

Philippines Sustainable Interventions for Biodiversity, Oceans, and Landscapes (SIBOL) Activity

ORIENTATION-WORKSHOP PROGRAMME

Orientation-Workshop of Accounting/Valuation Technical Working Groups (TWGs) on

Ecosystem Accounting and Ecosystem Services Valuation

Face-to-face Activity

March 8 – 9, 2022

I. Background/Rationale

This orientation-workshop was conceived to build the capacity of the partner agencies, especially the key stakeholders and the PA managers. To do this, SIBOL SA2 is planning to conduct orientation-workshop on ES valuation and ecosystem accounting. This orientation-workshop aims to prepare the stakeholders with methodologies and tools needed in science-based natural resource management. These workshops will go beyond definitions and concepts, and will focus more on the operational components of valuation and accounting.

One of the main interventions of SIBOL is the conduct of ecosystem services valuation and natural capital accounting of selected ecosystems at the site and national levels. This will lead to the formulation of long-term economic policies and economic incentives that enable sustainable management of natural resources and promote positive environmental behavior among its managers and users. To do this, the capacity to develop and maintain the accounts will be built at the agencies that are primarily responsible for generating and consolidating the data.

The results of the valuation and accounting work of SIBOL will be used as inputs to the High Conservation Value Areas (HCVA) Planning activities in NIPAS PAs. The values of the ecosystem services will be used to identify the appropriate management interventions, taking into account how much will societal gains and losses be, and who will bear these benefits and costs. Likewise, outputs from the valuation work will also be used as bases for economic instruments – economic incentives and disincentive schemes to incorporate environmental costs and benefits in their design. The results may also be used as tools for decision-making at the local level. Finally, these will also be used as inputs to the establishment of natural capital accounts at the national level.

Specifically, SIBOL aims to estimate the values of the following ecosystem services in its second year of implementation: global climate regulation, water regulation and purification, soil erosion control, coastal protection, recreational, spiritual, and provisioning services (NTFP, fish, etc.). Likewise, SIBOL aims to update the national forestry accounts and develop the national fisheries and coral reef asset accounts.

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II. Objectives

The main objectives of the valuation and accounting orientation-workshop are the following:

1. Orient the TWG members on ecosystem accounting and valuation of selected ecosystem services
2. Orient the TWG members on natural capital accounting (NCA), particularly using the UN-SEEA Framework
3. Form TWGs for each of the national asset accounts and site-level ecosystem accounts
4. Come up with a detailed workplan on the data collection by ecosystem service by site

The orientation-workshop aims to capacitate partner agencies, especially the key stakeholders and PA managers with methodologies and tools needed in science-based natural resource management.

III. Training Design

The *Ecosystem Services Assessment, Accounting, Valuation and Policy Workshop* aims to familiarize the participants with the assessment, valuation and accounting frameworks and simple methodologies as well as tools to identify the ecosystem services and estimate their economic values.

The design of the workshop includes specific lectures to introduce important concepts such as the UN-SEEA EEA Accounts and Linkages, and Ecosystem Service Accounting and Valuation, in preparation for the valuation workplan at SIBOL PA sites, and at the national level. Together with this are specific open forums where participants are welcome to ask and discuss the topics discussed and relate them to the works in their respective agencies.

IV. Participants

This *Orientation-Workshop of Accounting/Valuation Technical Working Groups (TWGs) on Ecosystem Accounting and Ecosystem Services Valuation* is for the partner agencies, key stakeholders and PA managers.

The orientation-workshop includes participants from Protected Area Management Offices (PAMOs) of Masinloc-Oyon Bay Protected Landscape and Seascape (MOBPLS), Cleopatra's Needle Forest Reserve (CNFR), Mt. Mantalingahan Protected Landscape (MMPL), Puerto Princesa Subterranean River National Park (PPSRNP), Siargao Islands Protected Landscape and Seascape (SIPLAS).

At the site level, the participants of the field-based activity are composed of members of academic institutions, namely: President Ramon Magsaysay State University (PRMSU), Palawan State University (PSU), Western Philippines University (WPU), Caraga State University (CSU), Surigao State College of Technology (SSCT), and University of the Philippines Los Baños (UPLB), who are involved in planning, and assessment of ecosystem services, among others.

Likewise, the orientation-workshop will also involve participants from the offices who can help in

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developing provincial, regional, and national accounts. Namely, these offices include the Palawan Council for Sustainable Development (PCSD) and the Municipal Planning and Development Coordinators Office (MPDC) – Rizal, Brooke's Point, and Quezon in the provincial-level, Department of Environment and Natural Resources (DENR) – Region III, Region IV-B, and Region XIII (CARAGA), and Bureau of Fisheries and Aquatic Resources (BFAR) - Region III, Region IV-B, Region XIII (CARAGA) in the regional level, and other DENR bureaus such as Biodiversity Management Bureau (BMB), National Mapping and Resource Information Authority (NAMRIA), and Forest Management Bureau (FMB) in the national level. National Economic Development Authority (NEDA) and Philippine Statistics Authority (PSA) are also invited to represent the economic development and planning, and central statistical authority.

V. Training Modules and Schedule

The *Orientation-Workshop of Accounting/Valuation Technical Working Groups (TWGs) on Ecosystem Accounting and Ecosystem Services Valuation* is ...

The following are the modules that will be discussed during the training-workshop and their corresponding lecturers and schedule.

Day 1 Introduction to National Capital Accounting	
Lecturers: Rina Rosales Dr. Marian Delos Angeles Dr. Gem Castillo	Date: March 8, 2022
Module Description: The Introduction to National Capital Accounting module aims to acquaint the participants to valuing natural resources on a national level in order to help formulate economic policies and incentives geared towards protection and sustainable management. This module will focus on the three main assets namely Forest Assets, Coral Reef Assets, and Fisheries Assets, which are relevant to the SIBOL PA site-level and the national level. It will serve as a bridgeway to the discussion of site-level valuation of ecosystem services.	

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Day 2 Introduction to Ecosystem Services Accounting and Valuation	
Lecturers: Rina Rosales Dr. Marian Delos Angeles Herminia Francisco Dr. Noela Lasmarias Dr. Gem Castillo Dr. Canesio Predo Dr. Tonie Balangue Dr. Agustin Arcenas	Date: March 9, 2022
Module Description: The Introduction to Ecosystem Services Accounting and Valuation module begins with the discussion on the SIBOL PA sites and the intended ES valuation and its rationale per site. In relation to the first module, UN-SEEA EEA Accounts and Linkages will be expounded on as an introduction to the formation of the general framework of ES Accounting and Valuation. More specifically, included in this module are the different valuation techniques of specific ecosystem services such as NTFP Harvesting, Crop Provisioning, Fish Provisioning, that will be used in SIBOL interventions. This then focuses on the overall flow of the valuation per service, various conditions of the ES that may affect the accounting of the PA and the prescribed techniques per ES. This module hopes to prepare the TWGs in the formulation of the detailed workplans.	

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DAY 1: MARCH 8

Date/ Time	Activity	Resource Person
9:00 - 9:30 AM	Opening Ceremonies	
9:30 - 10:00 AM	Introduction of Participants	Rina Rosales
10:00 - 10:15 AM	Coffee Break	
10:15 - 12:00 PM	Introduction of NCA/SEEA	Marian Delos Angeles
12:00 - 1:00 PM	Lunch Break	
1:00 - 2:00 PM	Forest Asset	Gem Castillo
2:00 - 2:30 PM	Open Forum	Rina Rosales
2:30 - 3:30 PM	Coral Reef Asset	Marian Delos Angeles
3:30 - 4:00 PM	Open Forum	Rina Rosales
4:00 - 5:00 PM	Fisheries Asset	Marian Delos Angeles
5:00 - 5:30 PM	Open Forum	Rina Rosales

DAY 2: MARCH 9

Date/ Time	Activity	Resource Person
8:00 - 8:30 AM	SIBOL Sites and Proposed ES	Rina Rosales
8:30 - 9:00 AM	SEEA EA Accounting	Marian Delos Angeles
9:00 - 9:30 AM	NTPP Harvesting	Herminia Francisco
9:30 - 10:00 AM	Crop Provisioning	Noela Lasmarias
10:00 - 10:30 AM	Fish Provisioning	Rina Rosales
10:30 - 10:45 AM	Coffee Break	
10:45 - 12:00 PM	Open Forum	Joji Shiraishi
12:00 - 1:00 PM	Lunch Break	
1:00 - 1:30 PM	Carbon	Gem Castillo
1:30 - 2:00 PM	Water	Canesio Predo
2:00 - 2:30 PM	Soil Erosion	Gem Castillo
2:30 - 3:00 PM	Coastal Protection	Tonie Balangue
3:00 - 4:00 PM	Open Forum	Freddie Palermo
4:00 - 4:30 PM	Recreation	Herminia Francisco

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4:30 - 5:00 PM	Spiritual Value	Agustin Arcenas
5:00 - 6:00 PM	Open Forum	Clarice Tee
6:00 - 6:30 PM	Signing Up	Leilani Yu
6:30 - 7:00 PM	Next Steps & Closing Remarks	Rina Rosales

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VI. Profile of Resource Persons



Dr. Agustin Arcenas brings in more than 25 years of experience in environmental, natural resource, and agricultural economics. He has worked with international development organizations such as the World Bank and the UN World Food Programme, particularly in the fields of sustainable agriculture, environmental protection, and poverty alleviation. Dr. Arcenas also worked as a teaching assistant and research assistant while taking his doctoral degree at Michigan State University. He continues his academic and educational enrichment as an Associate Professor at the University of the Philippines – Diliman.



Dr. Tonie Balangue has more than 35 years of experience in forest/ watershed and ENR management projects with national, international, and local governments, non-government agencies, and private development sectors. He earned a Doctoral Enrichment in Environmental Land Use Planning from the State University of New York – School of Environment and Forestry. Among his expertise are climate vulnerability modelling, project development and implementation of the Ecotown/ Communities of Resilience (CORE) framework, and ENR accounting and valuation. He was engaged in various consultancy works and team leadership roles with the Climate Change Commission, DENR, Philippine Institute of Development Studies, the Department of Agriculture, and the German Agency for International Cooperation (GIZ).

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Dr. Gem Castillo is a seasoned resource economist, with proficient knowledge on natural resource and ecosystem services accounting, extended cost-benefit analysis, financial analysis, decision support systems, systems modelling, simulation and statistical analysis. Among his contributions include the development of the first Fisheries BioEconomic Model (FishBE) during his engagement as resource economist and sector leader with the USAID funded Philippine Environmental Governance Project in 2008, and the development of the World Bank Program on Wealth Accounting and Valuation of Ecosystem Services (WAVES) in the Philippines in 2013 where he served as a key national expert. Dr. Castillo holds a PhD in Forest Economics with a Certificate in Resource Economics from the Michigan State University.



Dr. Marian S. Delos Angeles has more than 40 years' experience in natural resource and environmental economics. Her expertise and interests include natural resource and environmental economics in development policy-making, natural capital accounting, conservation financing, benefit-cost analysis and capacity development.

Ann taught at the University of the Philippines System, conducted research at the Phil. Institute for Development Studies (PIDS) and the Development Academy of the Philippines (DAP). She was Senior Environmental Economist at the World Agroforestry Center (Indonesia, and subsequently at the World Bank (Washington, DC) where she led the World Bank Institute's Natural Resources Program and participated in the Global Partnership Program on Wealth Accounting and the Valuation of Ecosystem Services (WAVES). Her consulting work includes the ten-year Philippine Environmental and Natural Resources Accounting Project, and natural resources management and biodiversity conservation initiatives of the country and of the ASEAN Center for Biodiversity. She co-founded REECS in 1992.

Her formal degrees are PhD. and M.A. in Economics from University of the Philippines and B.S. Mathematics, *Magna cum laude*, from the University of San Carlos, Philippines. She undertook post doctorate enhancement courses in environmental economics and marine policy as a PIDS/UNDP scholar at the University of Washington, Seattle, USA.

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Dr. Herminia Francisco is an environmental economist. She specializes on the economics of watershed conservation, soil erosion and conservation measures, pricing of environmental services, institutional issues governing management of common pool resources such as coastal resources, and climate change vulnerability and adaptation.

She spent a good part of her career managing the Economy and Environment Program for Southeast Asia (EEPSEA) under the Canadian International Development Research Centre. Prior to this post, she taught at the University of the Philippines at Los Baños and provided consultancy services to several national and international organizations. She is now doing limited consultancy services in the field of environmental economics in the Philippines.



Ms. Noela Lasmarias presents more than 25 years in environment and natural resource (ENR) economics, valuation, and accounting, both as a Lead Expert and as a Senior Consultant. These core areas of her expertise places her among the country's top thinkers in ENR policy analysis and development, particularly including the use of market-based instruments and sustainable financing for ENR management. In terms of economic proficiencies, Ms. Lasmarias is an expert in benefit-cost analysis, specifically in financial, economic, and extended BCA. She is also well-versed in ENR planning and management, particularly in environmental impact assessments and strategy development. In the field of environment and natural resource valuation, Ms. Lasmarias leads in designing and implementing participatory valuation approaches, training and capacity building and enhancement (participatory training methodologies and facilitation), and climate change adaptation planning. These expertise are demonstrated in her major engagements with the Climate Change Commission, Department of Environment and Natural Resources, Department of Interior and Local Government, The World Bank, Conservation International – Philippines, and the United States Agency for International Development (USAID). In addition, Ms. Lasmarias is part of the pioneering team of experts that developed the payments for environmental/ ecosystem services (PES) in key Protected Areas (PAs) in the Philippines nationwide.

Ms. Lasmarias holds a Master's degree in Environmental Studies and is currently completing her PhD on the same program from the University of the Philippines – Los Baños.

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Dr. Canesio Predo brings in more than 20 years of expert experience in economics and resource economics. He worked with Economy and Environment Program for Southeast Asia (EEPSEA) as the senior economist. He is serving as Associate Professor in the Institute of Renewable Natural Resources, College of Forestry and Natural Resources, University of the Philippines – Los Baños, where he teaches topics such as resource/forestry economics, forest finance, benefit cost analysis, economic analysis of forest policies, economic valuation of climatic risks, fundamental economics of small-scale forest-based enterprises. Dr. Predo holds a PhD in Agricultural Economics, Major in Resource Economics from University of the Philippines – Los Baños.



Ms. Rina Rosales has been in the field of sustainable financing, particularly of coastal and marine resources, and protected area conservation and management planning since 1996. She brings in a wide range of experience in economic and socio-economic analysis, econometrics, resource valuation and accounting, impact assessment, value chain studies, and cost benefit analysis. She has been part of the pioneering team who developed the first environment and natural resources accounting in the Philippines under the DENR Environment and Natural Resource Accounting Project (ENRAP), and thereby has been involved in the development of earliest markets and payments for ecosystem services (M/PES) in the country. Ms. Rosales holds a Master's degree in International and Development Economics from Yale Graduate School of Arts and Sciences.