



Environment Statistics and System of Environment- Economic Accounting (SEEA) – Country Context, Status, and Opportunities

National Assessment Report

Prepared by Vanuatu National Statistics Office, in consultation with national stakeholders, and with support from United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

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PREFACE

The purpose of this assessment report is to identify a way forward for environment statistics and environmental-economic accounting in Vanuatu. It provides guidance for initiating statistical development towards improving decisions related to sustainable development and green economy. It is based on existing national policy documents and a national technical assessment¹ of environment statistics.

This assessment report aims to capture the policy priorities, institutional framework and capacity needs for Vanuatu to engage in such development. It concludes by identifying priority sectors for environment statistics, and actions for improving these statistics over the short to medium term.

The assessment takes into account views of key national stakeholders. The support of UNESCAP in preparing this report, and training provided to national counterparts contributed immensely to progress to-date and will facilitate implementation plans going forward.



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¹ This assessment was prepared by the Vanuatu National Statistics Office led by Simil Johnson, Government Statistician, Vania Manutai, Acting Head of Economic Statistics, and David Talo, Economic Statistician. Support for preparing this assessment report was provided by Michael Bordt and Sanjesh Naidu of UNESCAP and it is largely based on national consultations held from 12-14 October 2016.

COUNTRY BACKGROUND.

This section highlights a few of the relevant initiatives (not a comprehensive list). The soon to be launched Vanuatu National Sustainable Development Plan was identified as the key driver for demanding environmental statistics given the associated strategies contained therein, and the need to monitor and evaluate progress.

Linkages to relevant policy and planning initiatives

National

Vanuatu National Sustainable Development Plan (forthcoming). The vision statement in the Vanuatu National Sustainable Development Plan (VNSDP) is “A Stable, Sustainable and Prosperous Vanuatu”. It demands careful and comprehensive measures to address the environmental challenges at hand. As environment is recognised as a cross-cutting policy issue, a robust information system is needed to develop and monitor sustainable development policy interventions. The Prime Minister’s Office administers a system of annual and six-monthly reporting and relevant environment indicators and data are necessary for informed decision making. Key areas in the environment pillar of the VNSDP linked to statistics need include: agriculture production; forestry; fisheries; energy; waste, water, land; and ecosystems/biodiversity. To sustainably utilise and manage natural resources, some specific considerations are needed if the VNSDP’s vision is to be achieved. These include, for example: depletion of forest, fish stocks, ecosystems and biodiversity; insecure energy and water supplies; accumulation of untreated waste; and degradation of land.

The VNSDP is broadly aligned to the Sustainable Development Goals, however, the respective indicator sets need to further assessment and consideration.

Vanuatu National Strategy for the Development of Statistics. The Vanuatu National Statistics Office (VNSO), in consultation with national stakeholders, has published a strategy for development of statistics. The Strategy outlines a number of areas where environment statistics are of interest and need to be compiled including: biodiversity; extractive industries; chemical use; water resources; conservation areas; waste management; and emissions.

There is close correlation between the Strategy for Development of Statistics and the VNSDP. A clear overlap exists in areas of: food and agriculture; forest; energy; waste; water; land; and ecosystems.

Other relevant sectoral policies. A number of sectoral policies contain elements of environment sustainability to achieve broader national development priorities, these include: Vanuatu National Energy Road Map; Vanuatu Agriculture Sector Policy; National Oceans Policy; Vanuatu Strategic Tourism Action Plan; and National Waste Management Policy. Key

components of these policies and plans relate to: sustainability of each sectoral priority; direct and cross-cutting linkages to development priorities; infrastructure and capacity issues in supply; efficiency and effectiveness of production over consumption demands; and medium-term needs and plans to address existing challenges. In this context, these sector policies and plans have a component of monitoring and evaluation which require data and can inform the statistics production processes coordinated by VNSO.

In order for such plans to be effective, relevant data and information is required. For example, the Vanuatu Strategic Tourism Action Plan notes, that the tourism industry has rapidly become the leading sector in the economy accounting for around 20% of Gross Domestic Product. Cruise ship passenger arrivals have also grown substantially in recent years. If tourism visitation continues at a moderate growth scenario, arrivals may exceed 500,000 arrivals a year by 2018. This could have potential impacts on: tourism governance, marketing, infrastructure and transportation, investment, product development and standards, and very significantly, human resource development. Stakeholder consultations indicated, for example, significant water demand by rising number of cruise tourism vessels visiting Vanuatu is of policy concern. As such, appropriate statistics on water supply and use can assist with tourism planning and policy making.

International

Relevant global initiatives. There are many relevant global initiatives that include the promotion of system environmental-economic accounting (SEEA) for better environmental monitoring and accountability. In particular, two most relevant include: the Sustainable Development Goals; and the SAMOA Pathway for sustainable development in Small Island Developing States. A number of proposed SDG indicators can be measured systematically using guidelines in the SEEA.

INSTITUTIONAL FRAMEWORK OVERVIEW

Vanuatu has a centralised statistical system, with the VNSO having the legal responsibility to coordinate the production and dissemination of official statistics... In recent years there has been increased recognition given to statistical activities and the importance of “statistics informed” policy, resulting in increased resources dedicated for quality, timely and reliable statistics throughout the VSS [Vanuatu Statistical System] (VNSDS 2016-2020).

Current 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. VNSO management and key stakeholders such as Prime Minister’s Office are committed to development of environment statistics in the short-to-medium term (i.e., within three years).

A core team of three graduate statisticians at VNSO have been assigned the task of leading the compilation of SEEA accounts in the short-term.

Across environmental sectors, basic data are being compiled by many ministries/departments and the Utilities Regulatory Authority (URA). For example, fisheries, water, land and energy data appear reasonably in place. There is currently no central data repository for environment and spatial data (digital maps). The Vanuatu National Strategy for the Development of Statistics notes that institutional arrangements for coordination have improved since the creation of the Statistical Leadership and Coordination section in the VNSO, but still fall short of ensuring overall level required for the production of official statistics. While the Government Statistician has the mandate for the coordination required to achieve the VNSDS production strategies, as per the Statistics Amendment Act of 2013; the VNSO does not have the resources to achieve the level of coordination required.

The revision to the Act created the Statistics Advisory Council (SAC), the ultimate body with oversight for the Vanuatu Statistical System (VSS). It will be the mechanism to improve coordination in the VSS by bringing users and producers of statistics together to discuss supply and demand issues. One of the key functions of the SAC will be to finalise the prioritisation of activities and monitor the implementation of the VNSDS across all sectors. The SAC will meet twice a year to discuss the ongoing work program of VSS agencies based on the Vanuatu National Strategy for the Development of Statistics, VNSDP and emerging priorities.

CHALLENGES

The primary challenges in implementing environment statistics include:

- data is spread across many different sectors and located in many different databases;
- some of the databases are project based, and thus not routinely updated (this would reduce the ability to compile consistent time series);
- there are limited staff resources dedicated to environment statistics and technical expertise required for compiling SEEA accounts is not yet developed in Vanuatu (VNSO is beginning its efforts on environmental statistics and accounting); and
- improving data sharing will take strong commitment and investment over time.

OPPORTUNITIES

There is a high level of commitment in improving environment statistics in Vanuatu and the need for integrated information has already been recognised, particularly by the Prime Minister's Office. In particular, priority sectors for improved environmental data collection include: ecosystems and biodiversity, water, energy, waste, and land. National strategic planning in

Vanuatu includes an existing framework for ensuring that monitoring and evaluation indicators/ data on the environment are not only compiled but also used in planning processes.

The SEEA framework can promote better coordination across the national statistical system through its consistent use of accounting structures and classifications which would in-turn improve data quality across sectors (including in national accounts, amongst others). The framework can also support the identification of data gaps by putting existing data in perspective of the “big picture” (all land, all water, all energy...).

Vanuatu already has a broad range of relevant data, although effort to consolidate data is needed.

The endorsed strategy for the development of statistics in Vanuatu includes environment, environmental-economic accounts and related statistics, which forms the foundation for outlining resource requirements, building effective coordination and improving collaboration.

RECOMMENDATIONS

This section outlines a proposed strategic direction, including elements related to the institutional structure, training and capacity building activities, and specific actions for the improvement of environment statistics in Vanuatu.

Institutional structure

A functioning national coordination mechanism of technical-level stakeholders is needed to ensure follow-through in implementing improvements to lead the work on environment statistics and SEEA implementation. The Statistics Advisory Council, the ultimate body with oversight for the Vanuatu Statistical System could be an effective mechanism to improve coordination by bringing users and producers of statistics together and promoting further data and information sharing.

The need for robust monitoring and evaluation of the VNSDP remains a key reason for creating demand for reliable and regular environment statistics and potentially could drive the user and producer efforts for better statistics. Overall guidance by the Council of Ministers, the highest policy making body could provide oversight for improving environmental data collection and use for policy and monitoring for national development priorities.

Recommendation: The VNSO, as per mandate, assume responsibility for guiding the implementation of all environment statistics related activities as planned under the Vanuatu National Strategy for the Development of Statistics. A mechanism that could be leveraged is the Statistics Advisory Council that VNSO could convene on a regular basis.

An informal group (mainly operating via an email forum and via meetings on a needs basis), could serve to progress the necessary preliminary steps in compiling priority accounts, as identified later in this report. This informal working group (made up of participants of the SEEA

training workshop conducted on 13-14 October 2016 – see list of participants in Annex 2) could also advise the Statistics Advisory Council on environmental statistics.

The group of technical staff trained on SEEA could help collate necessary data for producing the selected priority accounts. VNSO to chair and urgently initiate this informal process with the aim to keep momentum, and also gather necessary data and information needed to produce the selected priority accounts.

Data

Environmental data exist but are scattered across different agencies and are available in different formats. There is currently a lack of central data repository for environment and spatial data. The VNSO could provide the initial support to coordinate on data and information through the informal working group.

Recommendation: A central data repository for environmental data to be housed in VNSO. In addition, VNSO needs to establish data and information sharing agreements various agencies, for example the Utility Regulatory Authority, and Fisheries department, amongst others.

VNSO and other departments engage in primary data collection through planned censuses and surveys. These statistical compilations could be used to improve environmental data collection by adding focussed and relevant questions.

Recommendation: VNSO consider ways to fill environmental information gaps through existing censuses and surveys which may be planned over the short to medium term.

Topical Focus of the Accounts

This section outlines specific opportunities for implementing the System of Environmental Economic Accounts in order to produce policy-relevant statistics in Vanuatu. The multi-stakeholder national consultations held by VNSO in October 2016 identified priority accounts, underpinned by national policy and sustainable development aspirations. These are discussed below, taking a short to medium term timeframe for implementation.

SHORT-TERM PRIORITIES

Water statistics and accounting

Water accounting is relevant for: water policy, regulation and pricing; tourism sector policy and planning; public health service delivery; and reducing waste water, amongst others. The stock of water in Vanuatu's groundwater and streams and the replenishment of those stocks by rainfall are not well measured. Further, there are concerns that the prices charged for water supplied to cruise ships and other tourism activities do not justify the risk to depleting the supply.

Existing data: Data available from the URA on water abstraction and provisioning of piped water by customer type in major urban areas. URA latest review is dated 2014 and a good set of price, use and quantity data is available. This could be validated using data from the private sector suppliers. In addition, the Department of Public Utilities data on other urban water supply could be used to supplement and for validation purposes. Sources of data on water quality and rainfall need to be researched.

Data gaps: Department of Lands supplies water in rural areas and outer islands, and while some data exist, further research on the appropriateness of data available is needed. Water catchment in private tanks and bore holes (some information may be available from the census and other surveys) and non-government organisation supported water supply projects in rural areas. Waste water data are not available, but could be estimated from initial Water Supply and Use Accounts.

Recommendation: A data sharing agreement between VNSO and URA is put in place. VNSO could investigate use of this information, including through merging the URA customer list with the business register to identify industry classification. Obtain data from the Department of Lands on supply of water to all rural areas and outer islands, and obtain water quality and rainfall data. Refer to next steps section for further guidance. Water accounts on an experimental basis appear possible, and further research is needed through VNSO and relevant stakeholders.

Land Cover

Land cover accounts form the basis for future development of ecosystem accounts and have multiple uses in terms of sustainable land management, including: waste management; water policy; coastal resource management; evaluating the need for protected area sites; and agricultural policy. Land cover accounts take spatial data (digital maps) and classify land according to use and type.

Existing data: Department of Lands has much information on land use and data. Maps with land use classifications for 2003 are available. More recent data needs to be interpreted from available satellite images.

Data gaps: Regular production is not a planned activity.

Recommendation: Department of Lands could be tasked with the production of regular land coverage maps. Relevant regional agencies like Pacific Community need to be consulted for updated maps. Refer to next steps section for further guidance.

Recommendation: VNSO and stakeholders determine the most appropriate vehicle for publishing the results of the pilot Land and Water Accounts. This could be a special bulletin or a section in an existing publication.

MEDIUM-TERM OPPORTUNITIES

Energy

The update Vanuatu National Energy Roadmap has a vision to “energise Vanuatu’s growth and development through the provision of secure, affordable, widely accessible, high quality, clean energy services...” While government is promoting the use of energy efficient products; however, monitoring of the energy Roadmap is weak and requires relevant data.

Existing data: URA has data on electricity provisioning by customer (those connected to the electricity grid) which could be merged with the business register to obtain electricity by industrial classification. A review of electricity pricing and regulation is due in 2016/2017 which will provide an updated baseline (comparable to 2010 current baseline). The two major electricity suppliers could provide data for validation purposes. Detailed information on diesel fuel imports is available.

Data gaps: Although the volume of fuel imports is available there is little breakdown of information, for example, fuel consumption for transportation (i.e. how much is being consumed by residential and commercial users, how much is for automobiles, boats, generators, etc.). The census has some information on the use of renewable energy and detailed investigation is needed to determine relevance. A new survey instrument would likely be required to obtain information on biofuel and fuel in the transport, commerce, industry and tourism sectors.

Recommendation: The information on electricity provisioning is included in a data sharing agreement with URA. VNSO could investigate use of this information, including through merging the URA customer list with the business register to identify industry classification. Further data assessment and specific technical support is needed to check on feasibility and determine next steps.

Solid Waste

Solid waste management is a priority for the natural environment of Vanuatu. SEEA could provide a way to link measures of economic activity (e.g. GDP) and waste generation statistics, for example by providing measures of industry efficiency in generation and treatment of waste relative to output.

Existing data: Limited to landfill information, which account for a small proportion of overall waste generated and disposed in the country.

Data gaps: Information on illegal dumping, all waste generated and disposed, and exports of waste (car batteries and chemical waste etc.) are needed.

Recommendation: Further technical assistance is needed to determine data gaps and feasibility.

OTHER FUTURE POSSIBLE ACCOUNTS

Ecosystem condition accounts

Ecosystem accounting could provide detailed information on the state of ecosystems, changes over time and their importance to providing future ecosystem services.

Recommendation: Over the medium-term, further specific assistance may be considered to assess gaps, feasibility and measures needed.

Tourism satellite accounts with environmental information (land, energy, waste, water).

Tourism is a key driver of development in Vanuatu. However, it is difficult to find the balance between utilising the natural environment as a driver of economic growth for tourism, and preserving the environment for the cultural, social and economic well-being of current and future generations and for future tourism development.

Existing data: The existing data that are available on land, energy, waste and water could be linked to tourism.

Data gaps: Businesses which are part of the tourism sector should be defined in the business register. A tourism sector survey does not exist, but would be essential to estimating the proportion of activities in these businesses that serve tourists.

Recommendation: If Vanuatu decides to develop a tourism satellite account (TSA), the account could be integrated with the SEEA to provide a picture of the impact of tourism on the environment. A case study currently prepared by Fiji to link TSA with SEEA in areas associated with Tourism could also inform Vanuatu's planning.

TRAINING AND CAPACITY BUILDING

SEEA implementation relies on technical capacity not only in the statistics office but also in other environmental stakeholders. To date, a number of staff from the VNSO and line Departments have received SEEA training through ESCAP in-country support (see list of participants in Annex 2). In addition, one VNSO staff attended a SEEA through the Statistical institute for Asia and the Pacific (SIAP) in 2016, and two participants from the Prime Minister's Office, and Ministry of Finance and Economic Development attended a SEEA training organised by ESCAP and SIAP for the Pacific region in September 2016.

Recommendation: Keep momentum from training/ capacity building efforts by actually attempting to compile a selected account over the next six months. In the short-term, ESCAP will provide technical assistance to support the compilation efforts.

NEXT STEPS

(Next 5 months)

- Pursue the national agreed timeline to compile priority accounts as follows:
 - **Land account** with focus on land cover for two periods with compatible classifications. The objective to compile a land cover change matrix (2003 to recent).
Actions needed:
 - Ongoing – ESCAP support via e-mail, teleconference;
 - 1 month – VNSO get 1991-2003 coverage (QGIS) from Lands; use in PopMap or relevant software;
 - 1 months – Informal working group recommend and collate alternative sources for more recent (2010 to 2015) land cover data (national, international, regional);
 - 3 months – VNSO test land cover change matrix and informal working group review changes; and
 - 3-5 months – ESCAP follow up technical assistance to help finalise and organise an advocacy event.

ii. **Water account** with focus on stock and supply.

Actions needed:

- 1 months – URA/VNSO (and other relevant stakeholders like Lands Department) data sharing arrangement;
- 2 months – research data sources (short document on data sources):
 - URA – quantities abstracted for water supply (commercial/residential for Port Vila); water prices; quantities for cruise ships.
 - Utility (UNELCO) - there is a 4 tier tariff structure for water services in Port Vila there is no clear categorising of different customer types. Need to validate this with utility company;

- Lands Department – abstraction of water in rural areas and outer islands;
 - Water quality statistics;
 - Metrology data on rainfall; and
 - VNSO: Other sources: surveys (sources for households use), national accounts (expenditures on water).
- Ongoing – ESCAP support via e-mail, teleconference; and
- 3-5 months – ESCAP follow up technical assistance to determine feasibility and assist with compilation as needed. An advocacy event could also be convened.
- Statistics Advisory Council (SAC) and informal working committee
 - Convene of the SAC as the body to guide environment statistics. This will be supported by the informal working committee.
- Central database
 - VNSO to initiate (including through data and information sharing arrangements as needed) a central database on environment statistics, particularly in short-term priority areas. Other areas could be collated in the database over the medium term.

(1-3 years)

- The Government continue to allocate dedicated staff time for environment statistics within VNSO and relevant departments to maintain relevant databases and compile statistics.
- Ongoing capacity building. On-the-job training needs to be supplemented by a program of intensive capacity building given turnover of staff, amongst others. Staff members need to have time to attend online and in person trainings. ESCAP will work to ensure that Vanuatu is invited to relevant international training opportunities.
- Establishing data sharing arrangements with a broad range of stakeholders.
- Establish a database within VNSO.
- Ensuring collaboration and coordination with other stakeholders within the Vanuatu Statistical System to maintain necessary databases and help collate and compile data.

- Review and determine a timeline for the compilation of other areas of priority, starting with energy and wastes accounts. Ecosystem and tourism related accounts could be considered over the medium-term.

CONCLUSION

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 has already been recognised, particularly by the Prime Minister's Office. 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 Sustainable Development Goals and the SAMOA Pathway.

ANNEX 1 ASSESSMENT METHODOLOGY

The assessment included consultation with key national stakeholders. The VNSO organised and led the assessment. The assessment was conducted under the guidance of Vanuatu's Government Statistician, Mr. Simil Johnson, and VNSO staff Ms. Vania Manutai and Mr. David Talo. Technical support was provided by Mr. Michael Bordt and Mr. Sanjesh Naidu of ESCAP. The assessment was supported by funds from a United Nations Development Assistance project implemented by ESCAP.

The assessment included a national consultative meeting with the following agenda:

- Welcome remarks and introduction – VNSO;
- Project overview and background – ESCAP;
- Review and revision of assessment of diagnostic tool presentation – Prime Minister's Office;
- Respective agencies to provide policy interest/ plans that relate to use of environment and data collection on environment issues (e.g. energy, land, waste, water, eco-systems, emissions); and
- Selection of priority accounts and short- medium term work plan for SEEA project in Vanuatu – VNSO

A stakeholder training on the SEEA Central Framework, land and water accounts was delivered by ESCAP.

A list of all the stakeholders involved in the assessment consultations and SEEA training can be found in Annex 2.

ANNEX 2 LIST OF STAKEHOLDERS CONSULTED AND PARTICIPATED IN TRAINING

	Name	Position	Organisation
1	Simil Johnson	Government Statistician	Vanuatu National Statistics Office (VNSO)
2	Johnson Pinaru	Director General	Dept of Public Works and Utilities
3	Jone Roqara	Deputy Director	Dept of Public Works
4	Wycliff Bakeo	Sector Analyst Agriculture	Dept of Strategic Planning & Policy and Aid Coordination, Office of Prime Minister
5	Julieth Hawka	Sector Analyst Agriculture	Dept of Strategic Planning & Policy and Aid Coordination, Office of Prime Minister
6	Brett Rakau	Information and Communication Officer	Dept of Energy
7	Gwenneth Natu Tari	Marketing Officer	Dept of Agriculture
8	James Samuel	Forestry Inventory Officer	Dept of Forestry
9	Lucy Joy	Senior Fisheries Data Officer	Dept of Fisheries
10	Esther Tarosa	Budget Officer	Dept of Finance
11	Martin Sokomanu		Dept of Lands
12	David Talo	Acting Statistician	VNSO
13	Alice Trief	Social Statistics Compiler	VNSO
14	Aspinold Amos	Economic Statistics Compiler	VNSO
15	Vania Manutai	Acting Snr Economic Statistician	VNSO
16	Margaret Daniel	Project officer - Livestock Department	Dept of Livestock
17	Angelica Feandre.	Project officer - Livestock Department	Dept of Livestock
18	Edmon Tabisari	Economist Analyst	Utilities Regulatory Authority of Vanuatu
19	Daryl Abel	Information Systems Management officer	Dept of Climate Change and Environment
20	Peter Korisa	Operational Manager	National Disaster Management Office
21	Lindon Tari	Compliance officer	Dept of Bio-security