

Sustainability Concept for Autonomous Islands

The goal of this study is presenting best practices for a sustainable development on autonomous islands. The sustainable development is considered completely following the Cato Model of Sustainability and Agenda 21 Action Items.

At First the Definitions and dependencies are established: Autonomous islands are a relative small populated pieces of land, surrounded by water, with size restrictions and position restrictions.

Sustainable development is defined as development that fully ensures future needs and development while conserving continuity of natural cycles, ability for energy production and uniqueness of a site.

The important fractions of sustainability on Islands is viewed in Chapter 2. As result it is found that most ecological aspects like biodiversity and waste management are important for autonomous islands and have to be discussed. Additionally several economical issues are found as important, but social-cultural aspects are too similar to those in mainland countries to be discussed in detail. The most important subtopics are:

The Tourism industry is for many islands the main source of or at least big part of the income. In the traditional way, by acting unsustainable, it can directly or indirectly decrease itself. Sustainable tourism, like the self-financing Bonaire Marine Park in the Dutch Antilles is introduced.

Sustainable land use is found as vital issue because soil degradation on islands weighs high. Madagascar loses so much soil that its rivers turn red and astronauts describe the island as bleeding.

Biodiversity as key resource and Galapagos is introduced. This island has a detailed action plan how to protect its resources, as bad example the Easter Islands are named, who lost the biggest part of their biodiversity followed by civil war.

And sustainable fisheries is very important for autonomous island as sometimes the whole industry relies on fishing but often one main food source

is seafood. Actions to maintain a high marine biodiversity are demonstrated.

Finally Waste management is extremely important as uncontrolled waste landfills endanger the environment. The Lady Elliot Island in the Great Barrier Reef has a remarkable concept to recycle and reuse.

As non autonomous islands specific subtopics energy development and energy efficiency, consumption pattern, atmosphere protection and social-cultural issues are examined. When discussing energy development the island of Samsø that uses 100% renewable energy in electricity and heat is mentioned.

A critical discussion of the results can be found in Chapter 4.

Since these best practices are snap-shots of successful projects at their peak, the articles often released by the organization who implemented the project. This paper does not contain the risks of a "up talked" a project nor does it foresee future developments developments.

Finally it provides ideas for further research: For example, how sustainable is the water management of an island? How can it be compared with other islands? Which project can count as really sustainable? The development of indicators to compare islands and reduce the promotion of "up talked" projects would be reduced.