

Environmental Data, Policy and the Sustainable Development Goals

The Case Study of Guyana



SUSTAINABLE DEVELOPMENT GOALS

© 2023 United Nations Environment Programme

ISBN No: 978-92-807-4058-5

Job No: DEL/2556/NA

This publication may be reproduced in whole or in part and in any form for educational or non-profit services without special permission from the copyright holder, provided acknowledgement of the source is made. The United Nations Environment Programme would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale or any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme. Applications for such permission, with a statement of the purpose and extent of the reproduction, should be addressed to: unep-communication-director@un.org.

Disclaimer

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory or city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of a commercial company or product in this document does not imply endorsement by the United Nations Environment Programme or the authors. The use of information from this document for publicity or advertising is not permitted. Trademark names and symbols are used in an editorial fashion with no intention on infringement of trademark or copyright laws.

The views expressed in this publication are those of the authors and do not necessarily reflect the views of the United Nations Environment Programme. We regret any errors or omissions that may have been unwittingly made.

Suggested Citation

United Nations Environment Program (2023). Environmental data, policy and the Sustainable Development Goals – the case study of Guyana

Acknowledgments

Special thanks to Stephen Teng'o (UNEP) for the internal coordination of this publication's production.

Authors

Andreas Obrecht, Deirdre Shurland, Diane Klaimi and Hyun Sung (UNEP)

Project Management

Diane Klaimi and Njoki Kibe (UNEP).

Pictures:

Cover image - ©Unsplash/Andres Herrera

Inside images - Page 3: © Unsplash/Dinesh Chandrapal; Page 5: © UNEP/Stephanie Foote; Page 6: © Unsplash/Joshua Gobin; Page 8: © Pixabay/David Mark

Production

Law Division

United Nations Environment Programme

P.O. BOX 30552, Nairobi, Kenya

Tel.: +254 20 7623365

Email: unep-law-director@un.org


www.unep.org

Design, Layout and Printing

United Nations Office Nairobi (UNON), Publishing Services Section

Date of Publication

July 2023



UNEP promotes environmentally sound practices globally and in its own activities. Our distribution policy aims to reduce UNEP's carbon footprint.

A healthy environment is a precondition for achieving the Sustainable Development Goals. To be able to meet environmental objectives, Governments need accurate and reliable environmental data.

With funding from the United Nations Development Account, the United Nations Environment Programme (UNEP) partnered with the Governments of Bangladesh, Burkina Faso, Colombia and Guyana to monitor, in a coherent and integrated manner, implementation of the environmental dimension¹ of the Sustainable Development Goals.

In Guyana, UNEP worked with various government entities to devise ways of producing better environment-related data, to clarify legal mandates and to improve coordination and exchange across government agencies.

1. Context

The 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals, charts a new path for ensuring a balance between humanity and the planet. Achievement of the highly interconnected Sustainable Development Goals is integral to the correct functioning of the biosphere, which is vital for people's livelihoods and well-being and therefore resilience.

links with other commitments; they also need to be able to translate this understanding into concrete measures to realize environmental objectives in an integrated manner.

To achieve this, access to accurate information, cross-sectoral collaboration, coordination within and across institutions and more inclusive mechanisms are all necessary. This case study shows how the generation and use of environmental data has been strengthened in Guyana using the particular skills and experience of UNEP.

Countries need to be well equipped to understand the environmental dimension of the Sustainable Development Goals and their

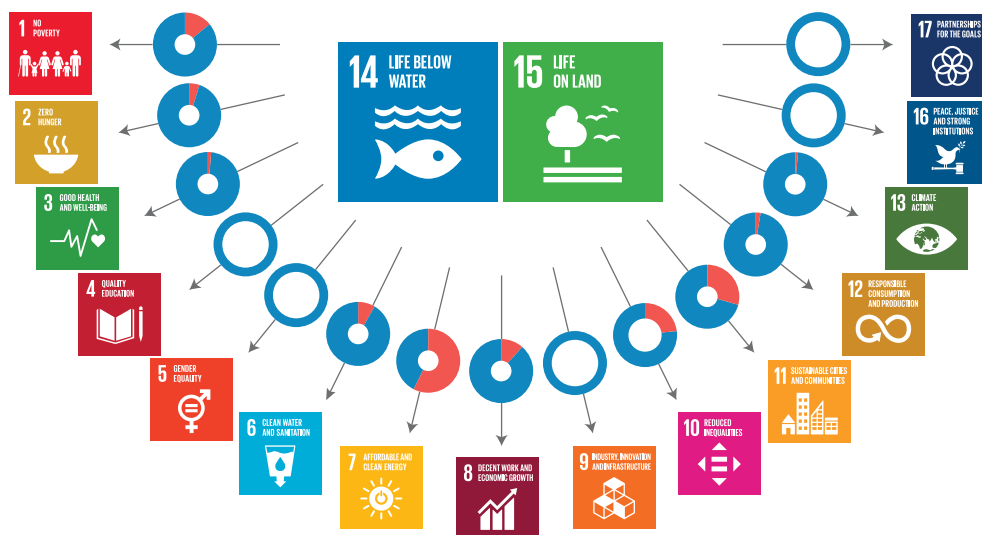


Figure 1. Environment as the Basis of the Sustainable Development Goals

The illustration above shows how the achievement of Sustainable Development Goals 14 (Life below water) and 15 (Life on land) affects the achievement of the other Sustainable Development Goals in terms of co-benefits (blue) and trade-offs (red). It is based on information from 65 global assessments (United Nations reports and international scientific assessments) and 112 scientific articles, published since 2015, that make explicit reference to the Sustainable Development Goals. Where the rings are thin, this indicates either gaps in knowledge or a weaker link.

Source: A. Obrecht and others, "Achieving the SGDs with Biodiversity", Swiss Academies Factsheets, vol. 16, No. 1, 2021

¹ There is no precise definition of the environmental dimension of the Sustainable Development Goals, and there are different views on what the environmental dimension of development should include. The most common approach is to take the 93 environment-related indicators of the 17 Sustainable Development Goals under the 2030 Agenda for Sustainable Development as presented by UNEP to the Committee of Permanent Representatives to the United Nations Environment Programme at its subcommittee meeting on 20 September 2018.

Overall Project Objectives

- To enhance the technical capacities of national focal points, in relevant institutions in fields such as development, finance, agriculture, fisheries and the environment, to contribute to implementation of the environmental dimension of the 2030 Agenda for Sustainable Development in a coordinated, integrated and evidencebased manner.
- To enhance the technical capacities of national statistical and data-collection institutions regularly to produce comprehensive environmental data sets that integrate information related to achievement of the Sustainable Development Goals and to implementation of multilateral environmental agreements.
- To share the lessons learned and the knowledge acquired by the countries participating in the project with a wider set of countries through interregional and intraregional networking and collaboration, thereby creating the basis of a case study of South-South cooperation on the use of integrated approaches for coherent policy planning and implementation.

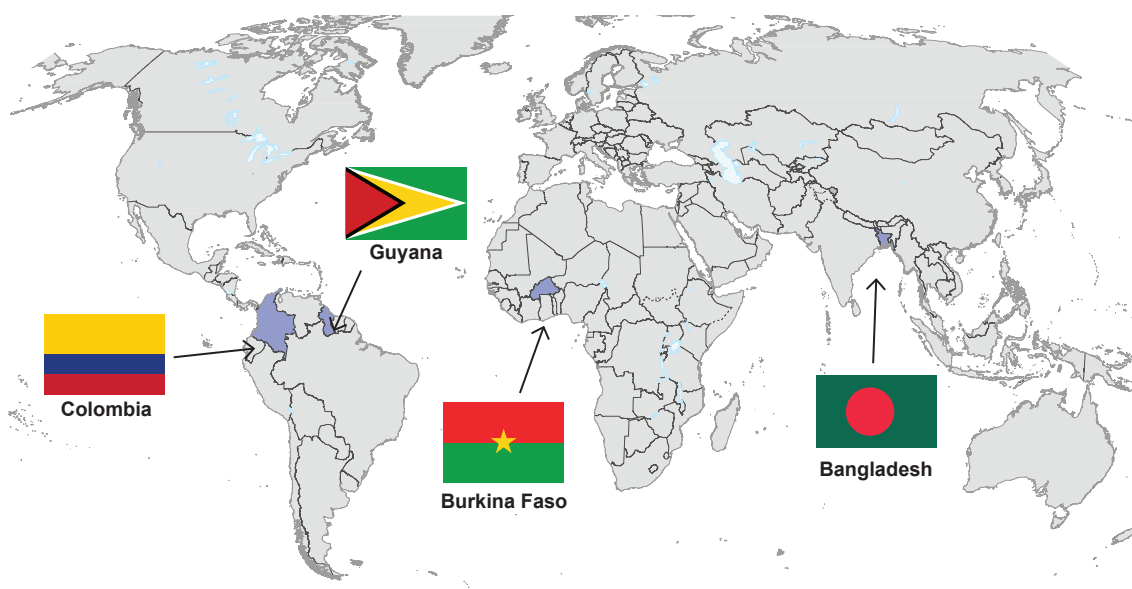


Figure 2. Participating Countries

Under the present project entitled, “Towards coherent implementation of the environmental dimension of the Sustainable Development Goals” (United Nations Development Account project 1819Q), UNEP worked with the Governments of four countries: Bangladesh, Burkina Faso, Colombia and Guyana.

2. Case Study – Guyana

Since 2020, the development of environmental policy in Guyana has been guided by the 2009 Low Carbon Development Strategy and its update, following a change in Government. Under the previous Administration, the Green State Development Strategy: Vision 2040 served as the national development strategy. The change in Government led to a shift in priorities, but the underlying need to address environmental data remains of high relevance. The Green State

Development Strategy aimed for a transition, over the long term, to a more diversified, green and inclusive economy in the spirit of the Sustainable Development Goals. It focused on unrealized goals that had been priorities in several other national, thematic and sectoral strategies, such as the National Development Strategy 2001–2010, the nationally determined contributions under the Paris Agreement, the Low Carbon Development Strategy, Guyana’s

National Biodiversity Strategy and Action Plan (2012–2020) and the National Adaptation Strategy to Address Climate Change in the Agricultural Sector of Guyana: Strategy and Action Plan. One of the common elements in these strategic documents is the need for Guyana to strengthen its environmental data management.

The United Nations agencies present in Guyana cooperate under the United Nations Multi-Country Sustainable Development Framework in the Caribbean 2017–2021, which was developed instead of country-specific development assistant frameworks, and under the Socioeconomic Response and Recovery Plan prepared by the United Nations country team in response to the coronavirus disease (COVID-19) pandemic. As part of a region-wide effort, the Guyana country team is currently preparing the country implementation plan for the next five-year Multi-country Sustainable Development Cooperation Framework (2022–2026). The need to enhance the generation, management and use of national data to monitor progress towards achieving the Sustainable Development Goals is recognized in the Framework, along with the continuing challenge of reporting on

capacity of the Guyana Bureau of Statistics, particularly in terms of environment-related data; promotion of the application of international standards in the collection, reporting and sharing of environmental data within the Guyana Environmental Protection Agency; and improvements in the collaboration between the Bureau of Statistics and the Environmental Protection Agency in relation to environmental data.

The first voluntary national review of Guyana submitted to the high-level political forum on sustainable development in 2019 mentions that the Ministry of Finance has been chosen to lead the process of monitoring the country's progress towards achieving relevant targets of the Sustainable Development Goals, via the national budgeting process. The voluntary national review also mentions that data systems need to be strengthened and research needs to produce data that will “allow agencies to better target their interventions, whether it be to identify causes of biodiversity loss or to generate mineral maps to allow for better planning” (pp.79–80). The review also gives examples of monitoring capacity being limited by the lack of equipment (for example to test water quality under Goal 14) and identifies specific monitoring needs (such as in the forestry sector or in relation to the transportation of wildlife).

The 2019 voluntary national review outlines eight priority actions in which data and monitoring play an important role. The fifth priority aims to institutionalize monitoring and evaluation systems in all government agencies and provide resources for training. The sixth priority aims to establish mandatory inter-agency collaboration mechanisms to support the tracking of progress towards core Sustainable Development Goals. The present project contributed to addressing these priorities.



Guyana - © UNEP/Stephanie Foote

implementation of multilateral environmental agreements and on the implementation of the 2030 Agenda for Sustainable Development through voluntary national reviews. Among the strategic objectives of the present project were therefore the raising of awareness of the importance of data for decision-making and national reporting; enhancement of the

3. Environmental Data In Guyana



In Guyana, environmental data is collected by a number of governmental institutions, but mainly by the Environmental Protection Agency, the Guyana Forestry Commission, the Protected Areas Commission, the Guyana Wildlife Conservation and Management Commission, the Guyana Geology and Mines Commission and the Guyana Lands and Surveys Commission. Although the Bureau of Statistics lacks a formal mandate relating to environmental statistics under the 1965 Statistics Act, it is increasingly called upon to deliver environmental statistics for national estimates. To that end, it is reliant on cooperation with the environmental agencies.

Overall, environment-related data are collected and processed by 16 agencies under a variety of ministries, which leads to cumbersome data-sharing practices, lengthy delays and high transactional costs. Since Guyanese independence in 1966, the enactment of new environmental legislation has often resulted in the creation of new institutions, the mandates of which sometimes overlap with those of existing institutions, and thus the potential for increased competition for financial resources. This situation is not unique to Guyana and reflects the challenges to efficient and effective environmental governance that can exist at the national and international levels.

The challenges faced by Guyana in relation to environmental data can be enumerated as follows:

Cooperation for the continuous gathering of environmental data. There is no permanent government network for primary data collection, and reliance on sources external to government agencies is high. Cooperation among agencies is either ad hoc or takes place through memorandums of understanding, which makes the continuous monitoring of the environment cumbersome. The Bureau of Statistics has a mandate for national censuses, statistics and surveys using data from administrative sources, but not specifically in relation to environmental statistics. The 1965 Statistics Act needs to be revised and updated and the continuous gathering of environmental data can be strengthened by greater policy coherence in line with target 17.14 of the Sustainable Development Goals (Enhance policy coherence for sustainable

development). Agencies require specialized, trained data-coordination staff responsible for data collection and data-sharing.

Institutionalized data exchange among government entities. Public institutions rely on individual memorandums of understanding or informal channels to share environmental data. A number of interagency committees, such as the Land Reclamation Committee and the Mangrove Action Committee, undertake coordination, but many of them struggle or are defunct owing to a lack of leadership, purpose or resources. The sharing of environmental data can be a lengthy and ineffective process, and the data often varies in quality or format. Interoperability is lacking, and environmental data is often considered to be the property of the generating entity. Continuous, reliable funding and the availability of equipment and capable staff are necessary for the systematic production of environmental data, based on an ethos of collaboration and sharing.

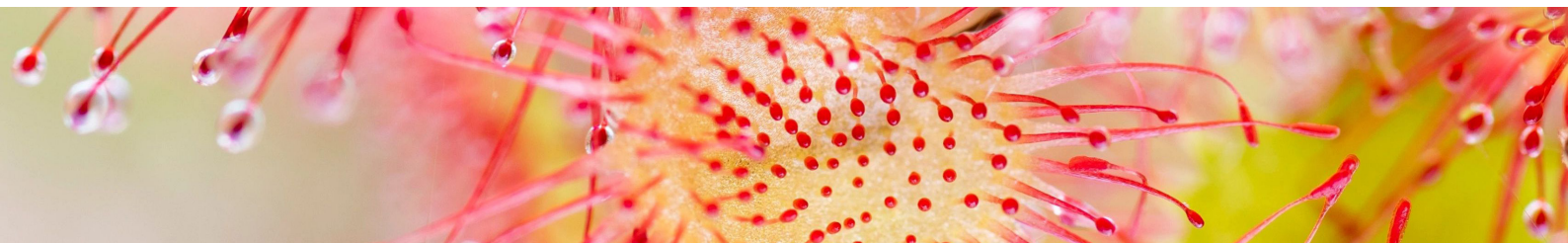
The appropriate level of detail. There is a gap in the national system with respect to environmental statistics. It is therefore difficult to manage natural resources sustainably and to provide coherent and comprehensive reports relating to international processes and multilateral environmental agreements. Reporting is inconsistent. For example, there are data gaps in the 2019 voluntary national review in relation to 11 of the 20 Aichi Biodiversity Targets, whereas the Sixth National Report of Guyana under the Convention on Biological Diversity, submitted in September 2019, provides information on all 20 of the Aichi Biodiversity Targets and on related national targets. The voluntary national review lacks information on solid waste and emissions of nitrous oxide, methane and carbon dioxide and data on most of the environment-focused indicators of the Sustainable Development Goals.² The voluntary national review provides data for only two of the 25 indicators for which UNEP is the custodian, owing to a lack of clarity in terms of responsibilities.

2 The annexes to the 2019 voluntary national review provide an overview of the data that is available in Guyana in relation to the indicators of the Sustainable Development Goals. In some cases, even when data would possibly have been available, for instance at the Ministry of Agriculture, it was reported as “not available”.

The definition of responsibilities.

Responsibilities for reporting on the implementation of multilateral environmental agreements and other international conventions are distributed across many government entities, from ministries to statutory institutions such as the Environmental Protection Agency. The Agency would require more capacity-building to be able to assume full responsibility for environment-related data. In addition,

government entities' awareness of the mandate of the Bureau of Statistics is insufficient. It is unclear which of the environmental agencies are responsible for setting standards in relation to data-collection techniques, quality control and monitoring and development of environment databases. Institutions that would be well placed to do the coordination do not necessarily have the legislative mandate or the capacity required.



Europe, UK, Yorkshire Moors, Round-leaved sundew on a peatland bog. © UNEP/Stephanie Foote

4. UNEP Action to Improve Environmental Data and Policy Coherence in Guyana

UNEP has a global mandate to monitor the environment and is the custodian of 25 environment-related indicators of progress towards the Sustainable Development Goals. The mandate of UNEP includes the promotion of policy coherence and the coherence of efforts to meet the environment-related targets of all 17 Sustainable Development Goals, notably through subprogramme 4 of the UNEP programme of work on environmental governance and subprogramme 7 on the environment under review.

In Guyana, through the present project, which was launched in 2019, UNEP supported a set of activities to assess the use of environment-related data and to strengthen the role of such data in the monitoring of sustainability at the national level. As UNEP was already present in Guyana, the relationships that it had built provided opportunities for liaison with government entities and other United Nations agencies working with environment-related data or data relevant to the measurement of progress towards the Sustainable Development Goals.

In the design of the project, analysis was undertaken to identify gaps in the data needed for reporting on the progress towards the Sustainable Development Goals and implementation of multilateral environmental agreements, in particular the Convention on Biological Diversity,

the United Nations Framework Convention on Climate Change and United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa. Efforts were also made to identify the linkages between reporting mechanisms.

In August 2019, a training workshop was conducted to build data-management and monitoring capacities in relation to the United Nations Framework for the Development of Environmental Statistics and the application of statistical tools, namely the Sustainable Development Goals Synergies tool developed by the Stockholm Environment Institute that analyses the interaction of the Sustainable Development Goals and their targets, the Environment Statistics Self-Assessment Tool and the System of Environmental Economic Accounting. The workshop was attended by participants from 23 institutions and included representatives of governmental agencies, intergovernmental organizations and civil society organizations. During the workshop, recommendations were developed relating to a planned revision of the national strategy for the development of statistics, which will be the road map for the Bureau of Statistics in terms of the national statistical system,³ including for

³ A national statistical system comprises the statistical organizations and units within a country that, together, collect, process and disseminate statistics on behalf of

environmental statistics. Recommendations furthermore included ways to strengthen inter-agency cooperation.

Bilateral meetings with representatives from environmental and data-management agencies, such as the Environmental Protection Agency and the Bureau of Statistics, resulted in the creation of an ad hoc biodiversity task team, which subsequently held three meetings to focus on improving cooperation among agencies in the generation and use of biodiversity-related statistics.

Building on the insights gained during the training workshop and on analysis by UNEP, a policy brief on strengthening governance of environmental data in Guyana was produced to support implementation of the 2030 Agenda on Sustainable Development and, initially, the Green State Development Strategy: Vision 2040; the focus shifted to the Low Carbon Development Strategy following the change of government. The policy brief includes detailed proposals on how cooperation among agencies on environmental data can be strengthened in Guyana, in particular by working on institutional arrangements.

The Green State Development Strategy: Vision 2040 was finalized during 2019, with support from UNEP and the Partnership for Action on Green Economy initiative, which provided financial resources and supported the initial implementation of the Strategy. As mentioned, the Strategy was subsequently discontinued in

the national government. Members of the system typically include the national statistics office, playing a coordinating role, and units within line departments and agencies responsible for producing sectoral statistics, relating, for example, to agriculture or health. The statistics produced by these bodies are referred to collectively as official statistics.

August 2020 by the newly elected government, which also halted the initiative's supporting activities subject to further review.

In 2020, during implementation of what was supposed to be the final components of the present project, the COVID-19 pandemic disrupted activities. In response, UNEP and the United Nations country team, in compliance with United Nations system-wide directives, offered support to Guyana in its COVID-19 response and recovery efforts, including through implementation of the country team's Socioeconomic Response and Recovery Plan. These efforts aimed for greater emphasis on the environmental dimension of national recovery.

UNEP will continue to work with the Environmental Protection Agency and the Bureau of Statistics to build their capacity in terms of the application of standards and protocols for environmental data management.



Guyana - © Flickr/Craig Bellamy

5. Results



The success of the present project is linked to the pre-existing presence of UNEP in Guyana. This facilitated the building networks and trust within and among government agencies, provided opportunities for direct interaction and improved access to and the application of UNEP technical expertise and resources. In its medium-term strategy 2018–2021, UNEP prioritized work on environmental governance and environmental data. It undertakes most of its work in partnership

with other United Nations agencies and other international and local organizations. UNEP built upon its existing strengths in this project, which resulted in a high return on investment.

The approach chosen for the project required and promoted cooperation among United Nations organizations and representatives working in Guyana, including the country team and the Resident Coordinator. Implementation

of the environmental dimension of sustainable development provides an entry point that can lead to enhanced cooperation and coordination among government agencies, improving data generation and use and monitoring in areas that include, but also go beyond, the environmental dimension.

Achievements of the present project include:

- ❑ The production of an internal policy brief on strengthening governance of environmental data in Guyana to support implementation of the 2030 Agenda for Sustainable Development and the Green State Development Strategy: Vision 2040. The policy brief included an analytical component and recommendations for legal reform, the strengthening of institutions and the improvement of accountability and transparency. The policy brief has not yet been disseminated.
- ❑ The creation of a biodiversity task team involving representatives of government agencies, including the Environmental Protection Agency and the Bureau of Statistics. The task team was discontinued, however, when the project came to an end. The aim of the task team was to encourage agency representatives to discuss and to cooperate more effectively with regard to strengthening the generation and use of biodiversity-related data and its integration into efforts to implement the Sustainable Development Goals. The task team held three meetings to address those issues and developed a proposal for terms of reference for a technical working group of experts that would be tasked with data coordination and the development of environmental statistics. It was proposed that such a working group could support the Department of Environment, within the Office of the President, and the Bureau of Statistics, in the preparation of the planned revised national strategy for the development of statistics, which was identified as a priority in the country's 2019 voluntary national review, so that the environmental dimension of the revised strategy could be strengthened. These proposals did not come to fruition, however, as the project was disrupted by the COVID-19 pandemic and affected by the change in government.
- ❑ Input for the development of a protocol for the collection of high-quality environmental data within the management framework of the Country Implementation Programme of the United Nations country team. The input was drawn from work done by the country team in support of the preparation of the economic response to the COVID-19 pandemic in Guyana.
- ❑ Facilitation of the testing and roll-out of the UNEP methodology for measuring progress in relation to indicator 17.14.1 of the Sustainable Development Goals (the number of countries with mechanisms in place to enhance policy coherence of sustainable development). The methodology was developed to assess policy coherence at national level and is based on a scoring system. It aims to identify not only missing mechanisms, but also ways of strengthening existing mechanisms.
- ❑ The integration of environmental policies into the Green State Development Strategy: Vision 2040. The Strategy aimed for an "inclusive and prosperous Guyana that provides a good quality of life for all its citizens based on sound education and social protection, low-carbon and resilient development, providing new economic opportunities, justice and political empowerment" (p. 1). Guyana has experienced substantial economic growth due to the commercialization of oil and gas, which has allowed for the modernization of other sectors. In the Strategy, Guyana endeavoured to take a holistic approach to its development, in line with the Sustainable Development Goals, and financed by the proceeds from the sale of oil and gas. The focus of the Strategy was on the sustainable management of natural resources, but the conservation of biodiversity, ecosystem services and heritage were also proposed as desirable outcomes. The Strategy included policy recommendations that emphasized the importance of data, for example, for integrated water-resource governance and sustainable forest management. The Green State Development Strategy was discontinued upon the transition to the new government in August 2020. In its place, the Low Carbon Development Strategy is in the process of being updated and expanded.

□ The participation of Guyana in the Partnership for Action on Green Economy (PAGE), starting in 2017. The Partnership provides technical assistance for policy development and implementation, capacity-building and financing for the transition to an inclusive green economy. The Partnership's resources were programmed for five years as of 2017 but interrupted in 2020 pending review. They will restart in 2022 under the auspices

of the Country Implementation Plan of the United Nations country team, part of its cooperation framework with the Government.

□ The development of a model inter-agency cooperation agreement and an environmental datasharing protocol, which has been agreed for use and application by the Environmental Protection Agency and the Bureau of Statistics.

Lessons learned under the project

The circumstances of individual countries vary greatly in terms of the extent of and institutional set-up for environmental governance, data collection and management, available resources and capacities. This necessitates the development of solutions that are tailor-made to the needs of each country. In the case of Guyana, the successful

deployment and implementation of the present project was greatly facilitated by the pre-existing presence of UNEP in the country. Direct communication between the project coordinator, local decision-makers and project partners was indispensable in the development of country-specific approaches and in ensuring that working relationships with agencies remained strong even through transitions at the political level.

Each country has its own approach to integrating the Sustainable Development Goals and other multilaterally agreed objectives into domestic policies. UNEP can play a significant role in ensuring that the environmental dimension of these objectives remains in sharp focus, despite potential shifts in priorities, which are likely to occur owing to the COVID-19 pandemic. In this regard, the project clearly demonstrates the advantages of adaptive project management; as political circumstances can change during a project, workplans should be adapted whenever necessary to respond in the best possible way to the changing needs of the country.



Guyana - © Pixabay/Ulises Casaraz

A Touch of Gender

UNEP is committed to promoting gender equality in strengthening the environmental dimension of the Sustainable Development Goals in Guyana and the region. The application of a gender lens in reviewing the recommendations in this case study recognizes the cross-cutting nature of SDG 5 and its relation to the environmental goals. Therefore, countries drawing examples from this case study are encouraged to promote the progress of gender equality at various levels. UNEP through its [Medium Term Strategy](#) provides guidance on how to integrate gender related environmental elements in the Sustainable Development Goals through the integrated approach.

6. Recommendations

- ❑ Work to develop and implement the planned new national strategy for the development of statistics in Guyana should continue as it would contribute to fulfilment of the fifth and sixth priorities of the country's 2019 voluntary national review. The new Department of Environment and Climate Change, the product of the merging of the Department of Environment and the Office for Climate Change, could engage in the development of the strategy.
- ❑ Support is required for the long-term continuation of the technical working groups associated with the institutions involved in the collection and processing of environmental data.
- ❑ To fill in gaps in data and to ensure the stability of data collection over time, the Government is encouraged to create a national mechanism involving government agencies, research institutions and non-governmental organizations; to support the establishment of a national system for environmental information management and monitoring and related protocols for data sharing including metadata; to ensure the availability of resources for these purposes; to support inter-agency coordination on the production of environmental statistics; to provide incentives for data sharing; and to strive for interoperability among databases.
- ❑ Support for the development of technical capacity for the generation of environmental statistics is required, in particular with regard to data collection and reporting on the Sustainable Development Goals. This could be provided in cooperation with international partners and the United Nations country team. UNEP is encouraged to stay engaged in the process.
- ❑ Revision of the 1965 Statistics Act and other legislation would strengthen the mandate of the Bureau of Statistics and provide for the inclusion of environmental data.
- ❑ Institutional accountability requirements could be strengthened, including in relation to transparency and public access to information.
- ❑ Guyana could consider participating in the early application of the data-reporting tool for multilateral environmental agreements, "DaRT".⁴ DaRT provides parties to multilateral environmental agreements with a private and secure working space to organize, maintain and share information, data and knowledge across conventions and across reporting purposes.
- ❑ The Government is encouraged to review and revitalize the network of national focal points for multinational environmental agreements, the Sustainable Development Goals and other international conventions to ensure more coherent, high-quality reporting. UNEP could provide advice and support in this regard.
- ❑ Environmental data could be better used for communication purposes, including for the design of public education and awareness programmes.
- ❑ The national biodiversity strategies and action plans under the Convention on Biological Diversity and other policies that support the implementation of multilateral environmental agreements could be endorsed as policy instruments in support of the achievement of the Sustainable Development Goals.

⁴ DaRT is being developed by UNEP with the support of the secretariat of the Convention on Biological Diversity and has been endorsed by the United Nations Information Portal on Multilateral Environmental Agreements (InforMEA). It is available at <https://dart.informea.org/home>

References

1. Guyana, Office of the President (2009). Low Carbon Development Strategy. <https://lcds.gov.gy/wp-content/uploads/2021/10/Low-Carbon-Development-Strategy-May-2010.pdf>
2. Guyana, Office of the President, (2009). Low Carbon Development Strategy Update: Transforming Guyana's Economy while Combating Climate Change. <https://lcds.gov.gy/wp-content/uploads/2021/10/low-carbon-development-strategy-update-march-21-2013.pdf>
3. Guyana, Department of Environment (2019). Green State Development Strategy: Vision 2040. <https://doe.gov.gy/gsds>
4. Guyana (2000). National Development Strategy 2001–2010. <http://www.ndsguyana.org/downloads/annex27.pdf>
5. Guyana, Ministry of Natural Resources and the Environment (2014). Guyana's National Biodiversity Strategy and Action Plan 2012–2020. <https://www.greengrowthknowledge.org/national-documents/guyanas-national-biodiversity-strategy-and-action-plan-2012-2020>
6. Caribbean Community Climate Change Centre (2009). National Adaptation Strategy to Address Climate Change in the Agricultural Sector of Guyana: Strategy and Action Plan <https://www.ctc-n.org/resources/national-adaptation-strategy-address-climate-change-agricultural-sector-guyana-strategy>
7. United Nations (2016). Multi-country Sustainable Development Framework in the Caribbean 2017–2021. <https://jamaica.un.org/en/18199-united-nations-multi-country-sustainable-development-framework-caribbean>
8. United Nations country team (2021). 2020 UN Guyana annual results report. <https://guyana.un.org/en/127453-un-guyana-annual-results-report-2020>
9. Guyana, Ministry of Finance (2019). First Voluntary National Review: High-level Political Forum on Sustainable Development. <https://hlpf.un.org/countries/guyana/voluntary-national-review-2019>
10. Guyana (1965). Statistics Ordinance No. 14 of 1965. http://parliament.gov.gy/new2/documents/acts/15912-act_14_of_1965.pdf
11. Guyana (2019). Sixth National Report to the Convention on Biological Diversity. <https://www.cbd.int/doc/nr/nr-06/gy-nr-06-en.pdf>



United Nations Environment Programme
United Nations Avenue, Gigiri
P.O. Box 30552 - 00100
Nairobi, Kenya
www.unep.org

