



Implementing System of Economic-Environment Accounting (SEEA) for sustainable resource use and development in the Pacific

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Outline

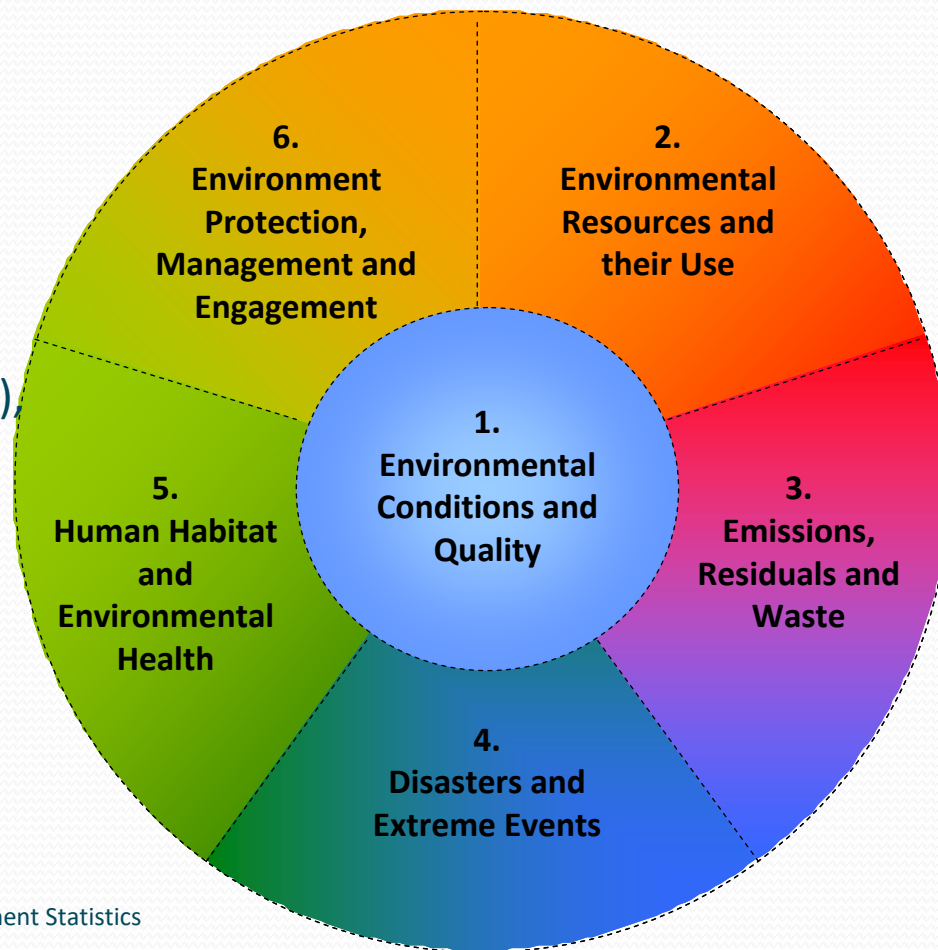
- Brief on SEEA
- Overview of SEEA related work in the Pacific
- Some policy applications
- Next steps

Environment statistics are *interdisciplinary* and *inter-institutional*

Environment statistics are about:

- the **state** of the environment,
- our **dependence** on it,
- our **impact** on it,
- it's **impact** on us (even negative ones) and
- how we **protect** and manage it.

This information comes from many institutions using different methods, concepts and classifications.

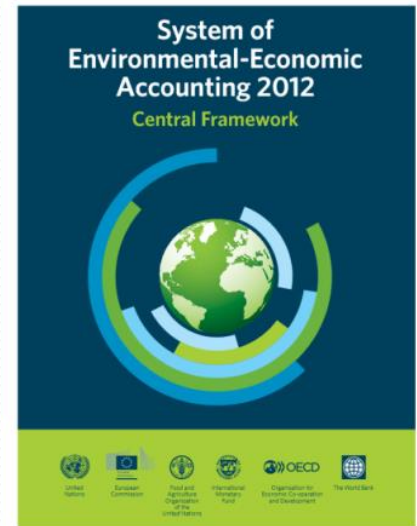


What is SEEA?

- an international statistical standard
- provides a methodology for compiling physical and monetary accounts for a range of resources, including land, water, energy, waste and timber, and linking these to economic activity, in particular to GDP
- describes how to account for ecosystem assets and services both in monetary and physical terms

SEEA Features

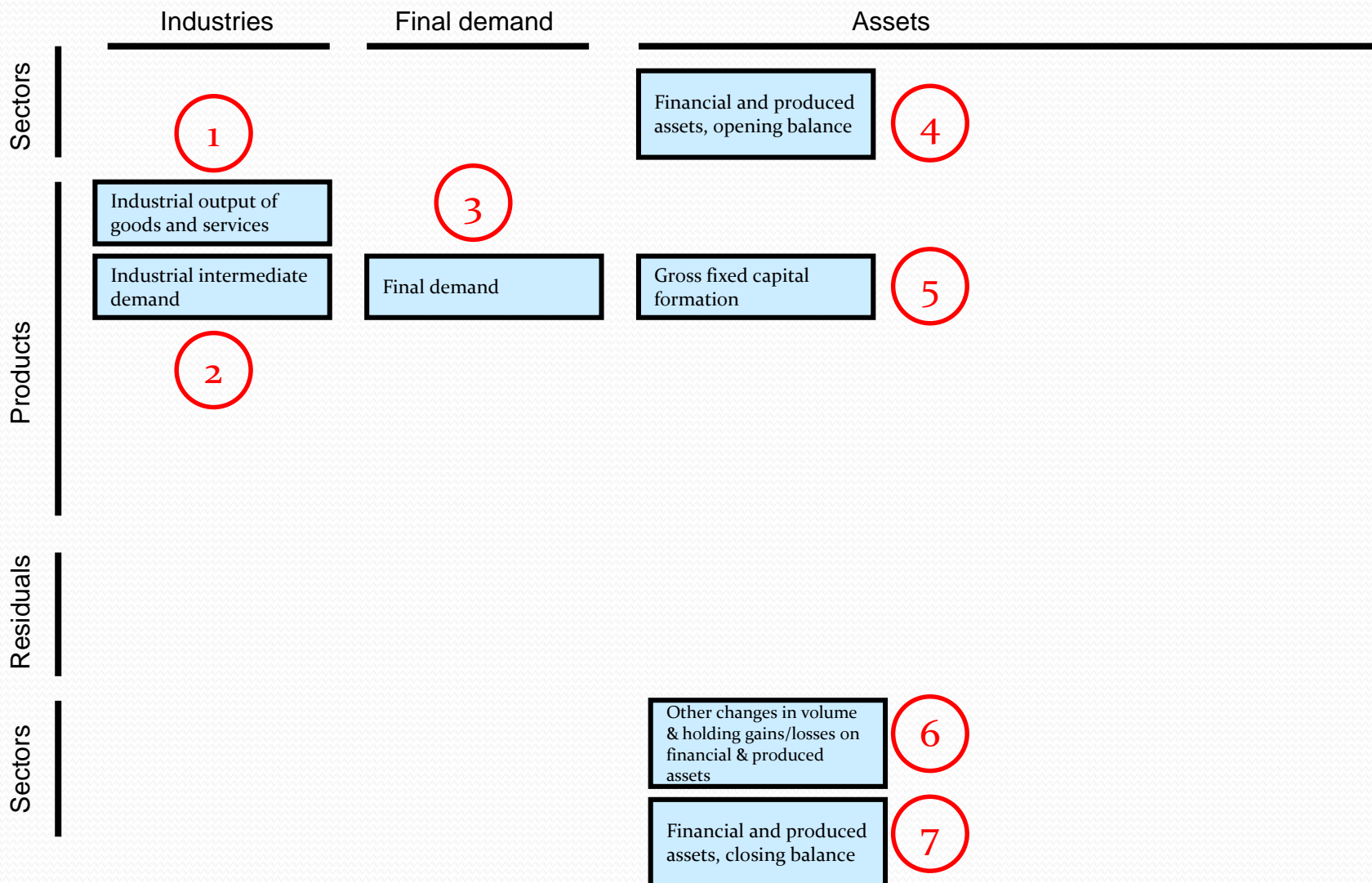
- A coherent measurement framework linked to SNA:
 - Aligned concepts, classifications and methods
- Based on accounting principles & systems theory:
 - Stock/flow → asset, supply, use
 - Consistent units of measure & valuation rules
- Flexible and modular
 - Select and adapt components to country needs
 - Don't need to be complete to be useful



The SEEA and the SNA

- The SNA measures national economic activity, production and assets (wealth):
 - In monetary terms
 - By tracking transactions between **economic units** (businesses, households, governments)
- The SEEA measures environment/economy links:
 - Expands the asset boundary (includes natural assets)
 - Distinguishes expenditures on **environmental protection**
 - Records **physical** quantities of inputs to economy
 - Records **residuals** produced and consumed (by whom)
 - Records changes in private and public **natural assets**

SNA view of the world

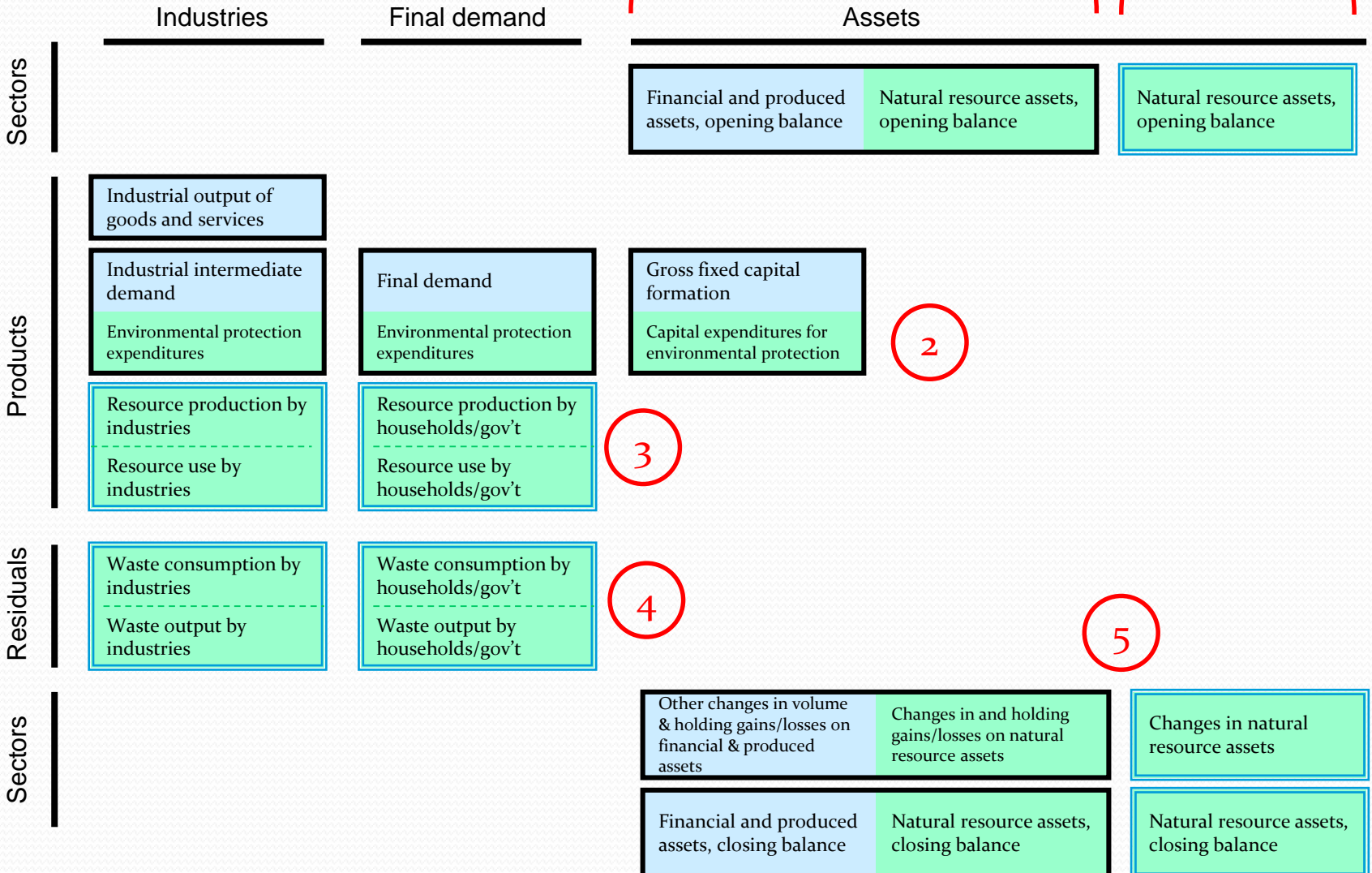


SEEA View of the world

Private

1

Public

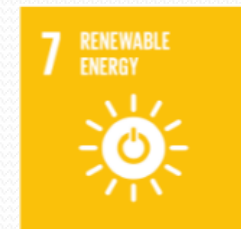


SEEA-CF – The Accounts



- **Assets** (stocks; physical and monetary):

- Mineral and energy resources
- Land
- Soil
- Timber
- Aquatic resources
- Other biological resources
- Water
- Oceans – framework being developed



SEEA-CF – The Accounts

- **Physical flows**

- Supply/use for materials (extract → consume)
- Material flows (through economy) to final demand (e.g., GHGs)
- Water supply/use
- Energy supply/use
- Residuals
 - Air emissions
 - Water emissions
 - Wastes (generated and used/recycled)



SEEA-CF – The Accounts

- **Monetary flows**
 - Environmental protection expenditures
 - Resource use and management
 - Environmental goods and services sector (supply side)
 - Environmentally-related payments by & to government (fines, fees, taxes, subsidies, concession payments)



SEEA – Pacific Implementation

- Fiji – Energy, Water, Solid Waste, Land (forthcoming) and measuring sustainable tourism (case study)
- FSM – Energy
- Palau – Water and Energy
- Samoa – Water, Energy accounts forthcoming
- Vanuatu – Land (forthcoming), Oceans pilot under consideration
- SEEA assessments completed for five countries – reviewing policy/planning demand, capacity and data issues, and developing a practical process for implementation

Results sample

FEDERATED STATES OF MICRONESIA ENERGY ACCOUNTS

The accounts were developed using the System of Environmental-Economic Accounting - Central framework (SEEA).

The accounts were prepared by Statistics Division, Department of Resource and Development, National Government, Federated State of Micronesia, United Nations Economic and Social Commission for the Asia Pacific, Pacific Office and the Australian National University.

The full Energy Accounts are available at <http://www.fsmstats.fm>

ENERGY IS CENTRAL TO FSM'S DEVELOPMENT GOALS



SUSTAINABLE
DEVELOPMENT
GOAL # 7

Improve the environment and its states:
reduce energy use and convert to
renewable energy sources/ minimize
emission of greenhouse gases.



STRATEGIC GOAL 3
FSM STRATEGIC DEVELOPMENT
PLAN
2004 - 2023

Lessening energy demand via
conservation strategies and use
of more efficient energy using
appliances:



Installation of alternative energy
production technologies



ENERGY ACTIONS & TARGETS
FSM STRATEGIC DEVELOPMENT PLAN
2004 - 2023

Safe, reliable, cost-
effective and
sustainable energy
supply



A diversified
energy resource base



Environmentally
sound and efficient
use of energy



KEY TARGETS FROM
THE FSM NATIONAL ENERGY POLICY 2012

KEY FINDINGS FROM THE 2015 ENERGY ACCOUNTS

4610

MILLION GIGAJouLES

FSM TOTAL USE OF ENERGY
PRODUCTS
(fossil fuel & electricity)

596,433

GIGAJouLES

FSM LOSS IN ENERGY CONVERSION
(loss in burning diesel to generate
electricity)

TOTAL USE OF ENERGY PRODUCTS BY STATE, 2015



54% POHNP
8% KOSRAE
23% CHUUK
14% YAP

ECONOMIC PRODUCTIVITY OF ENERGY USE IS DECLINING



FSM ENERGY PRODUCTIVITY

2009 2012 2015

TOTAL MONETARY USE OF FOSSIL FUEL BY SECTOR



50% OTHER INDUSTRIES
29% ELECTRICITY
4% HOUSEHOLDS
3% GOVERNMENT
14% EXPORTS

Some applications of SEEA

- Upfront attempt to link account production to policy and analysis. Still work-in-progress to build demand for policy use.
- Some policy applications include:
 - budgeting and fiscal policy issues, such as taxation to create incentives that determine use of natural resources;
 - specific sector/resource policy and planning, for example measuring sustainable tourism (as discussed in Fiji's case study earlier), and oceans management;
 - infrastructure investment and maintenance planning; and
 - regulatory measures that determine production and use of natural resources.

Applications of SEEA - SDG indicators monitoring

- SEEA provides a framework for supporting monitoring of national plans and SDGs
- SEEA connections to SDG
 - For example: target 15.9 “by 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts”.

An Example – Goal 7 on Energy

- 4/6 SDG indicators can be directly/ partially derived from SEEA Energy
- Provides a measure of CO2 emissions
- Facilitates policy analysis on efficiency of resource use, intensity (with application for regulation), type of resource used (renewable, fossil), use and supply capacity (link to infrastructure planning)

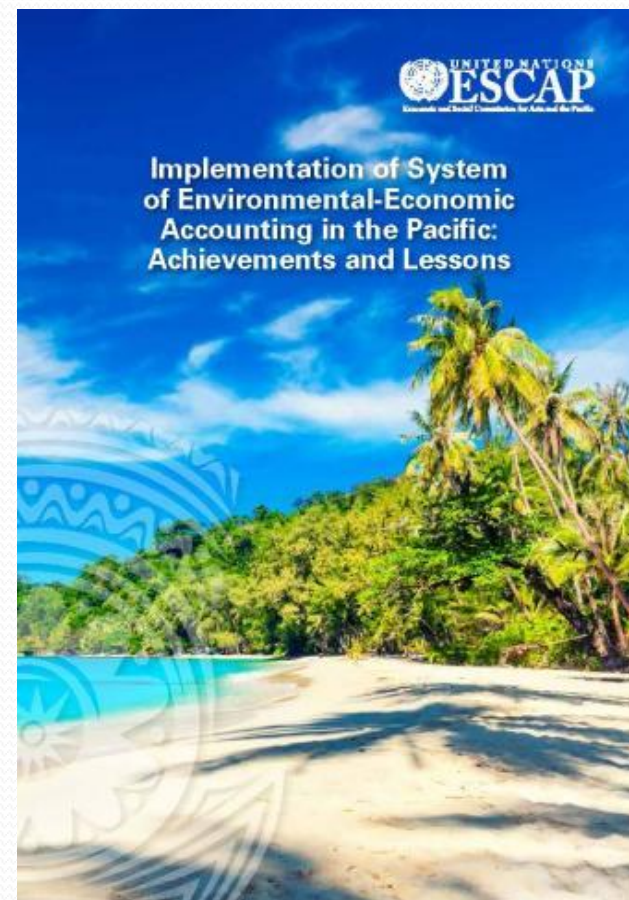
Work-in-progress

- Early days for SEEA implementation in the Pacific – an initial attempt to produce official environmental statistics has resulted in good progress in five countries
- Further focus on quality of the existing accounts, and extending the range of accounts produced. Broader applications once a number of requisite indicators are available, e.g. Oceans and measuring sustainable tourism
- Increasing the number of countries in the Pacific producing and using SEEA accounts is a goal, although ground realities, level of country commitment and policy value-added will need to be assessed on a country-by-country basis

Reference

This paper is based on content of a publication issued by the United Nations Economic and Social Commission for Asia and the Pacific, Pacific Office (dated 20 December 2017), titled SEEA Implementation in the Pacific – Achievements and Lessons.

- See <http://www.unescap.org>





Vinaka – thank you!