Project Summary

Project Background
The Galapagos Islands are a very valuable natural habitat that has in the past been relying mostly on non-renewable energy sources. Particularly the off-grid energy generation via diesel-generators posed major environmental dangers to the fragile eco-system.

Project Objectives
The objective of the BMU-funded project "Climate protection via Renewable Energy in the Galapagos with special emphasis on power generation through Jatropha oil" was to support the Government of Ecuador's (GoN) strategy to switch the power supply of the Galapagos Islands completely to renewable energies until 2020. Moreover, it also envisioned facilitation of additional available renewable energy sources in the islands (wind, solar, etc.). Human Capacity Development (HCD) for the GIZs political partner MEER (ministry for electricity and renewables), knowledge transfer through training and exchange of experience played an important role in achieving the objectives of this project.

Project Results
The respective local experts have extensive knowledge of the technical possibilities and requirements of renewable energy systems and are capable to identify, plan and implement, both, technically and financially feasible and appropriate options for the Galapagos.

Services Provided
Implementation of 10 training programmes that were offered to the local experts (from both the technical as well as the decision making level) and a final documentation of these trainings for the GIZs web presentation. The services included the organisation of the logistical aspects (coordination of settings and contents with GIZ and MEER).

The trainings topics were:
• Grid-Integration of Wind and PV systems
• Political Framework Conditions and Regulations for the Support and Distribution of Renewable Energies (RE) and Energy Efficiency (EE)
• Dimensioning of Energy Storage Systems-Design and Service
• The “Life Cycle Assessments (LCA)” approach with focus on Jatropha as a sustainable agro-fuel in Ecuador
• Architectural concepts of EE in housing and tourist industry
• Operation and Maintenance of wind power installations
• Electric mobility on San Christobal
• CHP as an alternative for generation of heat and power in regard to GHG reduction
• Study tour to Denmark & Germany on the topic of 100% renewable energy islands and best practices in europe; present and future energy supply with renewable sources
• Hydraulic energy storage systems (Pumped hydro)
• Intelligent electricity grids (smart grids) on islands