Problem Chosen	2020 MCM/ICM Summary Sheet	Team Control Number
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Summary

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The Known Name

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Summary

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1 Introduction

1.1 Background

The plastic industry can date back to1950s, over the past 60 years, the production of plastic has grown rapidly, which has surpass most other artificial materials[1]. While people then did not realize the potential negative influence of plastic usage to ecosystem, plastic waste gradually accumulated in the environment because of its non-biodegradable trait. Some scholar believe that plastic bags and Styrofoam containers can take up to 1,000 years to decompose[2]. 6,300Mt plastic waste has been generated in 2015, while only 9% of which had been recycled and reused. 12% of them were incinerated and the percentage of plastics that discarded in landfills or natural environment was up to 79%[1]. Plastics in nature especially in the ocean will cause a series of ecological problems. Apart form the chemical affects to organisms, plastic ingestion and entanglement are also threatening the diversity of species[3]. It is easy to imagine that if no measure is taken, human will facing severe degradation and pollution caused by enormous plastic waste.

Besides, the management of the plastic waste is one of the hardest issue on integrated municipal solid waste (MSW). There are many researches that focus on the plastic recovery routes based on the life cycle assessment approach (LCA) [4], and a few methods to assess the impact of solid waste system and technologies, which aim at develop more effective ways to migrate the plastic waste problem[5].

However, it seems that there are few researchers ever explore the valuation model of estimating the maximum use of plastics nor utility policy to reduce the usage of plastics remarkably. That indicates there is still room for further explanation in this area.

The management of the plastic waste is one of the most controversial topic in the discussion on integrated municipal solid waste area.

References

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