

# **Implementation of System of Environmental-Economic Accounting in the Pacific: Achievements and Lessons**



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# **Implementation of System of Environmental-Economic Accounting in the Pacific: Achievements and Lessons**







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# 1. Introduction

The System of Environmental-Economic Accounting (SEEA) Central Framework<sup>1</sup> was adopted as international statistical standard in 2012. Implementation in the Pacific, however, has only picked-up momentum from 2015, based on country and regional level work which the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) Pacific Office implemented through a United Nations (UN) Development Account Project titled *Strengthened Capacity of Small Island Developing States in Asia-Pacific on Valuation of Environmental Capital and the Economic Cost of Gender Inequality* (the Project). The Project responds directly to the requests made by member States in the Rio+20 outcome document “The Future We Want” (UN General Assembly 2012). Among other things, that document calls for balanced integration of the three pillars of sustainable development through better data availability.

This publication summarises the lessons and achievements from implementation of SEEA in the Pacific, based predominantly on the work undertaken by ESCAP Pacific Office through the Project over the period 2015-2017. This work directly led to, inter alia, the development and first, historic release of accounts in four Pacific Island Countries (Federated States of Micronesia (FSM), Fiji, Palau and Samoa), diagnostic readiness assessments for SEEA in five Pacific Island Countries (FSM, Fiji, Palau, Samoa and Vanuatu), a dedicated Pacific regional training course, and several in-country capacity building efforts.

Prior to implementation beginning on the Project, other development partners had collaborated with ESCAP Pacific Office on raising awareness of SEEA through regional dialogue, while other bilateral partners had provided training support to national statistics offices as well. Broader partnerships during the Project implementation were explored and engaged, to leverage expertise and resources for sustaining efforts. ESCAP's Statistics Division, United Nations Statistics Division (UNSD) and Statistics Institute for Asia and the Pacific (SIAP) also provided technical assistance and training support at various stages of implementation.

This publication aims to capture and share knowledge based on the results achieved through a methodical and concerted approach by ESCAP in partnership with five countries in the Pacific region. It also captures region-wide awareness and capacity building initiatives for compilation of accounts using SEEA.

Specifically, this publication aims to:

- i) share the experiences and lessons (which may be applicable to countries both within and outside of the Pacific region);
- ii) showcase the significant progress in the Pacific, to create awareness amongst users and producers, particularly in small island states context, and amongst development partners to build further momentum; and
- iii) signpost future work in the Pacific region, to guide development partners to focus and design any planned assistance.

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<sup>1</sup> SEEA Central Framework <https://unstats.un.org/unsd/envaccounting/seearev/>

## 2. The SEEA Framework– Why is it Useful for the Pacific?

*The SEEA framework provides internationally agreed concepts and definitions on environmental-economic accounting. It is an invaluable tool for compiling integrated statistics, deriving coherent and comparable indicators and measuring progress towards sustainable development goals.*

Ban Ki-Moon  
Former Secretary General, United Nations

As the Pacific region embarks on its journey towards attainment of the Sustainable Development Goals<sup>2</sup> by 2030, practical and scalable tools for collecting, analysing and tracking data are necessary to support decision-making in governments, civil society, development partners and the private sector.

Environmental economics and accounting has significant potential to improve policy-making, resource use and environmental outcomes in the Pacific region. The Pacific Island Countries (PICs) are generally dependant of imports (e.g. energy – some of the most intensive users of fossil fuels in the world are in the region) and resource challenged (e.g. water - with sources of freshwater in atoll countries largely limited to scarce rainwater and groundwater, imported water or desalination). Pacific ecosystems are extremely fragile, and made more so each year by the increasing threat of climate change.<sup>3</sup> As such, it is important that the region can reliably utilise economic and environmental statistics for informing policy decisions.

The ESCAP Pacific Office effort thus far has aimed to build national capacity to produce policy-relevant environment indicators using SEEA. The approach was tailored for each country, and the development of accounts was driven by national priorities, data availability at the national level and the capacity within country.

The key features of the SEEA are outlined in Annex 1. In brief, the SEEA consists of a set of accounts which structures information in consistent ways to enable: links to economic statistics; comparable statistics to be produced between environmental domains (e.g. land, water, oceans and air) and between countries. Importantly, SEEA produces data and indicators for policy, analysis and research.

Initial results from SEEA implementation in the Pacific region are positive and demonstrate the ability of the SEEA Central Framework to be customised to the small PICs, often characterised by lesser resources and local capacity. However, each SEEA account released by PICs highlighted the challenges remain with data and information gaps.

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<sup>2</sup> See <https://sustainabledevelopment.un.org/sdgs>

<sup>3</sup> For example, see 2016 Forum Leaders' Meeting Communique at [http://www.forumsec.org/resources/uploads/embeds/file/2016\\_Forum\\_Communique\\_Full\\_7Dec16.pdf](http://www.forumsec.org/resources/uploads/embeds/file/2016_Forum_Communique_Full_7Dec16.pdf)



This document outlines the application of SEEA in the Pacific region, providing the approach adopted for national and regional level implementation, followed by a summary of developments. Account specific summaries produced by PICs, as well as, information on national assessments completed are provided. An overview of capacity building, training and awareness efforts is also presented. Lessons from implementation efforts are discussed, followed by a way forward that provides guidance to national stakeholders and development partners on entry points for further work and potential partnerships.

### 3. Approach to SEEA Implementation in the Pacific

SEEA implementation in each country was driven by a combination of national priorities, national data availability and the capacity to compile statistics and use those statistics to inform policy analysis. Implementing the SEEA was positioned within the broader context of improving the compilation of environment statistics for policy analysis and was integrated within the work plans (especially to national accounting) of the respective statistics offices.

The strategy adopted for supporting national implementation of environment statistics included:

- i) assessing environment policy priorities, statistical infrastructure, data availability and human resource capacity;
- ii) identifying priorities for SEEA statistics, which detail the institutional framework, training needs and priority actions for national implementation; and
- iii) providing technical assistance and training for compiling and using statistics for one priority sector identified in the national assessment. The technical assistance work was nationally-tailored and targeted at the priorities identified through the assessment work. It aimed at building national level capacity and maximised skill transfer, through a combination of on-the-job and formal training for various stakeholders.

The regional strategy for supporting the development of SEEA included:

- i) coordinating regional training for PICs, including how to diagnose and assess needs, capacity and feasibility for implementation and basic compilation methods. Training covered main SEEA components of initial interest to PICs, including energy, land, solid waste, water; and
- ii) documenting national experiences and SEEA efforts in the Pacific region.

## 4. SEEA Accounts Produced and Associated Findings

Four PICs have published environmental-economic accounts and a fifth is currently compiling an account.

Fiji has completed three accounts (energy, water and solid waste), Federated States of Micronesia completed an energy account, Palau produced both energy and water accounts, while Samoa has published a second iteration of water accounts.

**Table 1. Status of SEEA implementation in the Pacific region.**

Country	Accounts produced	Accounts planned or possible over short to medium-term
Federated States of Micronesia	Energy	Water Further iteration of energy account
Fiji	Energy Water Solid waste	Land cover (in-progress) Further update and iteration of accounts produced
Palau	Energy Water	Waste Further update and iteration of accounts produced
Samoa	Water	Energy Further iteration of water account
Vanuatu	Currently collating data for compiling land cover accounts	Water

Further details of the accounts and results are found below. The experience is grouped by account type (e.g. energy, water, solid waste).

### 4.1 Energy accounts

Energy is a critical issue for the Pacific and the region is lagging behind in terms of access to energy, energy infrastructure, regulation and clean energy generation.

Intensity of oil use for electricity generation in the Pacific is over 80 percent, with most countries relying almost exclusively on diesel for commercial energy requirements. The region's geographical isolation, small economies of scale and limited generation capacity have translated into high electricity costs and low electrification rates, with 70 percent of households without modern electricity services.<sup>4</sup> Between 2005 and 2030, electricity demand in the Pacific is expected to grow by about 7 percent per year, while electricity generation will increase by 6.4 percent per year. By 2030, refined petroleum fuels are projected to remain the Pacific region's dominant primary source of energy for power generation, complemented by hydropower and natural gas.<sup>5</sup>

<sup>4</sup> UNESCAP. 2017.

<sup>5</sup> ADB. 2013. Energy Use in the Pacific.

Pacific leaders have prioritised the development of affordable and clean energy to break the dependence on volatile global fossil fuel markets, reduce high costs associated with transporting fuel, promote low-carbon growth, and expand access to electricity.

In this context, the importance of data collection and standardised analysis and reporting on energy issues is clear.

Energy accounts have been produced for the Federated States of Micronesia, Fiji and Palau. Key results and policy background for these are found below.

### ***Federated States of Micronesia***



Energy is a critical input to the economy and well-being of the Federated States of Micronesia (FSM). The FSM Strategic Development Plan 2004 – 2023 and National Energy Policy both aim for more efficient use of energy, diversification of energy sources and increasing the level of renewable energy use. Achieving these aims requires understanding of the cost and benefits of different courses of action. Such analysis requires an integrated analysis of environmental and economic considerations. Utilising the SEEA Central Framework, experimental energy accounts were produced for the FSM<sup>6</sup>. These include physical (kilojoules) and monetary (US\$) measures and show the main suppliers and uses of energy in FSM as well as for each of the states.

The experimental energy accounts show that:

- virtually all energy is produced from fossil fuels;
- the value of energy use has increased between 2009 and 2015;
- Pohnpei uses the most energy of all states;
- energy productivity is declining (efficiency is decreasing); and
- it is possible to produce SEEA accounts in FSM with available data.

The policy implications of the experimental energy accounts include:

- identification of cost effective investments in energy supply infrastructure to reduce energy losses;
- assessing financing options for investments, including user pays and equity principles; and
- promoting more efficient energy use by business and households.

The release of the experimental energy accounts in a first step. The next steps include technical improvements in energy accounts, such as:

- adding solar and fuel wood;
- closer alignment with the national accounts;
- better accounting for use of energy by foreign fishing vessels; and
- enhancing the data collection, coordination and cooperation mechanisms needed to facilitate the on-going production of the energy and other SEEA accounts (e.g. CO<sub>2</sub> emissions) for FSM.

<sup>6</sup> Available at [www.unescap.org](http://www.unescap.org) and <http://www.fsmstats.fm>



ESCAP Pacific Office provided and facilitated technical support for compiling the account, while Statistics Canada and ESCAP Statistics Division provided feedback on a draft account.

## Fiji



The need for reliable and affordable energy, lack of public awareness regarding energy efficiency and the consequent need to monitor energy use and the sustainability of its supply are all key concerns highlighted in the Green Growth Framework for Fiji, and the National Development Plan. In addition, the national Energy Policy 2014-2020 outlines Fiji's vision and strategic direction for achieving sustainable energy for all.

Utilising the SEEA Central Framework, the Fiji Bureau of Statistics, with technical support from ESCAP produced experimental energy accounts<sup>7</sup> for 2006 through to 2014. The accounts are in physical terms only. The energy accounts provide a framework for the assessment of energy production and consumption as well as related issues of resource use.

The energy accounts produced by Fiji only include electricity generated and distributed by Fiji Electricity Authority (FEA) but this amounts to 97.5 percent of all electricity generated on the grid in Fiji.

The main findings from the energy accounts were:

- energy use in Fiji is increasing;
- the major consumer of energy is the commercial sector, followed by industry, then households;
- the energy intensity of the Fijian economy is improving;
- over half of electricity generated in Fiji comes from thermal generation – this comes at significant cost and environmental impacts; and
- a large proportion of the energy content of the fuel being used for thermal generation in Fiji is being lost in energy transformation.

Fiji has identified the following limitations of the current energy accounts:

- electricity represents only a small portion of Fiji's energy mix;
- the FEA client base covers only a part of Fiji's population; and
- energy consumers are based on the classification used by FEA to classify their customers (commercial, household and industry) and not further disaggregated by sector, for example, manufacturing, agriculture, hotels and restaurants.

Future energy accounts could be expanded to provide a more comprehensive picture of Fiji's energy supply and use. Understanding the overall energy supply, demand and distribution would provide a framework within which to better manage Fiji's future energy requirements and impacts.

In consideration of these factors, further work by the Fiji Bureau of Statistics may include:

- providing information on additional sources of energy supply (fuel for transportation, cooking and industry);

<sup>7</sup> Available at [www.unescap.org](http://www.unescap.org) and [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj)

- seeking more detail on users, for example, the energy intensity of specific industries would aid the management of energy use; and
- more detail on rural and outer island households would help understanding where to focus improvements in access to energy.

## Palau



The Palau National Energy Policy (2010), identified goals directly related to the energy account. The policy aims to reduce energy use, raise energy efficiency and convert to renewable energy sources. A range of actions and targets are outlined in the Policy, including:

- 30 percent reduction in overall national energy consumption by 2020; and
- 20 percent of electrical energy generated in Palau through renewable sources by 2020.

Physical and monetary energy accounts<sup>8</sup> were developed for the fiscal years 2014 to 2016 using the SEEA Central Framework.

Key results from the energy accounts included:

- the physical use of energy (kilojoules) declined between FY2014 and FY2016;
- energy productivity (\$ of GDP per \$ of energy use) increased 60 percent between FY2014 and FY2016, due mostly to decreases in energy use and the price of energy products;
- the physical efficiency of energy use has declined by 31 percent and 45 percent respectively;
- per capita use of energy (kilojoules) declined between FY2014 and FY2016, due to a combination of increasing population and decreasing physical use of energy and water;
- the value of infrastructure for electricity supply, water supply, and sewerage treatment increased slightly from \$85.7 million in FY2014 to \$86.2 million in FY2016; and
- use of solar electricity more than doubled between FY2014 and FY2016, with government the largest user. However, solar electricity makes up less than 1 percent of total energy use.

The information contained in energy accounts had a range of policy implications, including:

- Regulatory issues - the retail price of fossil fuel is higher than regional benchmarks but retail price of electricity is lower (both in pre- and post-tax prices). Reviewing government taxes and subsidies on energy products might lead to a more equitable and user pays pricing regime, encourage renewable energy and switching to hybrid or electric cars;
- Infrastructure planning - the accounts reveal that there are significant losses of energy via the distribution networks, while energy efficiency is also declining. Increased investment in supply infrastructure may reduce losses while increased investment in energy saving technology may increase efficiency;
- Renewable energy - the accounts show the increasing use of solar energy reflecting positively on government policy. Reductions in price of renewable technology could see further reductions in the dependence on fossil fuels; and
- Tracking the sustainable development goals (SDGs) - the accounts produce data able to be used to track several of the SDGs targets and indicators related to energy.

<sup>8</sup> Found at [www.unescap.org](http://www.unescap.org) and <http://palaugov.pw/system-of-environmental-economic-accounting-seea/>

The Bureau of Budget and Planning, Government of Palau led the compilation effort, with technical support provided and facilitated by ESCAP Pacific Office. The Australian Bureau of Statistics (ABS) and ESCAP Statistics Division provided a technical review of the draft accounts.

## 4.2 Water accounts

Access to clean drinking water is a fundamental human right. Water is also a key input into many private and public enterprises including the production of food. Availability of water in the Pacific region is extremely variable, changing country to country, and can change year to year depending on climate, infrastructure and demand issues.

Water insecurity in the region is rapidly increasing with pressure coming from climate change, urbanisation and energy needs. In fact, the UN estimates that global water use over the last century has been growing at twice the rate of population increase. Samoa, Fiji and Palau have all produced water accounts and key results and policy relevance are presented below.

### Samoa



Samoa is fortunate having high rainfall and a small population. However, with increasing tourism, urbanisation and the impacts of climate change, water management is a key policy issue. In 2013, ESCAP, the ABS and the United Nations Statistics Division (UNSD) assessed priorities, opportunities, constraints and feasibility for SEEA implementation in Samoa. The assessment highlighted Samoa's strong existing institutions which indicated that it could begin to implement SEEA. Accounts for water, energy, solid waste, marine and coastal resources were recognised as having high policy relevance for Samoa. Of these, the assessment concluded that water accounts had the highest policy relevance and feasibility of production.

Utilising the SEEA Central Framework, experimental water accounts for three financial years 2011-12, 2012-13 and 2013-14 were produced and published<sup>9</sup> by Samoa Bureau of Statistics (SBS) in 2015, with technical support provided by ESCAP. A second water account covering 2014-15 was added in 2017, through SBS effort, with ESCAP providing comments on a draft account. These include physical supply and use data, flow data and partial monetary supply and use data.

The experimental water accounts show:

- total water consumption varied little year by year;
- households were the major consumers of water in each year;
- the implicit price of water varied between water suppliers and sectors;
- households supplied via Independent Water Schemes (IWS) were observed to be using four times the amount of water used by metered customers;
- while water use for electricity generation is extremely high, actual consumption is very low as the water is immediately discharged back to the environment; and
- estimated water use by livestock stayed relatively static over the three years.

<sup>9</sup> Found at [www.unescap.org](http://www.unescap.org) and [www.sbs.gov.ws](http://www.sbs.gov.ws)



The policy implications of the experimental water accounts include:

- better targeted investments in water infrastructure may be needed;
- setting appropriate water tariffs to help ensure the production and use of water in Samoa is efficient and equitable;
- improved reporting against targets and indicators including the SDGs; and
- compiling Tourism Satellite Accounts in conjunction with relevant SEEA accounts would allow policy-makers to better understand the dependence of tourist industries on natural resources.

The publication of the experimental water accounts for Samoa in 2015 and 2017 was the first step in establishing on-going environmental accounting program in Samoa. The initial accounts recognise several activities could be undertaken to improve the water accounts, including:

- improvement of primary data sources;
- production of complementary environmental accounts including water asset accounts, land use accounts and energy accounts;
- better mechanisms for data exchange including standardisation of coding;
- an active programme of professional development and training for those charged with producing the accounts; and
- better integration with the national accounts.

## Fiji



The 2013 Fiji Constitution guarantees the right of every person to clean and safe water in adequate quantities. The Green Growth Framework and development plan for Fiji underscores the need, and adopts measures, to improve access to safe drinking water for the population. In particular, to address data gaps in water resource planning, the Framework calls for developing an “integrated database on national water use, extraction and replenishing rates and disseminate widely for water resource planning and matching water supply with demand by 2017”.

An experimental water account was prepared in response to the need for better data and statistics to inform policies on water resource management and universal access to safe drinking water without increasing pressure on the environment. Supported by UNESCAP, the Fiji Bureau of Statistics utilised the SEEA Central Framework, to compile water accounts<sup>10</sup> for 2013 to 2016. UNSD also provided initial technical support with ESCAP.

The main findings of the water accounts were:

- surface water extraction was increasing year on year;
- most metered water consumption was by households, followed by the commercial sector; and
- not all water abstracted for metered water production was used as a large amount is being lost through distribution, and smaller amounts through the purification processes.

<sup>10</sup> Available at [www.unescap.org](http://www.unescap.org) and [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj)

This experimental account was the first attempt towards a more complete accounting of water availability, supply and use in Fiji. While the accounts derived some useful information, further development of SEEA water accounts is needed to facilitate gathering of water data to address a number of important policy questions such as:

- how much water is available for use? How much of that portion has already been used?
- which source of water have we been dependent most on? Is it sustainable?  
what is the main use of water? and which industry use water more/less efficiently?

In order to provide evidence to support these policy questions, the Fiji Bureau of Statistics is considering the future work, including:

- disaggregating the commercial sector into key water-related industries (including agriculture, hotels and restaurants, and manufacturing) to capture the amount of metered water use in different industries;
- expanding the scope of the account from metered water to cover information on abstraction and use of water, as well as wastewater and reused water generated by industry; and
- compiling an asset account for water to monitor the stock and changes in the stock of water for use.

## Palau



Water accounts were an identified priority in an assessment report prepared by Bureau of Budget and Planning, Government of Palau with support from ESCAP and UNSD. The National Water Policy (2012) aims to: protect and conserve Palau's water resources; and ensure access to affordable and sustainable water supply and wastewater services. Furthermore, an Executive Order has established water use and conservation policies in anticipation of extreme drought conditions expected until May 2018. Measures target government offices and facilities, including implementation of water efficiency practices and technologies, and awareness raising and training. Physical and monetary accounts for water<sup>11</sup> were developed the fiscal years 2014 to 2016 using the SEEA Central Framework. ESCAP Pacific

Office provided and facilitated technical support, and ABS and ESCAP Statistics Division reviewed draft accounts.

Key results from the water accounts were:

- the physical use of water (mega litres) declined between FY2014 and FY2016;
- water productivity (\$ of GDP per \$ of water use) decreased 38 percent between FY2014 and FY2016 due mostly to increases in the price of water;
- the physical efficiency of water use has declined by 31 percent;
- per capita use of water (mega litres) declined between FY2014 and FY2016, due to a combination of increasing population and decreasing physical use of water; and
- the value of Palau Public Utility Corporation infrastructure for electricity supply, water supply, and sewerage treatment increased slightly from \$85.7 million in FY2014 to \$86.2 million in FY2016.

<sup>11</sup> Found at [www.unescap.org](http://www.unescap.org) and <http://palaugov.pw/system-of-environmental-economic-accounting-seea/>

Some of the policy implications from the water accounts are:

- Infrastructure planning - the accounts reveal significant losses in water through the distribution networks, while water efficiency also declined. Increased investment in supply infrastructure may reduce losses while increased investment in water saving technology may increase efficiency; and
- Tracking the SDGs - the accounts can produce several of the indicators for the SDG targets related to water.

### 4.3 Solid waste accounts

Solid waste management is a particularly challenging issue for PICs. Volumes of solid waste have been growing in line with rising living standards, increased importation of goods, and larger tourist arrivals. Planned and careful management of solid waste is a priority for the countries of the region, but data on production, reuse and disposal of waste is limited, making policy-making and budgeting difficult. To this end, Fiji has produced solid waste accounts on an experimental basis.

#### Fiji



Rapid urbanisation and expansion of economic activity has increased both consumption and imports in Fiji, placing significant pressure on the management of all forms of waste. An ineffective waste management system, littering, absence of organised waste management systems in the rural and outer islands and ineffective enforcement of existing laws are outlined as concerns in Fiji's Green Growth Framework.

By utilising the SEEA Central Framework and with technical support from ESCAP, the Fiji Bureau of Statistics has produced experimental waste accounts<sup>12</sup> for 2013 to 2016.

The main findings of the solid waste accounts are:

- overall trend of increasing waste generation;
- total waste generated consists of general (80 percent), green (10 percent) and special waste (10 percent);
- between 2013-2016, the quantity of waste increased at more than double the rate of GDP. This indicates that the economy is becoming more waste intensive;
- almost all waste generated in Fiji ends up in landfill, almost nothing is recycled; and
- in 2016, the waste management related capital expenditure allocated to the Department of Environment represented just 0.07 percent of total central government expenditure.

While providing extremely useful data to policy-makers, due to constraints on data availability the solid waste account only includes the proportion of waste collected and sent to landfills from areas representing around 40 percent of the total population.

<sup>12</sup> Available at [www.unescap.org](http://www.unescap.org) and [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj)



Addressing this data limitation is amongst the next steps under consideration by the Fiji Bureau of Statistics, others include:

- methods of gathering data on solid waste for outer islands and rural areas, with no access to collection and landfill services; and
- including data on illegal dumping, litter, recycling and associated activities.



## 5. SEEA Diagnostic Assessments

SEEA diagnostic assessment reports were completed for five countries, namely Fiji, FSM, Samoa, Palau and Vanuatu. The aim of the assessment process was to identify a practical way forward for environmental statistics and environmental-economic accounting in a country context. The assessments were intended to provide a foundation for initiating statistical development to better support policy and decision-making related to sustainable development, environmental management and the green economy.

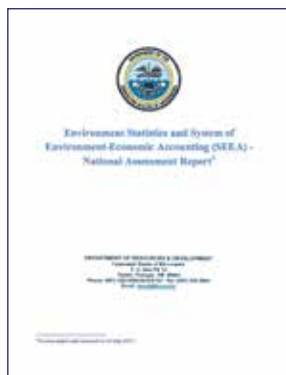
The assessments capture policy priorities, institutional arrangements and frameworks, and capacity needed for countries to successfully improve environmental statistics at the national level. The work utilises international good practice for statistical development and was undertaken by national stakeholders, led by national statistical offices with technical support from ESCAP Pacific Office, in collaboration with UNSD (for FSM and Palau), and ESCAP Statistics Division (for Vanuatu).

Key elements of the assessments were:

- establishment of the rationale for an integrated statistical system for environmental information;
- summarising the priorities and opportunities for improving the institutional framework necessary for SEEA implementation;
- identifying policy basis and national priority accounts; and
- exploring linkages to other activities, including capacity building and training, seeking technical support, and leveraging existing initiatives.

The final assessment report acts as a basis for engaging stakeholders, and developing concrete proposals for support. However, these national assessment reports should be reviewed over time and updated to reflect emerging priorities and revised implementation plans. The following section presents an overview of the assessment findings for Federated States of Micronesia, Palau and Vanuatu, which have been published by national authorities.<sup>13</sup> In addition, an assessment on the feasibility of measuring sustainable tourism in Fiji using SEEA, was conducted and is presented in this section.

### ***Federated States of Micronesia***



Environmental sustainability remains a significant development focus for FSM. The current Strategic Development Plan identifies nine strategic goals related to the environment. These include: mainstreaming environmental considerations, including climate change, in national policy and planning; reducing energy use; making natural resources accessible; protecting natural marine, freshwater, and terrestrial ecosystems; and improving environmental awareness and education.

FSM has a decentralised statistical system with many activities being carried out at the State-level. The National Statistical Office compiles and consolidates national level statistics. Across environmental

<sup>13</sup> Available at [www.unescap.org](http://www.unescap.org) and respective national statistics office websites.

sectors, basic data is being compiled by many sectoral areas within separate departments and organisations. There is currently not a body that is responsible for ensuring the consistent and reliable collection and production of environment statistics. Additionally, there is a lack of a central data repository for environment data.

Overall, the assessment report<sup>14</sup> found a high level of interest in improving and better utilising environment statistics in FSM. A number of recommendations were made regarding the streamlining and strengthening of institutional arrangements to implement environmental data collection, analysis and compilation under SEEA.

The following areas were assessed as priorities for implementation under SEEA:

- agriculture, forestry, marine and coastal resource accounts;
- ecosystems and biodiversity accounts;
- water, energy and waste accounts; and
- climate change and land management accounts.

The assessment outlined the recommended next steps for implementing the prioritised SEEA accounts, with energy accounts identified as being most feasible.

## Palau



Palau relies on the natural environment for economic development and societal and cultural well-being. Additionally, Palau is a global and regional advocate for protecting the environment, oceans and halting climate change. Better environmental data management and statistics stands to strengthen Palau's ability to make environmentally sustainable policy interventions.

The assessment<sup>15</sup> found that across environmental sectors, basic data is being compiled by many ministries and departments. Additionally, there is a lack of a central data repository for environment related data. Several recommendations were made to streamline institutional arrangements and frameworks to ensure

successful implementation of SEEA. There is a high level of interest in improving and better utilising environment statistics in Palau. Priority sectors for improved environmental data collection include: tourism; marine and coastal resources; ecosystems and biodiversity; food security; water; energy; waste; climate change; and land management.

Due to their relevance to policy priorities and actions, the assessment recommended the following areas be prioritised:

- energy and water;
- marine and coastal resources;
- solid waste; and
- land cover.

<sup>14</sup> Available at [www.unescap.org](http://www.unescap.org) and <http://www.fsmstats.fm>

<sup>15</sup> Found at [www.unescap.org](http://www.unescap.org) and <http://palaugov.pw/system-of-environmental-economic-accounting-seea/>

The report also provided an outline of actions Palau could undertake towards implementation, with energy and water accounts identified as short to medium-term actions.

## Vanuatu



Vanuatu relies on the natural environment for sustainable development. There is a high level of interest in improving environment statistics in Vanuatu and the need for integrated information is recognised. In particular, priority sectors for improved environmental data collection include: ecosystems and biodiversity, water, energy, waste, and land. Better environmental data management and statistics will strengthen Vanuatu's ability to make environmentally sustainable policy interventions and monitor implementation of priorities set out in the Vanuatu National Sustainable Development Plan. It will also help with its global reporting commitments, including for the SDGs and the SAMOA Pathway.

Currently the compilation and publication focus is on economic and social statistics. However, the Vanuatu Strategy for the Development of Statistics includes plans in several areas of environment statistics. The assessment found that across environmental sectors, basic data are being compiled by many ministries/departments. There is currently no central repository for environment data. Several recommendations were made to improve and streamline institutional arrangements to ensure successful implementation of SEEA.

The following areas were recommended for prioritisation under SEEA:

- water account, and land cover account (short-term priorities);
- energy account, and solid waste account (medium-term priorities); and
- ecosystem condition accounts, tourism satellite accounts with environmental information (future priorities).

The assessment report<sup>16</sup> also outlined recommended steps to undertake the water and land cover accounts, and medium to long term actions to implement environment accounting.

## Fiji – Measuring sustainable tourism assessment findings



It is estimated that tourism related activities contribute up to 30 percent of Fiji's GDP, and forms the most significant source of foreign exchange earnings. Tourist numbers and spending are generally increasing, which while positive in terms of earnings and job creation, is causing mounting pressure on the fragile ecosystems, and energy, water and waste services.

Fiji's national policies and plans recognises that continued growth in this sector needs to be balanced with the broader social and environmental context in which tourism activity takes place. To this end, tourism is recognised as a core part of the national development plan and the Green Growth Framework for Fiji.

<sup>16</sup> Available at [www.unescap.org](http://www.unescap.org) and <https://vnso.gov.vu/>



A barrier towards integrated policy-making and planning in tourism is the availability of data and analysis to promote evidence-based decision making.

Reflecting this, the compilation of Tourism Satellite Accounts and related environmental statistics (using SEEA) could provide a more rigorous information base to assess the sustainability of tourism in Fiji. The UN World Tourism Organisation (UNWTO), ESCAP Pacific Office and the Fiji Bureau of Statistics partnered to support a nationally-led effort to assess the relevance and feasibility of an internationally compliant statistical framework for measuring sustainable tourism in Fiji. The assessment was also used to inform the current global statistical development of a framework for measuring sustainable tourism.

The assessment report<sup>17</sup> finds the need for a statistical framework and associated information on sustainable tourism, both highly relevant and feasible for Fiji. While measurement challenges exist, there is a substantive statistical infrastructure on which to build and use information on sustainable tourism to support policy analysis and development, and monitoring. There is clear demand in Fiji from both the tourism industry and leading policy agencies for measuring sustainable tourism. Overall, there is a strong institutional and data environment to support such measurement in Fiji.

More broadly, there is interest in how this work might be applied in other countries in the Pacific, given tourism sector dependency. An understanding of potential policy and measurement pathways in relation to sustainable tourism will assist in implementing relevant national and global sustainable development goals.



<sup>17</sup> Full report can be found at [www.unescap.org](http://www.unescap.org) and [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj)

## 6. Capacity Building and Training

A range of capacity building activity was undertaken and is summarised in Table 2, which mostly captures initiatives progressed under ESCAP Pacific Office's Development Account project over the period 2015-2017.

**Table 2: Summary of capacity building activity**

Activity	Comments
Regional meeting to develop programmes for the implementation of the 2008 System of National Accounts, 2012 SEEA and supporting statistics in the Pacific region. <sup>18</sup> Held in August, 2013 in Samoa.	Countries attending: Fiji, Papua New Guinea, Samoa, Tonga, Vanuatu. Organised by UNSD, in collaboration with ESCAP and other partners.
ESCAP organised Pacific regional training programme on SEEA, September 2016, Fiji.	12 countries plus Pacific Islands Forum Secretariat and UNSD. Details provided in text.
Dedicated assessment missions to FSM, Fiji, Palau, Samoa and Vanuatu - between 2015 to 2017.	Diagnostic assessments and identification of priority accounts and determine feasibility of compilation.
Dedicated missions (between 2015 to 2017) to targeted countries in support of compiling identified accounts.	Missions were in support of data assessment, capacity building and account compilation. Refer to the results released by authorities in FSM, Fiji, Palau, Samoa and Vanuatu.
Workshop on Natural Capital Accounting. Organised by the Global Development Network in association Wealth Accounting and the Valuation of Ecosystem Services Global Partnership (WAVES) and ESCAP Pacific Office. February 2017, Brisbane.	Workshop presented a valuable networking and knowledge sharing opportunity, and saw the launch of PANCAnet <sup>19</sup> , the online platform of the Pacific Natural Capital Accounting Network. Countries attending: Samoa, Fiji

A feature of the regional and national capacity building activity was the “hands-on” nature of training with practical exercisers being used to complement presentations and textbook reading. Assistance missions to countries focused on learning-by-doing, with the completion of a first draft of accounts the aim for all missions. In all cases, a draft was produced and presented to senior managers and stakeholders. The first draft accounts had gaps or other data deficiencies at the time of presentation. These limitations were addressed as best as possible in follow-up work and the limitations of the data were always made clear. The key benefit of presenting accounts to senior managers and stakeholders was creating understanding of scope and usefulness of the accounts and in many cases created the opportunity to suggest additional data sources and methods that would help address gaps and deficiencies.

<sup>18</sup> Details at <https://unstats.un.org/unsd/nationalaccount/workshops/2013/Samoa/Apia1.asp>

<sup>19</sup> Refer to [www.pancanet.org](http://www.pancanet.org)

A clear sign that capacity has been developed and maintained is that second Samoan water account, released in September 2017, which was produced largely without technical assistance.

A major capacity development undertaking was the ESCAP organised training programme<sup>20</sup> in 2016, exclusively for PICs and focussing on an introduction to SEEA methods accounting for energy, waste and water (three areas of most interest to PICs). Participants in attendance were from statistics offices and line ministries/departments representing: Cook Islands, Fiji, Kiribati, Republic of Marshall Islands, Federated States of Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Resource persons from the Pacific Islands Forum Secretariat and UNSD also participated. With a focus on practical advice, and mindful of existing capacity and institutional challenges around environment statistics compilation in PICs, the training programme aimed to:

- enhance understanding of basic concepts and applications of the SEEA Central Framework;
- understanding use of the self-diagnostic assessment tool to help determine priority areas of SEEA interest and feasibility of compilation;
- review data requirements and methods for the compilation of water, waste and energy accounts;
- facilitate experience sharing among countries present; and
- identify country plans for the SEEA implementation, while noting the opportunities for cooperation.

To complement these training events, ESCAP, organised a workshop on land accounting in September 2017<sup>21</sup>, and through SIAP, provided online training programmes on SEEA which a number of PIC representatives joined. For example, in November 2017, an online course<sup>22</sup> provided understanding and application of SEEA Central Framework. The programme helped participants acquire knowledge to deepen their understanding of the accounting principles and basic data needs for compiling environmental-economic accounts.



<sup>20</sup> Find presentations and related documents at [http://www.unsiap.or.jp/e-learning/5\\_es/1609\\_SEEA\\_Fiji.html](http://www.unsiap.or.jp/e-learning/5_es/1609_SEEA_Fiji.html)

<sup>21</sup> Refer to details at [www.unescap.org](http://www.unescap.org)

<sup>22</sup> Refer to details at [http://www.unsiap.or.jp/programmes/el\\_course\\_information/1710\\_EL\\_SEEA\\_Course%20Information.pdf](http://www.unsiap.or.jp/programmes/el_course_information/1710_EL_SEEA_Course%20Information.pdf)

## 7. Lessons from the Implementation of SEEA in the Pacific

Key lessons emerging for the implementation of the SEEA in the Pacific include:

- further introduction and awareness of SEEA required at national level. Interest is currently located within statistics offices and not amongst users of data and the broader statistical system;
- the production of pilot accounts and with selected examples of policy use has assisted to demonstrate the feasibility of producing SEEA accounts in the region;
- advance planning with country counterparts often allowed for various source information and data to be available in ahead of missions. This assisted in effective and efficient use of in-country time to focus on compilation and capacity building;
- national capacity is growing but due limited staff and competing demands, sustaining efforts without targeted support and demand from policy users could be a challenge;
- available statistics can be used to compile pilot accounts, usually with simplified industry breakdowns, often in a short space of time (within 12 months). Water and energy had been a focus - usually only one water supplier and one electricity supplier, meaning information is relatively easy to obtain;
- a combination of local staff time and development partner expertise has proved successful in planning for data needs and preparing accounts, as well as, knowledge transfer and capacity building;
- development partner expertise must recognise country context and adapt approaches to national realities for successful outcomes. Often stepwise and lighter approach is applicable given limited local counterpart capacities and variable systems in place;
- simplifying account templates, yet ensuring broad consistency with the SEEA Central Framework, has provided a practical solution to help counterpart use, as well as, better account for data realities and country context; and
- while there are data gaps and deficiencies, these can be overcome using standard statistical techniques (e.g. imputation, extrapolation, use of coefficients).

Planning and assessment processes provided useful starting points in all countries. The pilot account production process was successful in engaging senior managers and decision makers, and led to detailed discussions on how accounts could be used in policy and how account production could be embedded into statistical agencies. As such, the amount of initial planning and assessment could be reduced, with resourcing for pilot account production and subsequent planning and use increased. This approach is especially appropriate, given the resource and capacity constraints in the region. More so, understanding how accounts can be used (once produced) is a critical determinant in sustaining resource commitment and demand for SEEA.

A key feature of the work in the Pacific has been the attempt to link accounting work to policy and analysis. This is reflected in the SEEA assessment process and in the accounts produced, which in addition to the accounting tables have provided a range of interpretive and analytical text. This goes beyond what is done in many statistical offices. Government resources are smaller in PICs and often, there is limited capacity outside of the statistical offices to interpret and analyse the accounts.

While SEEA documentation developed in the Pacific (refer to FSM and Palau SEEA releases in particular) helps illustrate examples of issues for policy use, it underscores the point that statisticians and statistical offices alone cannot fully anticipate and understand policy use perspectives. To improve policy use and perspectives require the involvement of planners, key sector and budget policy makers into the early planning, production and post-production analysis phases to build ownership, and raise understanding of key policy applications (with concrete sectoral, infrastructure and fiscal policy uses developed). In fact, using the broader policy and planning coordination systems (e.g. through Ministries/Departments of Finance/Planning and Office of the Prime Minister) to drive use of SEEA findings and raise ownership, as the underlying basis for SEEA data compilation will create necessary policy demand for sustaining SEEA efforts, facilitate capacity building and allocation of resources for environment statistics, and informing more sustainable development outcomes.

It is evident that specific SEEA policy applications are still being developed globally, with little expertise amongst statisticians alone to fully integrate data for policy purposes. Economists, planners and sector policy experts can complement and facilitate analysis using SEEA account findings for policy application. In the Pacific region, policy applications could 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.

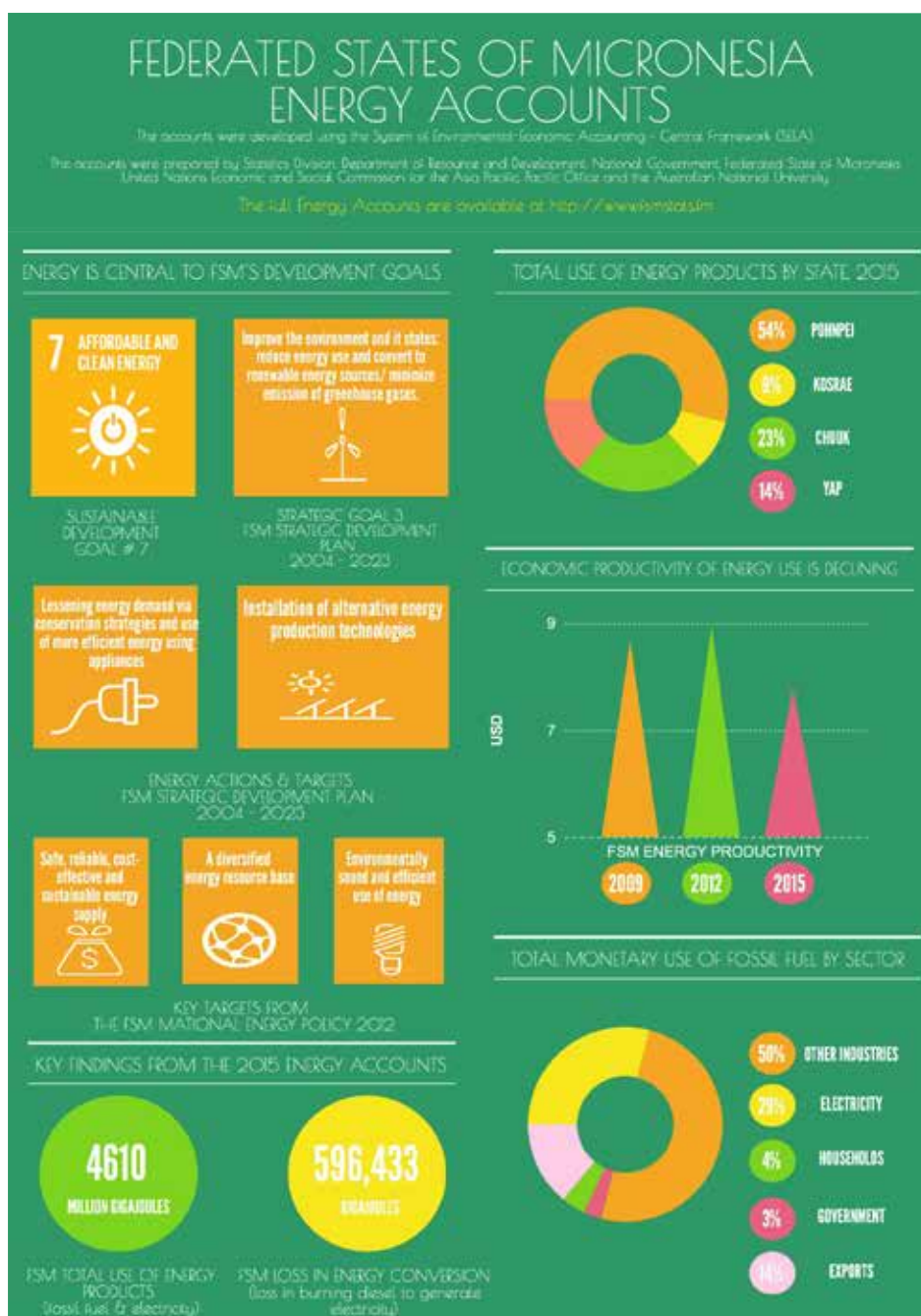
The SEEA accounts also provide relevant data to monitor progress against priorities and targets contained in the national and international development agenda. By producing baseline data and adding subsequent year series using SEEA accounts, tracking of progress against set national and global targets can be achieved. For example, estimates to measure Palau's core SDG indicators on water and energy and SDGs 6 and 7, such as change in energy and water use efficiency over time can be obtained from the energy and water accounts. For instance:

- 6.4.1 Change in water-use efficiency over time – the physical efficiency of water use as measured by GDP per litre of water use increased between FY2014 and FY2016 from \$0.09 to \$0.16. Conversely the economic efficiency of water use decreased as measured by GDP per value of water use from \$99 to \$62 GDP per dollar of monetary water use; and
- 7.2.1 Renewable energy share in the total final energy consumption – the amount of electricity produced from solar is less than 1 percent but has increased from 1,397 to 2,907 GJ between FY2014 and FY2016.

The most recently produced accounts used a process where ESCAP coordinated input from its own technical experts along with that from outside institutions (e.g. the Australian Bureau of Statistics and Statistics Canada). This model and service from ESCAP could become a useful resource for the region.



Communication of the accounts to regional policy makers, the general public, academic audiences and the statistical world has been a feature of the work in the Pacific. Short policy briefings with infographics (e.g. refer to FSM Energy account below)<sup>23</sup> have been a highlight, while information has been shared through UNSD newsletters<sup>24</sup> and World Bank WAVES online<sup>25</sup> resources.



<sup>23</sup> Refer to <http://www.fsmstats.fm/wp-content/uploads/2017/07/FSM-Energy-Accounts-Infographic.pdf>

<sup>24</sup> Refer to newsletter editions 38-41, at <https://unstats.un.org/unsd/envstats/newsletters>

<sup>25</sup> Refer to <https://www.wavespartnership.org/knowledge-center>

## 8. Future Directions

ESCAP, in collaboration with development partners, aims to continue supporting PICs in the implementation and use of the SEEA. Capacity building efforts should continue and draw on regional expertise and experience. In this, the initial aim will be to improve the quality of the existing accounts and eventually extending the range of accounts produced. Increasing the number of countries in the Pacific producing and using accounts is also an important consideration, although ground realities, commitment and policy value add will need to be assessed.

Going forward additional work needs to be directed at better understanding how the SEEA can be used for fiscal policy, infrastructure planning and regulatory measures to create higher national demand. Furthermore, greater effort to use SEEA findings to monitor the achievement of national priorities and SDGs will create added value.

Relevant types of assistance for the Pacific region include:

- regional workshops to share national experiences and provide training on account production/use in areas where PICs have most interest (aimed to consolidate and build on existing accounts compiled). Use of PIC and other national statistics office expertise to facilitate such training could be explored;
- regional workshops focussed on policy, budgeting and planning use of SEEA findings;
- regional workshops on sectoral application of SEEA could be explored, in particular, for measuring sustainable tourism (building on Fiji's case study findings discussed earlier), given importance of tourism in most PICs, and UNWTO and UNSD interest, and ocean resources;
- country assistance for assessment, production and importantly policy use;
- coordination of peer-review process for account production;
- prepare and disseminate knowledge products; and
- facilitate access to specialist knowledge and guidance.

Broader partnerships are needed to sustain and boost the solid initial SEEA developments in the region. For example, ABS and Statistics New Zealand have a track record in environment statistics and have in the past supported capacity development for PICs. Recently, the University of Hawaii has begun work on environment accounting and this may extend beyond Hawaii to Northern Pacific countries. At the regional level, the Pacific Community (SPC) could assist with awareness, advocacy and strategic support in collaboration with development partners, and the University of the South Pacific could explore the potential of a course on SEEA within its existing official statistics diploma and degree offerings. At the global level, World Bank WAVES, UNSD, and UNWTO remain important partners, amongst others, and structured support to PICs in future could boost the development of SEEA in the region. ESCAP, through SIAP, could support further capacity building through online and in-person learning opportunities.

Such partnerships, together with the expertise already developed in PICs and within ESCAP, means there is pool of expertise to support and improve the existing developments. This offers a range of opportunities to consolidate and sustain SEEA efforts in train, while maintaining a tailored approach to SEEA implementation in the Pacific region.

# Annex 1. What is SEEA?

## Introduction

The SEEA is an accounting framework that aims to record the stocks and flows relevant to the analysis of environmental and economic issues. The accounting approach of the SEEA is different from groupings of independent statistics on environmental and economic issues because it demands coherence and consistency with a core set of definitions and accounting treatments. As such the SEEA provides a framework to combine a wide range of source data to create aggregates, indicators and trends across the broad spectrum of environmental and economic issues.

The SEEA emerged from the System of National Accounts (SNA). The SNA is a framework that measures economic activity and organises a wide range of economic data into a structured set of accounts. Among many other things, the SNA produces the aggregate gross domestic product or GDP. The SNA generally measures economic activity in monetary terms and such valuation is usually based on market transactions.

The SEEA extends the SNA by recording environmental data that are usually available in physical terms (e.g. litres, hectares, tonnes) in conjunction with the economic data in monetary terms from the SNA. The SEEA brings together information on water, minerals, energy, timber, fish, soil, land and ecosystems, pollution and waste, production, consumption and investment. Each of these areas has specific and detailed measurement approaches. Much of SEEA's value comes from its capacity to present information in both physical and monetary terms in a coherent manner.

The integration of information concerning the economy and the environment requires a multi-disciplinary approach. Statisticians must work hand-in-hand with economists, scientists and other policy experts.

The broad and integrated nature of the SEEA makes it a relevant framework for the analysis of a wide range of current environmental policy issues. For example, the management of individual natural resources, to the consideration of the prospects for decoupling economic growth from adverse environmental impacts.

Apart from these specific applications, the SEEA can also be used for:

- i) deriving a range of indicators concerning environmental-economic issues such as energy use, water consumption, depletion of natural resources;
- ii) trend analysis through the use of common definitions and standards;
- iii) providing a framework for organising existing data and for assessing its quality and completeness;
- iv) monitoring the state of the environment and its relationship to the economy, and national and international development priorities;
- v) following changes in trade patterns and emissions embedded in categories of final demand through physical input-output analysis;
- vi) understanding where and when the benefits and costs of natural resource use accrue;
- vii) enabling international reporting and comparisons; and
- viii) as data input to various environmental-economic models designed to assess policy alternatives (e.g. environmentally extended input-output analysis).

## The SEEA as a System

The SEEA consists of a coherent, consistent and integrated set of tables and accounts that focus on different aspects of the interaction between the economy and the environment or on the changing state of the environment. The tables and accounts are based on internationally agreed concepts, definitions, classifications and accounting rules.

There are four main types of accounts in the SEEA framework. These accounts can be integrated with the existing monetary stock and flow accounts of the SNA:

- i) Physical and monetary flow accounts;
- ii) Functional accounts for environmental transactions;
- iii) Asset accounts in physical and monetary terms; and
- iv) Ecosystem accounts.

The first three types of accounts form the core of the SEEA and are known as the accounts of the SEEA Central Framework. Ecosystem accounts are described SEEA Experimental Ecosystem Accounts that is not yet an international standard. The four main types of accounts are briefly described below.

Physical and monetary flow accounts record flows of natural inputs from the environment to the economy, flows of products within the economy and flows of residuals generated by the economy. These flows include water and energy used in production (e.g. of agricultural commodities) and waste flows to the environment (e.g. solid waste to landfill).

Functional accounts for environmental transactions record the many transactions between different economic units (i.e. industries, households and governments) that concern the environment. The relevant transactions are identified by first defining the set of environmental activities, i.e. those activities that reduce or eliminate pressures on the environment and that aim to make more efficient use of natural resources. Examples include investing in technologies designed to prevent or reduce pollution, restoring the environment after it has been polluted, recycling, conservation and resource management. Environmental activities are classified as being either environmental protection activities or resource management activities.

Asset accounts in physical and monetary terms measure the natural resources available and changes in the amount available over time. Asset accounts focus on the key individual components of the environment: mineral and energy resources; timber resources; fish/aquatic resources; other biological resources; soil resources; water resources; and land. They include measures of the stock of each environmental asset at the beginning and end of an accounting period and record the various changes in the stock due to extraction, natural growth, discovery, catastrophic loss and other reasons.

The compilation of asset accounts in physical terms can provide valuable information on resource availability and may help in the assessment of sustainability. A particular feature of the SEEA asset accounts is the estimation of depletion of natural resources in physical and monetary terms. For non-renewable resources, the quantity of depletion is equal to the quantity of resource extracted but for renewable resources the quantity of depletion must take into account the underlying population, its size, rate of growth and associated sustainable yield.

Ecosystem accounts are a developing area and not yet an international statistical standard. Ecosystems are areas containing a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. Ecosystem accounts are structured to summarise information about these areas, their changing capacity to operate as a functional unit and their delivery of benefits to humanity. The benefits received by humanity are known as ecosystem services. They are delivered in different forms and are grouped into three broad categories:

- i) provisioning services which are the benefits received from the natural inputs provided by the environment such as water, timber, fish and energy resources;
- ii) regulating services that include the benefits provided when an ecosystem operates as a sink for emissions and other residuals, when an ecosystem provides flood mitigation services or when an ecosystem provides pollination services to agriculture; and
- iii) cultural services which are the benefits provided when an ecosystem such as a forest, provides recreational, spiritual or other benefits to people.

Each of the different types of accounts is connected within the SEEA framework but each focuses on a different part of the interaction between the economy and the environment. Examples of the relationships between the different accounts include:

- asset accounts and ecosystem accounts focus on the stock and changes in the stock of environmental assets, with asset accounts focusing on the individual components and ecosystem accounts focusing on the interactions between these components, including biodiversity;
- changes in the stock are often the result of economic activity, which in turn is the focus of physical flow accounts. Measurement of flows of natural inputs in the physical supply and use tables is consistent with the measurement of extraction in the asset accounts and the measurement of provisioning services in ecosystem accounts;
- measurement of flows of residuals (e.g. pollution) to the environment as recorded in physical supply and use tables is an important consideration in the measurement of environmental condition and may affect the flow of ecosystem services;
- measures of the flows of natural inputs and residuals can also be related to transactions recorded in functional accounts for environmental protection and resource management, including investment in cleaner technologies and flows of environmental taxes and subsidies. For example, payments for emission permits recorded in functional accounts can be related to the flows of emissions recorded in the physical supply and use tables; and
- effectiveness of the expenditure for environmental purposes may, ultimately, be assessed by changes in the capacity of ecosystems to continue their delivery of ecosystem services as recorded in ecosystem accounts.

These examples serve to highlight the many and varied relationships between the accounts, with each taking a different perspective. Throughout the SEEA these relationships are supported by the use of common concepts, definitions and classifications.

Further information on SEEA can be found online, including at <https://seea.un.org>.













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