

CHAPTER I

INTRODUCTION

1.1. Background

Modern economic realities require a fundamentally new approach to the implementation of economic activity, as commodity producers are currently experiencing serious restrictions, caused by a shortage of natural resources and unprecedented degradation of ecosystems. To ensure sustainable development, which presupposes economic progress, environmental security and improving the quality of life of the population, a different development paradigm is currently required (Tambovceva.T & Titko.J, 2017). From the environmental problems facing the world today, the application of a circular economy is a paradigm that is truly appropriate to be applied.

In recent years, the Circular Economy (CE) has gained worldwide attention as an effective alternative economic system to the current model of production and consumption of waste collection (Tonelli.M & Cristoni.N, 2019). The circular economy is an update of the linear economy. This update is carried out because in a linear economy, products are destined to be discarded, so manufacturers are constantly producing products by taking natural resources to produce new products. Of course, this will cause the growth of production waste to be higher. While the principles of a circular economy include reducing waste and pollution, keeping products and materials in use as long as possible, and regenerating natural systems (Ellen Macarthur Foundation, 2017). The circular economy concept is not only focused on reducing waste. However, it provides an economic value for the waste. Waste can be processed into new products that have a higher value than the previous product. The waste problem that occurs in the world which is a serious matter and needs to be resolved is the problem of plastic waste. Plastic waste is a problem

because it takes a very long time to decompose so it can pollute the environment (Sartono. A. D, 2022). The Circular Economy brought a revolutionary change for plastic waste management. Circular Economy emphasizes on zero waste methodology by innovation and rethinking design to increase product life cycle for better use and less frequent waste, reusability, and recyclability in all ways possible so that the waste would not end up in landfills or marine litter. The World Economic Forum also introduced The New Plastic economy which pointed out how plastic rethinking and redesigning will make major implications (World Economic Forum, 2016) in (Jaideep Balwada et.al, 2021).

Indonesia is also inseparable from the problem of waste, especially plastic waste and Indonesia is also the largest contributor to waste by being ranked second in the world. According to data from the Central Statistics Agency (BPS) and the Indonesian Plastic Industry Association (INAPLAS) in 2020, Indonesia is a contributor to plastic waste of around 67.8 million tons or there are 185,753 tons of waste every day. With this large amount of plastic, it causes the generation of garbage to build up in the provision of landfills and can create new problems because waste processing is still limited so that waste management becomes less than optimal. Nearly 80 percent of the world's plastic waste ends up in landfills (Bucknall, 2020). Plastic waste contributes 15% (28.4 thousand tons per day) of the total waste in Indonesia of 189 thousand tons per day (Kholidah et.al, 2019) in (Astuti, A.D. et al, 2020). Of the total plastic waste, only 10-15% is recycled, 60-70% is stored in landfill, and 15-30% is not managed which is then wasted into the environment (Purwaningrum, 2016). The data shows that more than half of the total amount of waste ends up in the TPA. Disposal of plastic waste in the TPA will shorten the life of the TPA because of the nature of the plastic which cannot be decomposed naturally (non-biodegradable) (Astuti, A.D et al., 2019). If plastic waste is dumped into the landfill in large, continuous and compacted quantities, it will cause leachate to not penetrate into the bottom layer of the landfill because the plastic is impermeable to

water. As a result, leachate comes out of landfills and causes wider environmental pollution (Horsák et al, 2016).

In Kabupaten Bengkalis, according to data from the Ministry of Environment and Forestry's SIPSN, piles of garbage in 2021 has reached 94,536.90 tons per year and the achievement of waste handling is 68.44% and waste reduction is 16.11% and there is 5% plastic waste in Kabupaten Bengkalis. The waste management system that is usually used by local governments such as collecting, transporting and disposing of is a waste management system that only creates a buildup of waste in the final disposal site (TPA).



Figure 1.1 Pile of Garbage in the TPA, Bantan Bengkalis, Riau
Source: Processed Data, 2022

The performance of the Dinas Lingkungan Hidup in handling waste in Kabupaten Bengkalis has not gone well, this can be seen from the limited land for the TPA, so it is not proportional to the amount of waste generated, and has not used

environmentally friendly technology in the TPA (final processing site), socialization in management waste is not entirely limited to the apparatus, the coordination of tasks with the UPT (technical implementation unit) sub-district cleanliness is not optimal, the competence of employees is still of low quality, there is still a lack of waste management and limited facilities and infrastructure so that waste management has not been carried out optimally and lack of participation community in reducing the volume of waste, sorting waste, and utilizing waste. (Setiawan.H, et al, 2019). In addition, community of Kabupaten Bengkalis involvement in reducing the accumulation of plastic waste is in low category. This can be proven by the accumulation of garbage in each temporary shelter which always full every day and causing a foul odor

From the problems raised by previous studies, researchers are interested in conducting research and to find out the handling of plastic waste in the circular economy in Kabupaten Bengkalis entitled "POTENTIAL OF CIRCULAR ECONOMY IMPLEMENTATION IN MANAGING PLASTIC WASTE IN KABUPATEN BENGKALIS".

1.2. Formulation of the Problem

Based on this background, the formulation of the research problem is: What is the potential of circular economy implementation in managing plastic waste in Kabupaten Bengkalis?

1.3. Purpose of the Study

Based on the formulation of the problem, the aims of this research are as follows:

1. This study aims to determine the implementation of circular economy in plastic waste management in Kabupaten Bengkalis.
2. To find out the most effective waste management model for the management of plastic waste in a circular economy in Kabupaten Bengkalis.

3. To find out the obstacles in the management of plastic waste in the circular economy in Kabupaten Bengkalis.
4. To find out the solutions that can be used to manage plastic waste in the circular economy in Kabupaten Bengkalis.

1.4. Significance of the Study

Based on the problem information, the writer can state the objectives of this research are:

1. Benefits for writers
As a medium to apply the theory obtained and the reality in the field in order to add experience and broaden the horizons of researchers in studying the scope of the circular economy and as information material for further research.
2. Benefits for the government or society
As a means to add insight and knowledge about plastic waste management by implementing a circular economy and increasing public awareness to protect the environment by sorting waste intelligently, because "Plastic is too expensive to be waste".
3. Benefits for Institutions
It is expected to be an additional reference media for science and a source of reading for other readers to conduct research in the same field, namely conducting research on handling and managing plastic waste through the application of circular economy.

1.5. Scope and Limitation of the Problem

Limitation of the problem is very necessary so that the discussion on research is focused and does not expand from the discussion, this the author limits the scope and limitations of the problem in this undergraduate thesis, namely focusing only on the potential of circular economy implementation in managing plastic waste in Kabupaten Bengkalis.

1.6. Writing System

So that the writing of this thesis report can be arranged systematically and neatly, it is necessary to write a systematic report. The following is a systematic undergraduate thesis report writing:

CHAPTER 1: INTRODUCTION

In Chapter 1 explains the background of the problem, problem formulation, research objectives, research benefits, research scope and problem boundaries as well as report writing systematics.

CHAPTER 2: LITERATURE REVIEW

In Chapter 2 describes the literature review and the previous theoretical basis that will be used in completing the research.

CHAPTER 3: RESEARCH METHODOLOGY

In Chapter 3 will describe in detail the steps taken to complete the research, starting from the location plan, time and object of research, types and sources of data, population and sample, sampling technique, data collection techniques, data analysis methods, types of study, and concept definitions and operational variables.

CHAPTER 4: RESULTS AND DISCUSSION

In Chapter 4, it explains the test results, discussion and limitations of the research results. The discussion of the results obtained is made in the form of a description qualitative explanation. The results of this study contain the potential of circular economy implementation in managing plastic waste in Kabupaten Bengkalis.

CHAPTER 5: CONCLUSION AND SUGGESTION

In Chapter 5, the author will explain the conclusions and suggestions from the research that has been done.

REFERENCES

APPENDICES

WRITER BIOGRAPHY