

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

It all started back in 1959, when a <sup>1</sup>Swedish engineer Sten Gustaf Thulin invented a plastic bag in the urgency to replace the paper bag and other alternatives that were mostly cost deforestation and environmental concerns. After several decades of the production and usage of plastic bags and other plastic based products, such an ironic situation happened. Plastic that was initially introduced to protect our environment, ironically hinder us to protect our environment by the improper management of the plastic wastes which indeed impact not only our environment but also the animals as well as us human beings. Plastics are a product with a very long life that most likely would remain over decades. One of the reasons behind the enormous amount of plastic waste produced all around the world is because of the affordable price and low quality of the substances leading to large numbers of plastic products only being used as disposable usage.<sup>2</sup> If we compare to other countries with similar populations such as India, Indonesia can be easily compared in terms of the management of plastic waste by comparing the amount of plastic waste entering the ocean annually. When India only reaches around 0.2 million tons in a year, Indonesia could reach 1.29 million tons annually which is more than five

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<sup>1</sup>"Apparently, Plastic Bags Were Invented To Save The Planet, But Then We Got Lazy," *Bored Panda*, [https://www.boredpanda.com/plastic-bags-supposed-to-help-save-planet/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=organic](https://www.boredpanda.com/plastic-bags-supposed-to-help-save-planet/?utm_source=google&utm_medium=organic&utm_campaign=organic) (Accessed September 10, 2020)

<sup>2</sup>Rick Leblanc, "How Long Will It Take That Bag of Trash to Decompose in a Landfill?," *The Balance Small Business*, October 22, 2019, <https://www.thebalancesmb.com/how-long-does-it-take-garbage-to-decompose-2878033> (Accessed September 10, 2020)

times of India with a similar population. It is clear that Indonesia needs to take action on the management of plastic waste especially as the second largest plastic waste producing country in the world after China.<sup>3</sup>

It is an issue because people are exposed to chemicals from plastic numerous times a day by the water, air, food, and other consumer products that we consume in our daily lives. Such chemicals that are absorbed by our bodies would affect hormones and other health issues to human organisms. Plastic that being buried in land contaminates the groundwater with harmful substances and the one being incinerated produces toxic gas to our atmosphere leading to air pollution.<sup>4</sup> Not only that, great numbers of plastic waste also being dumped to our ocean increases the number of<sup>5</sup> floating plastic waste every year which harms various sea species and disrupting habitats. All of these possibilities for sure will poison our environment and wildlife which certainly will affect human beings as well.<sup>6</sup>

Such issues have been constantly aware of us and it is true that various<sup>7</sup> activities around the world have been implemented such as reducing single-use plastic products like straws, cups, spoons, forks, use of reusable bags, reduce

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<sup>3</sup>Taufan Adharsyah, "Sebegini Parah Ternyata Masalah Sampah Plastik di Indonesia," *CNBC Indonesia*, July 21, 2019, <https://www.cnbcindonesia.com/lifestyle/20190721140139-33-86420/sebegini-parah-ternyata-masalah-sampah-plastik-di-indonesia> (Accessed September 10, 2020)

<sup>4</sup>Jessica A. Knoblauch, "The environmental toll of plastics," *EHN*, <https://www.ehn.org/plastic-environmental-impact-2501923191.html> (Accessed September 12, 2020).

<sup>5</sup>Chelsea Ritschel, "This is how much plastic is in the ocean," *The Independent*, <https://www.independent.co.uk/life-style/plastic-bad-environment-why-ocean-pollution-how-much-single-use-facts-recycling-a8309311.html> (Accessed September 12, 2020)

<sup>6</sup>Laura Parker, "The world's plastic pollution crisis explained," *National Geographic*, June 07, 2019, <https://www.nationalgeographic.com/environment/habitats/plastic-pollution/> (Accessed September 12, 2020)

<sup>7</sup>"Tips to Use Less Plastic," *Green Education Foundation*, <http://www.greeneducationfoundation.org/nationalgreenweeksub/waste-reduction-tips/tips-to-use-less-plastic.html> (Accessed September 12, 2020)

unnecessary packaging, and many more. There are also various environmental institutions or organizations to protect our environment such as World Wide Fund for Nature (WWF), Greenpeace, National Wildlife Federation, United Nation Environment Program and many more. However, by the active aid of such an environmental organization, plastic waste is still standing as a global issue that cannot be solved only by the contribution of certain countries. Yet, it does not mean we cannot contribute at all as a country to solve the concern of plastic waste. It is certainly important to be able to manage our waste of plastic by yourself first, especially being one of the largest plastic waste producing countries in the world. It is necessary to be responsible in protecting not only the environment of the country but more to a global scale.<sup>8</sup>

Throughout the thesis, it would provide an explanation regarding the correlation of plastic waste and economy of a country with a case analysis of Indonesia. Indonesia being called as the second largest plastic waste producing country in the world is no longer an unfamiliar calling. Production of plastic waste around 175,000 tons per day and nearly 65 million tons per year, rated Indonesia to be the second largest producing country in terms of plastic waste after China being the largest. In fact around 4% of world oil production are being exploited to produce plastics and an addition to a similar amount being spent as the source of energy for the process,<sup>9</sup> it is very easy to conclude human beings truly rely on plastic especially

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<sup>8</sup>Greg Seaman "Where to Donate? 10 High-Impact Environmental Charities with Integrity," *Eartheasy*, December 04, 2014, <https://learn.eartheasy.com/articles/where-to-donate-10-high-impact-environmental-charities-with-integrity/> (Accessed September 13, 2020)

<sup>9</sup>"Indonesia Menjadi Produsen Sampah Plastik Terbesar Kedua di Dunia, Ini Respon Karya Anak Bangsa," *Tribunnews.com*, November 05, 2019,

in today's society. We are able to observe that the issue does not stop only until the management of the plastic waste itself, yet also there are needs of new sustainable and reliable energy sources in terms of the production of such plastic products and perhaps further towards other manufacturing industries or other commercial needs also. Energy has always been an important factor in every single business because it is one core factor that is necessary to run any kind of economic activity in today's era.<sup>10</sup> So it is extremely important to be effective and efficient to find a way of producing sustainable, as well as environment friendly energy sources to be able to reach economic development at the same time contributing to solving the global environment issues.<sup>11</sup>

Being the second largest plastic waste producing country, it also can be seen as a large opportunity for Indonesia to contribute to solving such global environmental issues especially in the plastic waste area. Suppose Indonesia could manage the enormous amount of plastic waste into something efficient, environment friendly, as well as economically productive, the treat of such large number of waste will oppositely turn into a chance for Indonesia to step ahead in solving one of the most critical global concern that need to be taken care of not only Indonesia but most of the country throughout the world.<sup>12</sup>

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<https://www.tribunnews.com/techno/2019/11/05/indonesia-menjadi-produsen-sampah-plastik-terbesar-kedua-di-dunia-ini-respon-karya-anak-bangsa> (Accessed September 13, 2020)

<sup>10</sup>Laura Parker, "We Depend On Plastic. Now, We're Drowning in It.," *National Geographic*, May 16, 2018, <https://www.nationalgeographic.com/magazine/2018/06/plastic-planet-waste-pollution-trash-crisis/> (Accessed September 14, 2020)

<sup>11</sup>Laurie Brenner, "What Is the Importance of Energy Sources,?" *Sciencing*, March 02, 2018, <https://sciencing.com/importance-energy-sources-6391828.html> (Accessed September 14, 2020)

<sup>12</sup>Taufan Adharsyah, "Sebegini Parah Ternyata Masalah Sampah Plastik di Indonesia," *CNBC Indonesia*, July 21, 2019, <https://www.cnbcindonesia.com/lifestyle/20190721140139-33->

Indonesia has been constantly struggling on managing the waste being produced especially throughout the large cities such as Jakarta, Bogor, Bandung, Denpasar, Balikpapan, Padang and many more. However, Indonesia also tried to reduce such wastes by raising awareness throughout many media sources to reduce single use plastic products such as straws, cups, spoons, forks, and etc.<sup>13</sup> Even through the recent regulations raised for the plastic usage by the governor of Jakarta, Anies Baswedan to reduce the usage of single-use plastic bags but eco-friendly bags in December of 31st 2019. By issuing the law on single use plastic ban, Indonesia certainly shows their intention to reduce plastic waste production of the country, even with an aim of to reduce marine plastic waste for 70% by 2025. This regulation was raised by the government to anticipate the reduction of plastic bag uses in the future. Yet, for sure it needs to be jointly with various programs such as education and advertisement to be able to raise awareness of the people especially in the large cities. Furthermore, it is crucial and mandatory to apply strong implementation and action forces by the government to make the process to be more effective. Such strides of the government for sure is an improvement compared to the past of Indonesian government that pursues more of an economic development rather than noticing the environmental concerns.<sup>14</sup>

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86420/sebegini-parah-ternyata-masalah-sampah-plastik-di-indonesia (Accessed September 14, 2020)

<sup>13</sup>"Pergub Plastik Diharap Kurangi 50 Persen Sampah Plastik DKI," *CNN Indonesia*, January 17, 2020, <https://www.cnnindonesia.com/nasional/20200117212358-20-466451/bergub-plastik-diharap-kurangi-50-persen-sampah-plastik-dki> (Accessed September 14, 2020)

<sup>14</sup>Pingit Aria, "Dari Jakarta, Menakar Keseniusan Pemerintah Mengurangi Sampah Plastik," *Katadata.co.id*, January 13, 2020, <https://katadata.co.id/telaah/2020/01/13/dari-jakarta-menakar-keseriusan-pemerintah-mengurangi-sampah-plastik> (Accessed September 15, 2020)

The Problem is that <sup>15</sup>Human beings always want innovation but very few people are actually willing to sacrifice for a change just like what professor David Owens said during his presentation at Vanderbilt University. According to Michael Cooper, the reasons why most people cannot innovate can be mainly categorized by two options which are personal comfort being the first, and systemic norms being the second reason. Once people find comfort in their daily lives, it is most likely to stick to their daily patterns making them do what they have done comfortably in the past experience. And when the experience continues constantly, it would be their habits. It is why getting out of personal comfort. It applies equally to the second reason which is systemic norms. When a person is in charge of an innovation, the person needs to let go of the norms, break the existing patterns, try new technology, and so on. Throughout the process, there will surely be various obstacles that will hinder an innovation to take place including surrounding people that are not able to support your idea, risks that you have to take and many more. It is why innovation is not something brief and simple but it is a transformation with complex variables that need to be aware of.<sup>16</sup>

It surely would be a long process to raise awareness and change people's attitude towards certain behavior that they have been used to for many decades. Here we are able to find the needs of government intervention to solve such issues

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<sup>15</sup>Hannah Kinnersley, "Everybody Wants Innovation (but No One Wants to Change)," *MeetingsNet*, January 23, 2018, <https://www.meetingsnet.com/careerlifetravel/everybody-wants-innovation-no-one-wants-change> (Accessed September 15, 2020)

<sup>16</sup>Michael Cooper, "The Real Reasons Most People Can't Innovate," *Inc.com*, October, 01 2014, <https://www.inc.com/michael-cooper/the-real-reasons-most-people-cant-innovate.html> (Accessed September 15, 2020)

rather than waiting for people to change. Today's society clearly relies on energy sources by most activities that occur throughout today's society need an energy source from little things like charging our gadgets until the commercial needs to operate large industrial businesses.<sup>17</sup> Indeed it is certainly important to find an effective and efficient energy source. Furthermore, suppose the production of new energy sources would contribute to solving the plastic waste concerns and help the country itself to reach economic development would be such an innovation for the country with suitable abundant resources for producing the new energy source. Such alternative energy sources would certainly be beneficial to be implemented by the government.<sup>18</sup>

## **1.2 Research Question**

Based on the information that was previously mentioned, the writer suggests the following research question:

1. "To what extent management of plastic waste could bring positive impact towards economy of Indonesia?"
2. "To what extent would the trade strengthen Indonesia's stance in International World (ASEAN)?"

## **1.3 Research Objectives**

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<sup>17</sup>Laura Parker, "We Depend On Plastic. Now, We're Drowning in It.," *National Geographic*, May 16, 2018, <https://www.nationalgeographic.com/magazine/2018/06/plastic-planet-waste-pollution-trash-crisis/> (Accessed September 15, 2020)

<sup>18</sup>"Benefits of Renewable Energy Use", *Union of Concerned Scientists*, July 14, 2014, <https://www.ucsusa.org/resources/benefits-renewable-energy-use> (Accessed September 15, 2020)



The objective of this research is to evaluate the possibility of a country in the plastic waste sector to reach economic development of the country by implementing new technology that could compose an energy source through plastic waste. Through such evaluation it would be able to show the positive chance of Indonesia being the second largest plastic waste producing country to gain beneficial outcomes not only economically but also environmentally contributing to solve one of the major global issues which is plastic waste management.

#### **1.4 Research Contribution**

The findings of this research will provide higher awareness of the environmental issue that needs to be taken care of on a global scale, at the same time show the importance of innovation to be efficient and productive in using the threat of the country to become a push that could help to reach economic development of the country. Evaluation towards the needs and roles of government intervention would be discussed to help understanding of the relation towards the positive outcome such as economic development and stability. This research is significant to the international relations major as the topic discusses the economic development of a country through bilateral or even multilateral businesses and how an innovation of a certain country could affect many surrounding countries in terms of their economic sector. The research will also evaluate the effect of trade between countries and its relation towards their political relations.