

<b>Thesis Title</b>	Using Biophysical Characteristics for Coastal Resources Zoning, Phangnga Bay Case Study
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### Abstract

The study "Using Biophysical Characteristics for Coastal Resources Zoning, Phangnga Bay Case Study" was to be used as a guideline for preliminary coastal resources utilization planning. The biophysical characteristics were soil suitability, bottom, depth, tide, turbidity, mangrove forest, coral and seagrass. The study area was classified into three zones: preservation zone, conservation zone and development zone.

*Preservation zone:* This zone is very fertile and important to the ecology as it is a sensitive area in the environment. In few of this, the ecosystem impact will be happened in change and hard to recover as it was. This zone is for study, research, and resources preservation. These activities will not have any impact to environmental area and ecosystem in the area and vicinities.

*Conservation zone:* This is an important sanctuary zone in nature or the valued nature. Moreover, this zone is the regeneration, recovery and buffer zone between the preservation and development zones which are used for non-impact to environment such as sightseeing, diving, or suitable activities to specific characteristics.

*Development zone:* The rest of those two above-mentioned zone which have various kinds of development activities, for example: water recreations, industrial development, and aquaculture which does not have any impact to ecosystem or having effectively prevention.

The Phangnga Bay is designated as the study area and covers the coastal lines of three southern provinces: Krabi, Phangnga and Phuket. It is because these areas have high potentials for many uses, leading to the development in the regions and the country as a whole, in terms of tourism, fisheries, sea transport and industrial development. Besides the sub-area for detailed study located at the north of Maung Krabi district was also chosen for detailed study. Throughout the study, the techniques related to the image interpretation and the geographical information system (GIS) were taken as the tool for study in data systemization and analysis as well as to show the performance of the study.

According to the classification on three coastal resource zones, it was found that the Phangnga Bay area is proper as the preservation zone for 334.7 square kilometres, the conservation zone for 2,735.8 square kilometres and the development zone for 6,395.1 square kilometres, on the approximate percentage of 3.5, 28.9 and 67.6, respectively. As for the sub-area for study, it can be classified as the respective preservation, conservation and development zone for 25.99, 30.56 and 43.65 square kilometres, or the percentage about 26, 30.5 and 43.5, respectively.

The result of study for the actual in the sub-study area, which most area was classified into the preservation and conservation zone. Moreover, it was found that local people would like to conserve the fertility of coastal resources as before for land utilization in local fishery and tourist benefits. But in the present, it was also found that there is mangrove forest deterioration for shrimp farming and resorts. Thus, the mitigation for land utilization control is important and necessary to support the areas' conservation and protection. However, the coastal resources zoning in this study is a preliminary study that specified only the biophysical characteristics. In the real situation, it should be revised with local participation. Type of land utilization and socio-economic aspects should also be another main factor in natural resources conservation planning for sustainable development.

Coastal resource management with resources zoning is important for implementation related to present national environmental policy and the initiation of a workplan in this category. Using the GIS (Geographical Information System) for data analysis is an effective way of keeping large quantity of data, analyzing data and showing the results in the form of map that are convenient in operational utilization.