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參展科別	環境科學科
作品名稱	Research the efficiency of the fog-catching nets
得獎獎項	四等獎

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ABSTRACT OF EXHIBIT

TAIWAN INTERNATIONAL SCIENCE FAIR

Islands far from lands use the underground or surface water as the water for living. The population of the islands is growing fast and the amount of water usage is increasing year after year. However, the amount of water usage is limited, so that people who live in islands have trouble using water. To compensate this problem, underground water is drawn from deeper underground sites. If this matter occurs continuously, sea-level may rise and then we cannot use underground water.

Seawater desalination is a way to solve the water shortage, but it requires a lot of energy. It is difficult for island far away from lands to supply a lot of energy.

It is considered the eco-friendly way to minimize the use of energy on the island. In order to solve the problem of water shortage on the island, it is considered fog that on the island occur frequently. It is an attempt to create water from fog, but it is a lack of research of efficiency of fog-catching nets to create water from fog.

In this research, I have studied the efficiency of the fog-catching nets, a way to increase the efficiency, the amount of water that is created on the island, usage of discarded fishing net for fog-catching nets.

Through this research, I found a kind of fog which can be changed into water and the difference in efficiency due to the difference in the size of the mesh size of the fog-catching nets, wind direction, wind speed, water absorption capacity of thread of fog-catching nets, installation direction of fog-catching nets, a way of installation of fog-catching nets. Also I found fog-catching nets of discarded fishing nets on the island and the possibility of usage for everyday life that the amount of water are created for a day or a month during dry season on the island.

評語

This study uses a simple net to catch the fog into water, which can solve the problem of dry season. The design is simple but useful. The fundamental theory of how the water can be more efficiently collected by a certain mesh size can be further investigated.