

## **Developing Environmentally Friendly Plastics: Dr Rozanna Dewi**



Dr Rozanna Dewi, dosen Teknik Kimia Fakultas Teknik Universitas Malikussaleh. Foto: Bustami Ibrahim.





























Like climate change, plastic waste is a global issue and concern. For Indonesia, plastic waste is a serious problem since Indonesia is the second largest contributor of plastic waste in the world after China. Indonesia produces 64 million tons of plastic waste annually, of which 3.21 million metric tons are discharged to the sea. The death of a sperm whale with nearly 6 kilograms of plastic waste in its stomach on the island of Kapota in Southeast Sulawesi is the proof that the Indonesian ocean has been heavily polluted with plastic waste.

Various steps have been taken by the government and environmental activists to reduce plastic waste including campaign, reducing the use of straws and plastic bags, managing plastic waste, as well as turning plastic waste into an energy source.

As an effort to address this problem, Dr. Rozanna Dewi, took an initiative to contribute to reduce plastic waste. The plastic waste crisis has encouraged her who works as the lecturer at Chemical Engineering Department at Universitas Malikussaleh to develop eco-friendly plastics. Nona — Rozanna Dewi's nickname — who has conducted research on environmentally friendly plastics for a long time received research funding from the Ministry of Research, Technology and Higher Education (Kemenristekdikti) of Republic of Indonesia in 2017.

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A year after that, Nona established PT Plastik Sago Teknologi, which produces various household needs made from environmentally friendly plastic. Sago here does not mean corner in Acehneselanguage, but sago in English. "We chose the name because the raw material we use is sago," Nona told to **Ayi Jufridar** and photographer **Bustami Ibrahim** from *Unimalnews* in early August 2019.

Below is the conversation with Rozanna Dewi about eco-friendly plastics and her obsession in developing industries in Aceh.

*Why are you interested in using sago as the raw material?*

Sago is easily available in Aceh and other parts of Indonesia. Actually there are still other raw materials that can be used such as cassava, potatoes, or corn. However, they become the sources of food for many people. In contrast to sago, its use as a food source has decreased even in eastern Indonesia.

In addition, growing sago is not difficult and it can grow in various regions in Indonesia. If it is used to produce environmentally friendly plastics, it will not affect its availability as food source.

*Is the use of plastic materials very worrying nowadays?*

Plastics have become a major need in our society that we cannot avoid using them for various needs. However, plastic recycling has not been a massive movement when compared to the amount of plastic waste we produce. Waste management in the community has not been well developed. Increasing costs for plastic bags, for example is more as a new source of income rather than an effort to build awareness to reduce the use of plastic bags.

We certainly cannot avoid using plastic for various reasons. A dynamic and practical life makes plastic is largely needed by people. But the use of plastics can actually be reduced.

*What does PT Plastik Sago Teknologi produce?*

For the time being, we only produce various household needs such as plates, cups, flower pots, and bowls. Actually, we are also able to produce cellphone cases and electric switches or something similar. But we still have obstacles in obtaining capital. We need more mold and the price is expensive.

Well, we are a startup company and we do not have large number of employees and they are students who used to help research as well. We still need more equipment and capital. We hope there will be investors to help us growing bigger.

*Where are they currently produced?*

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