

Abstract

SESSION 2:

Accelerating Actions for
Sustainable Development and
Climate Change

WORKSHOP 3:

Valuation of Coastal
Ecosystem Services and
Benefits and Coastal Use
Zoning: Tools for Better
Planning and Implementation

Mainstreaming of Ecosystem Services in to Decision Making Process through Ecosystem Services Mapping and Valuation – A Case Study of Coastal Area in Ca Mau Province, Viet Nam

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Worldwide, ecosystems are being lost and degraded at alarming rates. The MA found that more than 60 % of global ecosystem services are in worse shape than they were 50 years ago. This is in large parts due to a continuous unawareness of the true value of nature's benefits and the persisting exclusion of these values from decision making in policy planning and economic transactions.

Mangrove ecosystems in Ca Mau province deliver a variety of goods and services that benefit people. These goods and services, often referred to as ecosystem services, provide some outputs that are commercially important (e.g., food from fisheries, recreation and education opportunities, etc.) and some that are not directly considered in the marketplace (e.g., shoreline protection and climate regulation). Value of mangrove ecosystem services, however, not well recognized in decision making processes.

The study focuses on mapping of regulating services in Ca Mau province in different scenarios, applying InVest (Integrated Valuation of Ecosystem Services and Tradeoffs). The study shows that the total carbon storage in 2010 has been reduced comparing with 2005 due to land . from forest to aquaculture. Coastal Vulnerability and Erosion Protection model has demonstrated significant role of mangrove in term of reducing coastal vulnerability, wind and wave energy and storm impacts. Mangrove also plays significantly role in protecting coastal community in exposure with erosion and inundation

Furthermore, the study has demonstrated tremendous value from mangroves through valuation of mangrove ecosystem services, including provision services (wood, firewood, fishing and aquaculture), regulating services more (carbon sequestration, coastal protection), cultural services (landscape beauty). The study highlighted that the economic value of the coastal protection service provided by mangroves in Ca Mau averages USD 2,600 per hectare per year, which is 25 times more than timber market value of mangroves.

Comparing two future scenarios (i.e. land use planning (LUP) and Forest Planning (FOR)), the results from the InVEST coastal vulnerability model indicate no significant difference in the coastal protection service provided by mangrove forests in 2020 under the LUP future scenario as compared to 2010 distribution of mangroves. Results from the coastal vulnerability model suggest that the FOR future scenario will provide greater coastal protection services as compared to the current scenario.

Results from the study has provided significant inputs for land use planning of Ca Mau Cape National Park and forest policy at provincial level.



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Ms. Kim Thi Thuy Ngoc is currently working with the Institute of Strategy on Natural Resources and Environment (ISPONRE), Ministry of Natural Resources and Environment (MONRE)

Dr. Ngoc has joined Ministry of Natural Resources and Environment in 2005. She has been working at Institute of Strategy on Natural Resources and Environment (ISPONRE) since 2008 and has participated in a number of international and national projects on natural resources and environment such as the Project for Ecosystem Services; Core Environment Program; Poverty and Environment Project; Wealth Accounting and Valuation of Ecosystem Services, Valuing the Forests – an application of natural capital accounting (NCA) in Viet Nam and Lao, among others.