summit and the establishment of the Millennium Development Goals

**2002** - The Johannesburg plan of implementation introduces the the development of a 10-year framework of programmes (10YFP) towards more sustainable consumption and production, shifting corporate business patterns and cycles towards eco-friendliness

**September 2015** – The UN Sustainable Development Summit and the establishment of the Sustainable Development Goals

**April 2016** - The ratification of the Paris Agreement at the UN headquarter in New York

## **Important, Relevant Documents**

- *Agenda 21*: A comprehensive plan towards achieving sustainable development globally, nationally, and locally introduced at the UNCED (United Nations Conference on Environment and Development at Rio 1992)

<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

- *Policies to encourage sustainable consumption*: An extensive report published by the European Commission after their congregation

[http://ec.europa.eu/environment/eussd/pdf/report\\_22082012.pdf](http://ec.europa.eu/environment/eussd/pdf/report_22082012.pdf)

- *Resolution approved by the UN General Assembly in 2015* : Further confirms the importance of Agenda 21 and the 10-year framework of programmes towards sustainability. Encourages the adoption of previous drafted resolutions and assures full commitment towards MDGs, SDGs, Agenda 21, and 10-year framework goals

[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/70/472/Add.1&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/70/472/Add.1&Lang=E)

- *Progress report on the 10-year framework of programmes on sustainable consumption and production patterns by UN Economic and Social Council*: Review the progress made over the past few years towards national governments adopting sustainable consumption and production patterns and reassures for future progress

[http://www.un.org/ga/search/view\\_doc.asp?symbol=E/2015/56&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=E/2015/56&Lang=E)

## **Previous Attempted Solutions: Analysis of Their Failure/Success**

### ***Governmental Subsidies and Taxations***

This is the most widely adopted solution as it is the easiest and most straightforward way to just stop carbon emission and other pollution from wherever it's produced. Governments like many members of the OECD places limits and environmental standards (that may or may not become stricter overtime) and apply subsidies/penalties towards corporation that adhere/violate them. For example, taxes on fuel or electricity could be placed to discourage over-consumption while subsidies could be offered to companies whose low ecological emissions could serve to be a great role model. For the most part, such monetary incentives and taxes are effective in forcing most businesses to following governmental standards to a certain degree, as many of these regulations are already in place in most countries and the strictness of these regulations are difficult to be tampered with. These monetary incentives are only useful

up to a limit as government could not impose unreasonable amounts of taxes or rewards enough to deter all unsustainable consumptions and productions. Furthermore, government may be more willing to encourage businesses that help stimulate economic growth than discourage everyone with high taxes. Therefore, the priority of where each member state should spend their monetary resources, whether it be offering them as rewards for following environmental standards or investing them in market growth, should be considered and could very well render this solution as less effective. In summary, member states should be looking towards more focused taxation strategies (see focused fining) and if not towards other means of governmental control.

### *Raising Awareness*

This solution, although common, is varied in its implementation by each member state with many degrees to its effectiveness. The main idea is that a large portion of the issue with unsustainable consumption and production is derived from unsustainable consumer habits which in turn encourage more unsustainable business markets. Ideally, raising awareness would instill healthy consumer habits such purchasing from sustainable sources, reduction of total waste produced, and well as recycling usages from purchased goods. This could be done by public media such as TV or radio PSAs, internet promotion, posters and physical advertisements, etc. One important issue with raising awareness is that although it may be easy to implement the dissemination of these information, their effects are harder to measure as it is difficult to predict how the public perceives and internalizes this information. Further, consumer habits are only a part of the entire issue of unsustainability and affecting the public seem to be more effective in MEDCs than LEDCs due to a larger market of more conscious consumers. With more access to resources and a wider need in the consumer market, MEDCs tend to possess larger consumer markets that have a wider variety of products and qualities, including some sustainably produced and others not. With access to more financial resources, consumers in MEDCs can more actively choose the product that suits their needs, without necessarily having to prioritize a lower price. This is where education and ecological awareness can successfully persuade a consumer in making the more sustainable choice, with their better access to a wider variety of products. Meanwhile, a smaller market with less varied products exist in LEDCs, making their consumers less likely to be able access to cheap sustainable goods. For example, the prevalence of a market that sells sustainable olive oil would be larger in the United States than Afghanistan; so although one could raise the awareness for consumers to purchase ethically produced sustainable olive oil, the limited access to a big market for Afghanistan consumers would render this solution less effective.

## **Possible Solutions**

### ***Cap and Trade System***

As mentioned previously in the section of definition of Key Terms, a cap and trade system could allow for the minimum amount of government spending towards healthy competition for emission allowances among corporations. Overtime, as the allowances are cut back by the government, only the stronger competitors could gain them and the overall emission of harmful chemicals is effectively reduced. Currently, the Cap and Trade System is adopted in many countries across the European Union and the United States, effectively reducing carbon emission and chemical residue released into the air. However, the Cap and Trade System is not infallible, as it can only target so many industries and regulate the emission of certain substances. In other fields that are not sustainable in their production and not their emission of chemicals (such as agricultural practices that heavily relies on water or the production of plastic materials), the Cap and Trade system fall short to regulate their exploitation of resources or incorporation of unsustainable ingredients. Another argument against the Cap and Trade system is the fact that it may increase the stress on the taxpayers' money overtime. As allowances dwindle, the high competition of the market leads to corporations to find other ways to balance out their elevated cost - by increasing the price of their product as well. In the most common case, this would be reflected in a higher electricity or water bill to citizens.

### ***Proper Product Labelling***

Proper product labelling is another alternative strategy adopted by few countries. Pivoting on the fact that unsustainably-produced products could give consumers a negative implication about its usages, the market of these unsustainable goods is such reduced. In nations such as Germany for example, electronic appliances sold are accompanied by a energy performance label. This causes stress toward companies whose products are less energy efficient and pushes them to make more appealing product for consumers in terms of higher performance with a lower energy cost. This labelling system, coupled with a focused fining strategy mentioned before, proves an effective combination for producers to make more efficient products and consumers to purchase more long-term cost-friendly products with the cost of energy taken into account. Proper labelling on agricultural products helps too, as products that may be cheap in price can appear less appealing due to the negative suggestions of chemical or pesticide usage in the its production. With higher standards and inspection of these

goods as adopted by the US, produce that is labelled organic or sustainable can also appear more appealing to buyers due to their safety assurance.

### ***Focused Fining***

In contrast to general taxations on carbon emissions or energy waste, focused fining strategies may be more effective in discouraging specific consumer behaviors. For example, an overall carbon emission tax set on automobiles may be too harsh on the general public and it penalizes them for one of their basic daily lifestyle needs. As a solution many European Countries (UK most notably) adopted congestion charges that would charge cars that are driving into traffic dense areas. Such is a more focused fining scheme that is more effective in terms of reducing carbon emission where its most easily avoided (during unnecessary congestion) and alleviating traffic as well. In London, where the congestion charges has been placed in designated congestion zones since 2003, greenhouse gases emitted from this areas has been decreased by 16% while traffic is reduced by 26%. Other strategies involve finding specific production of wastes; for example South Korea adopted a by volume waste fine via tax on plastic bag, yielding 14% decrease in municipal waste and a 50% increase in recycling in the last decade. It is ingenious focused fines like these that target a very specific consumer habit and impact a greater change without compromising the general lifestyle of the public. A potential shortcoming to note of this solution is the difficulty to establish such specific fining programs to monitor its thorough implementation, basically taking into consideration of all the extra resources invested for such a narrow program.

### ***Local Involvement***

Lastly, the government could encourage local involvement investing in sustainable implementation of infrastructure or subsidizing energy-conserving devices. For example, local governments can invest in the continually growing market of solar batteries and panels to be installed in local communities. Despite their current high costs, solar cells could be further developed in the near future and can provide a degree of energy self-sufficiency in the long-run, reducing electricity costs. Other durable renewable energy sources could be built, such as wind mills, water wheels/gates etc. Local governments can also subsidize manufacturers that produces energy efficient products, such as LED lights or eco-friendly cars. They can also encourage the usage and implement sustainable transportation to reduce carbon emission and energy waste, such as bike stations or efficient public transportations. Local government could further assist in the establishment micro-enterprises that improve access to local markets. This reduces the overall cost in the production and distribution of the product and promotes

sustainability; however, challenges such as proper incentives for collaborations and yielding short-term results may arise. Overall, the localization of businesses and investing on energy conserving products or sustainable energy sources.

### ***Anti-Corruption Measures***

As much as governments and citizens can engage in sustainability reforms, all efforts would be in vain if corporate companies and various governments do not maintain transparency and fairness. Therefore, it may be useful to consider anti-corruption measures in reinforcing the newly placed sustainable implementations. Potential corruption such as bribery or hidden transactions can benefit personal interests in the short term, but may obstruct market growth and the goal of sustainability in the long term. Measures against such corruption may include but are not limited to implementing preventive policies, establishing anti-corruption agencies, encouraging transparency in campaigns, etc. Delegates are welcomed to be innovative in their approach in this specific aspect of potential solution.

### **Bibliography/Plagiarism Checklist**

“World Energy in 4 Minutes.” YouTube, 2 July 2014,  
<<https://youtu.be/90I0Gl-5ggs>>

“World Energy Council.” Hydropower,  
<[www.worldenergy.org/news-and-media/news/world-energy-trilemma-insights/](http://www.worldenergy.org/news-and-media/news/world-energy-trilemma-insights/)>

“The Problem of Consumption.” MIT Press Journals,  
<<https://www.mitpressjournals.org/doi/10.1162/glep.2010.10.2.1>>

“Humanity's Voracious Consumption of Natural Resources Unsustainable – UN Report | UN News.” United Nations, United Nations,  
<<https://news.un.org/en/story/2011/05/374942>>

“United Nations Sustainable Development Agenda.” United Nations, United Nations,  
<<https://www.un.org/sustainabledevelopment/development-agenda/>>

“What Is Energy Security?” s: Global Carbon Dioxide Emissions, 1980-2016,  
<[www.iea.org/topics/energysecurity/whatisenergysecurity/](http://www.iea.org/topics/energysecurity/whatisenergysecurity/)>

“How Cap and Trade Works.” Environmental Defense Fund,  
<<https://www.edf.org/climate/how-cap-and-trade-works>>

“Unsustainable Consumption – the Mother of All Environmental Issues?” European Environment Agency, 15 July 2016,  
<<https://www.eea.europa.eu/highlights/unsustainable-consumption-2013-the-mother>>

“SDG 12: Responsible Consumption and Production.” United Nations, United Nations,  
<<http://in.one.un.org/page/sustainable-development-goals/sdg-12/>>

“Goal 7: Affordable and Clean Energy.” UNDP,  
<<http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-7-affordable-and-clean-energy.html>>

“Goal 12: Responsible Consumption and Production.” UNDP,  
<<http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-12-responsible-consumption-and-production.html>>

“12 RESPONSIBLE CONSUMPTION & PRODUCTION | JFS Japan for Sustainability.” JFS Japan for Sustainability,  
<[https://www.japanfs.org/en/projects/sdgs/sdgs\\_id035493.html](https://www.japanfs.org/en/projects/sdgs/sdgs_id035493.html)>

“China Is Keen on Promoting Sustainable Development.” D+C,  
<<https://www.dandc.eu/en/article/china-keen-promoting-sustainable-development>>

Halpin, James. “10 Facts About China's Pollution Problem That Will Make Your Skin Crawl.” Thought Catalog, Thought Catalog, 19 Feb. 2016,  
<<https://thoughtcatalog.com/james-halpin/2016/02/10-facts-about-chinas-pollution-problem-that-will-make-your-skin-crawl/>>

“The Same, But Different: Some Thoughts on Japanese Business.” Sustainablebrands.com,  
<[www.sustainablebrands.com/news\\_and\\_views/leadership/andrew\\_winston/same\\_different\\_some\\_thoughts\\_japanese\\_business](http://www.sustainablebrands.com/news_and_views/leadership/andrew_winston/same_different_some_thoughts_japanese_business). >

“Paris Agreement on Climate Change: US Withdraws as Trump Calls It 'Unfair'.” Fox News, FOX News Network,  
<[www.foxnews.com/politics/2017/06/01/trump-u-s-to-withdraw-from-paris-climate-pact-calls-it-unfair-for-america.html](http://www.foxnews.com/politics/2017/06/01/trump-u-s-to-withdraw-from-paris-climate-pact-calls-it-unfair-for-america.html)>

“OPEC Today: Influence on Oil Markets May Decrease But Role Still Important.” TWA Article Gas Hydrates: Where And How To Look for Them,  
<<https://www.spe.org/en/print-article/?art=2789>>

“How Does OPEC Control the Price of Oil?” NewsBlaze News, 17 Nov. 2017,  
<[https://newsblaze.com/business/how-does-opec-control-the-price-of-oil\\_91072/](https://newsblaze.com/business/how-does-opec-control-the-price-of-oil_91072/)>

“THE Future of Energy: Towards a Sustainable Development.” OPEC : Iran,  
<[http://www.opec.org/opec\\_web/en/3649.htm](http://www.opec.org/opec_web/en/3649.htm)>

France. “France’s National Report for the 18th Session of the United Nations Commission on Sustainable Development (CSD-18).” United Nations,  
<[http://www.un.org/esa/dsd/dsd\\_aofw\\_ni/ni\\_pdfs/NationalReports/france/Full\\_text.p](http://www.un.org/esa/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/france/Full_text.p)>

“Sustainable Development Goals.” UNDP,  
<<http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>>

“Promoting Sustainable Consumption GOOD PRACTICES IN OECD COUNTRIES.” Oecd,  
<<https://www.oecd.org/greengrowth/40317373.pdf>>

Zhuchenko, Alexander. “PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT IN RUSSIA: STRENGTHENING THE ROLE OF FARMERS .”  
<<http://www.eolss.net/sample-chapters/c16/E1-56-32.pdf>>

“Agenda 21 .. Sustainable Development Knowledge Platform.” United Nations, United Nations,  
<<https://sustainabledevelopment.un.org/outcomedocuments/agenda21>>

“Sustainable Consumption and Production .. Sustainable Development Knowledge Platform.” United Nations, United Nations  
<<https://sustainabledevelopment.un.org/topics/sustainableconsumptionandproduction#>>

“Energy Trilemma.” Google Search, Google,  
<<http://www.solidarity-us.org/files/CapAndTrade.jpg>>

“Cap and Trade.” Google Search, Google,  
<<http://www.solidarity-us.org/files/CapAndTrade.jpg>>

“London's Congestion Charge.” Centre for Public Impact (CPI),  
<[www.centreforpublicimpact.org/case-study/demand-management-for-roads-in-london/](http://www.centreforpublicimpact.org/case-study/demand-management-for-roads-in-london/)>

“Anti-Corruption | UN Global Compact.” The Ten Principles | UN Global Compact,  
<<https://www.unglobalcompact.org/what-is-gc/our-work/governance/anti-corruption>>

McCarthy, Niall. “The Countries Winning The Recycling Race [Infographic].” Forbes, Forbes Magazine, 4 Mar. 2016,  
<[www.forbes.com/sites/niallmccarthy/2016/03/04/the-countries-winning-the-recycling-race-infographic/#7db23e382b3d](http://www.forbes.com/sites/niallmccarthy/2016/03/04/the-countries-winning-the-recycling-race-infographic/#7db23e382b3d)>

马玉佳 . “China to Increase Recycling Rate of Construction Waste.” Hydrogen Fuel Cells May Hurt Ozone Layer,

<[www.china.org.cn/china/2018-02/24/content\\_50594391.htm](http://www.china.org.cn/china/2018-02/24/content_50594391.htm).>

“Ecological Marxism.” Green Criminology,

<<http://greencriminology.org/glossary/ecological-marxism/>. >

Ecowatch\_contributor. “What Does China's 'Ecological Civilization' Mean for Humanity's Future?” EcoWatch, EcoWatch, 26 Apr. 2018,

<[www.ecowatch.com/china-ecological-civilization-2532760301.html](http://www.ecowatch.com/china-ecological-civilization-2532760301.html). >

Briggs, Helen. “What Is in the Paris Climate Agreement?” BBC News, BBC, 31 May 2017,

<[www.bbc.com/news/science-environment-35073297](http://www.bbc.com/news/science-environment-35073297). >

“What Are the Possible Causes and Consequences of Higher Oil Prices on the Overall Economy?” Federal Reserve Bank of San Francisco, Federal Reserve Bank of San Francisco, 1 Nov. 2007,

<[www.frbsf.org/education/publications/doctor-econ/2007/november/oil-prices-impact-economy/](http://www.frbsf.org/education/publications/doctor-econ/2007/november/oil-prices-impact-economy/).>