



THE STATUS OF THE TECHNOLOGY ASSESSMENT (TA) IN SEYCHELLES


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SEYCHELLES AT-A-GLANCE

- ▶ The Republic of Seychelles lies northeast of Madagascar, an archipelago of 115 islands with almost 98,000 citizens, three-quarters of whom live on the main island of Mahé.
- ▶ Seychelles has the highest gross domestic product (GDP) per capita in Africa, at \$12.3 billion (2020).
- ▶ It is highly dependent on tourism and fisheries, and climate change poses long-term sustainability risks.
- ▶ The economic and social shock from COVID-19 on the Seychelles is severe.
- ▶ Economic growth declined significantly in 2020 to -12.9% from 1.9% in 2019 due to the significant disruptions in economic activities, including lower tourism, which plummeted by more than 60%.
- ▶ The fiscal deficit widened to 19.5% of gross domestic product (GDP) in 2020 because of lower revenues and higher COVID-19-related spending.
- ▶ While the immediate priority is containing COVID-19 and recovery from its economic and social impact on the country, a focus on longer term structural issues is also warranted for a strong and resilient recovery.



INHERENT RISK FACTORS

- ▶ Economic and Social Vulnerability
 - ▶ Biodiversity and Environmental Vulnerability
 - ▶ Energy Security Challenges
 - ▶ Food Security Challenges
 - ▶ Insularity factors
 - ▶ Demographic Challenges
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WHAT IS SEYCHELLES DOING WITH REGARDS TO TA?

- ▶ TA has never been undertaken in Seychelles.
- ▶ However, a Technology Needs Assessment (TNA) was undertaken the first time in the Energy Sector in 2017 with the assistance of UNEP;
- ▶ The outcomes of the TNA exercise helped Seychelles in developing policy and strategy for Seychelles Energy Transition (*The Seychelles Energy Policy 2010 - 2030*);
- ▶ Recently UNCTAD is working with Seychelles on a two-year TA exercise in: Agriculture and Energy; and
- ▶ The first stakeholders' workshop was successfully completed with the objectives:
 - ▶ To understand better the concept of TA and the methodology to be used in the project;
 - ▶ To identify gaps in TA, especially in the Agriculture and Energy sectors;
 - ▶ To determine the priority areas for TA to be investigated under the project; and
 - ▶ To develop a work plan for the project

TA PROJECT TIMELINES

- ▶ 2018: Presentation of EOI to UNCTAD
- ▶ 2020: Confirmation for participation in the TA project
- ▶ 2022: First stakeholders workshop held in March 2022;
 - ▶ Worked with UNCTAD to develop the roadmap;
 - ▶ Attempt to bring the TA project to the attention of the political leadership (Cabinet of Ministers)
 - ▶ TA remained at the level of the Ministry of Investment, Entrepreneurship and Industry (MIEI) under the leadership of the Division of Science, Technology and Innovation (DSTI);
 - ▶ In-person participation to the 13th Investment, Enterprise and Development Commission; "Leveraging new technologies' impact through Technology Assessments,"
- ▶ 2023: Selection and appointment of the TA Steering Committee (SC);
 - ▶ First TA Steering Committee to endorse the Terms of Reference;
 - ▶ Selection of the Experts Group (EG);
 - ▶ Endorsement of the EG by the SC;
 - ▶ Official meeting of the EG;
 - ▶ Participation in UNCTAD virtual workshop together with South Africa and Zambia; and
 - ▶ Second EG hybrid meeting with the participation of UNCTAD.

OUTCOMES OF THE TA STAKEHOLDERS' WORKSHOP

- ▶ A summary of the workshop discussions.
 - ▶ List of key stakeholders to participate in the TA project.
 - ▶ List of TA priority areas/technologies in the agriculture and energy sectors.
 - ▶ Selection of the priority sector to focus on in the TA project.
 - ▶ Timelines for next activities of the TA project.
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OUTCOMES OF THE IN-PERSON PARTICIPATION TO THE 13th INVESTMENT, ENTERPRISE & DEVELOPMENT COMMISSION; "LEVERAGING NEW TECHNOLOGIES' IMPACT THROUGH TECHNOLOGY ASSESSMENTS,"

- ▶ Overall understanding of the TA process based on the methodology that UNCTAD provided;
- ▶ Appreciating progress done by participating member states as well as the challenges that all are faced with;
- ▶ Learning from each country's experience;
- ▶ Understanding the importance of international collaboration in support of TA;
- ▶ Understanding how feed into STI policy and other policy and strategic framework; and
- ▶ Appreciation of the challenges the roadmap implementation in the backdrop of national resources.

OUTCOMES OF THE FIRST EG MEETING

- ▶ Familiarization of the roles and functions of the EG;
- ▶ Familiarization of the TA methodology;
- ▶ Identification of the broad spectrum of technologies as per:
 1. The National Energy Policy and Strategy; *“The Seychelles Energy Policy 2010 - 2030 “*
 2. The first stakeholders’ workshop
 3. The TNA report
 4. General observations of the latest technologies being applied in both Agriculture and Energy sector.
- ▶ Awareness of the overall spectrum of technologies on the national demand side in both sector;
- ▶ Considering technologies on the supply side, including some foresight in the application of AI, OTEC, Green Hydrogen

OUTCOMES OF THE UNCTAD VIRTUAL WORKSHOP ON TA

- ▶ Learning from each countries progress through the respective presentations;
 - ▶ Understanding on the process South Africa in particular went through in setting priorities for their technologies to be assessed;
 - ▶ Understanding of the TA methodology; and
 - ▶ Consolidating on the past activities experiences to find a way forward while appreciating the delay in relation to the roadmap implementation.
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THE SECOND EG MEETING ON TA WITH UNCTAD'S PARTICIPATION

- ▶ Based on previous meetings, workshops, the current National Development Strategy (NDS), current government priorities, policies and strategies the EG came out with the following considerations in setting priorities to the technologies to assessed:
 1. The TA should look at technologies that complement both the energy and agricultural sector taking into consideration the followings:
 - ▶ The Seychelles inherent factors, the importance of food security and the strategy to achieve 100% renewable energy by 2050
 - ▶ The current situation in relation to supply chain disruption putting at risk food security and sovereignty;
 - ▶ The national strategy to the energy mix;
 - ▶ The TA methodology adoption in the context of Seychelles as a Small Island Developing State (SIDS); and
 - ▶ Current Energy and Agriculture policies and other policies tradeoffs

TECHNOLOGY PRIORITY FOR THE TA PROJECT

- ▶ Due the challenges of sustainable agricultural outputs the choice of technologies to be assessed are:
- ▶ Solar
- ▶ Controlled environment for vegetable production
 - ▶ Using solar energy (PV) to power fully-controlled crop production.

The Rationale:

- ▶ Fully-controlled environment will mitigate the negative climatic impacts, phytosanitary problems (common in hot humid climate)
- ▶ Solar will provide more cost-effective energy helping Seychelles Net-zero Food System and Building Resilience Strategy.

CHALLENGES FACED SO FAR

- ▶ A delay in keeping at pace with the milestones as set in the roadmap due to:
 - ▶ Organizational power structure;
 - ▶ Due to the above, the decision-making process to support the TA is slow as a result of bureaucratic hurdles and delays;
 - ▶ The divided attention of the lead agency on TA project;
 - ▶ The selection of the SC members is challenged to demographic factors; a narrow pool of adequate human resources;
 - ▶ Equally so for the EG;
 - ▶ Institutional-arrangement-fit to support the project;
 - ▶ The lack of awareness at the higher political leadership to support the project.

CONCLUSIONS

- ▶ TA being new for Seychelles, equally for most countries in Africa present a learning curve opportunity to adopt the methodology. However, institutional set-up presents a major challenge to the progress of the exercise. Nevertheless, since the acceptance of the EOI in 2020, there has been significant progress to carryout the TA based on the UNCTAD methodology.
- ▶ Seychelles has reached the third phase of the methodology, while falling far behind the implementation Roadmap. However, with a clearer understanding of the methodology in the backdrop of the prevailing conditions, the progress can be sustained to achieve the ultimate goal of the project.

THANK YOU

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