

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)  
Integrated Applications End-to-End Solutions (1)

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## INTEGRATED APPLICATIONS FOR THE SUSTAINABLE USE OF COASTAL REGIONS IN BRAZIL

**Abstract**

This paper presents the outcome of the student Team Project “Coastal Sustainability and Offshore resource and Activity management” in this year’s Space Studies Program (SSP 2013) of the International Space University in San Jose in Brazil.

Humans and nature very often are in strong competition in the coastal regions (natural habitats versus human infrastructure). Coastal management includes multiple factors to be considered such as natural coastal processes, economic development and growth, community planning and land use, hazard mitigation, coastal shoreline stabilization, policies and laws, and public involvement in policy development. Beside oil extraction, fishery industries, operation of ports, etc. in coastal zones, the regions are also considered as an important part of the tourism.

The ISU “Coastal Sustainability and Offshore resource and Activity management” Team Project suggests cost effective solutions based on space integrated applications (integrated applications of Earth observation data from various satellite missions, satellite navigation and telecommunications technologies together with ground data gathering and ground telecommunications technologies) for sustainable management of Brazilian coastal and off shore resources as well as protection of local communities from various hazards. The Team Project explores the technical challenges, as well as relevant policy, legal and business issues related to the development of cost effective services for monitoring the environment and sustainable utilization of resources.

The International Space University which is located in Strasbourg, France provides graduate-level courses to future leaders of the global space community. The main courses are the Space Studies Program, Master of Space Studies Program and Master of Space Management Program. Each course involves several Team Projects. The primary objective of the Team Project is to provide the students an experience in an interdisciplinary and international teamwork environment with the time and resource constraints on a novel and challenging topic. This year Project Team of 45 participants is tasked to explore the challenges how space-based integrated applications can help local communities of coastal regions in Brazil.