Coexistence of Nature and Humans - Towards the 21st Century (2)

Part 2: Challenges facing zero-emissions in Yakushima

The Island of Yakushima has become well known world-wide since the discovery of "Jomon-Sugi", a cedar which is thought to be over 7,000 years old, and ever since Yakushima's registration as a UNESCO World Heritage site in 1993, the nature and the people's life on the island have frequently been featured both in Japan and overseas. The Yakushima Charter, which was adopted by the island's local assembly, also in 1993, declares a series of targets aiming at the achievement of coexistence between nature and humans, and the development of the island in a fashion that fully respects Yakushima's particular history, traditions and natural environment. In order to live in good harmony with nature by creating a resource-circulation based society that inflicts a minimum of wastage on the natural environment, the people in Yakushima are trying to achieve a zero-emissions system. This system sets three targets, namely: 1) no use of fossil energy within the island; 2) full utilization of resources obtained from the island; and 3) creation of a zero-wastage society and lifestyle.

The first target - "no use of fossil energy" - means the elimination of uses of fossil fuels (including heavy oil, gasoline, light oil etc.) which enter the island for the purposes of power generation and transportation fuel. Unusually for a remote island, Yakushima is very rich in water resources and some 70% of energy supply is already provided by hydropower generation. This is enabled thanks to the natural / climatic conditions of the island, where it is said to rain 35 days in a month! The average annual rainfall is 4,400mm, and the record annual rainfall stands at 10,000mm. In addition to the existing hydropower generation, the island is hoping to achieve self-sufficient energy supply by replacing fossil fuel-dependent power generation with the optimum combination of solar energy, wind energy, small-scale hydropower plants etc. Also under consideration is the introduction of electric vehicles in order to stop the use of gasoline for transportation.

To achieve "full utilization of resources from the island", Yakushima is aiming at the use of local resources in order to achieve self-sufficiency of resourses as well as the development of local industries. Specific project plans include Research and Development of Yakushima's indigenous medicinal plants, introduction of agricultural and horticultural products suited to the mild climate, and promotion of eco-tourism making the most of the island's rich natural resources. Activities with regard to the third target "creation of zero-emissions society" includes separation and recycling of household garbage, and the circulation and recycling of resources by connecting different industrial activities. What is currently being tried is the domestic disposal of organic wastes from households to make compost and various recycling methods of wastes from primary industries (i.e. agriculture, forestry and fisheries).

However, there are also new problems arising as a result. In Yakushima, where currently flammable wastes are burned and non-flammable and large waste is buried underground for disposal, there has been an increase in the amount of large waste such as furniture, electric products and vehicles. Furthermore the disposal of waste left by the increasing number of tourists is becoming a problem. The challenge facing Yakushima in its efforts to rid itself of wastage and create a resource- circulation based society is still at its beginning. We hope people in Yakushima will keep trying, to the best of their abilities and in their own time, to achieve a unique way of local development making the most of the island's characteristic closed system environment. And in keeping with its status as a World Heritage Site, we hope that Yakushima will find a way for its human inhabitants to coexist with nature.

Solar power generator

Illegal dumping of wastes

Eco-Station for electric vehicles

A heap of deserted cars