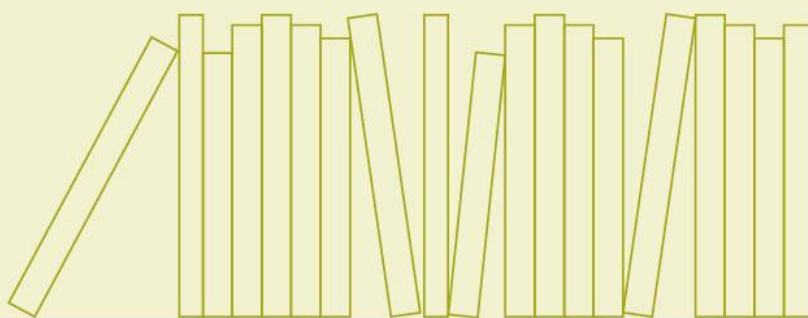


Economic Commission for Latin America and the Caribbean

**ECLAC SUBREGIONAL HEADQUARTERS
FOR THE CARIBBEAN**



Report of the expert group meeting on advancing statistical literacy towards promoting sustainable development in the Caribbean



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Economic Commission for Latin America and the Caribbean
Subregional Headquarters for the Caribbean

Expert group meeting on advancing statistical literacy
towards promoting sustainable development
in the Caribbean

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**REPORT OF THE EXPERT GROUP MEETING
ON ADVANCING STATISTICAL LITERACY TOWARDS PROMOTING
SUSTAINABLE DEVELOPMENT IN THE CARIBBEAN**

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CONTENTS

A.	MAIN CONCLUSIONS AND RECOMMENDATIONS.....	2
B.	ATTENDANCE AND ORGANIZATION OF WORK	2
	1. Place and date of the meeting.....	2
	2. Attendance.....	2
	3. Agenda	2
	4. Documentation	2
C.	SUMMARY OF PROCEEDINGS	3
	1. Opening of the meeting	3
	2. Overview and presentation of the study	3
	3. Discussion of study	5
	4. Questions and answers	6
	5. Conclusions	6
Annex I	List of participants.....	7
Annex II	Programme	9

A. MAIN CONCLUSIONS AND RECOMMENDATIONS

1. The study on “Advancing statistical literacy towards promoting sustainable development in the Caribbean” indicated that staff of National Statistical Offices (NSOs) of the Caribbean are engaged in statistical activities that reflect their levels of competency but irrespective of competency level, NSO staff reported having challenges in the areas of survey sampling and methodology and inferential statistical analysis. However, the NSOs facilitate continuous education for staff to enhance their skills and are engaged in promoting statistical literacy among the general population. Nonetheless, the results suggest the need to improve the statistical literacy of staff who do non-statistical work at the NSOs. At the policy level, the lack of data sharing agreements and coordinating mechanisms in the national statistical system (NSS) appear to be posing challenges for statisticians in communicating data and statistics to data users.
2. Staff members of NSOs have a fair to good opinion of the statistical literacy of staff of government ministries, departments and agencies that they interact with on data needs and requests. They also perceived this group to be the least likely to misuse or misinterpret data and statistics.
3. The issue of statistical literacy of the general population should be given serious attention. Statistical reasoning, thinking, and literacy are essential elements of the critical reasoning needed to function effectively in today’s society. Therefore, more emphasis should be put on promoting statistical literacy to increase the public’s ability to understand and critically evaluate statistical results. This is in addition to targeting specific groups of NSO stakeholders, including decision-makers, opinion leaders, journalists, and students, who would benefit from more specific interventions to enhance their statistical literacy.

B. ATTENDANCE AND ORGANIZATION OF WORK

1. Place and date of the meeting

4. The expert group meeting on advancing statistical literacy towards promoting sustainable development in the Caribbean was held virtually on Tuesday 21 December 2021.

2. Attendance¹

5. The meeting was attended by Caribbean statistical experts and professionals from the member States of Antigua and Barbuda, Jamaica, Saint Kitts and Nevis, Saint Lucia, Suriname, Trinidad and Tobago, and the associate members of Montserrat, and Turks and Caicos Islands. Representative of the Caribbean Community (CARICOM) Secretariat was also present.

3. Agenda

1. Opening of the meeting
2. Overview and presentation of the study
3. Discussion for study
4. Questions and answers
5. Conclusions

4. Documentation

6. The draft study entitled “Advancing statistical literacy towards promoting sustainable development in the Caribbean”, prepared by ECLAC subregional headquarters for the Caribbean, was presented for review by the meeting participants and thus served as the background document for the meeting. The study

¹ See annex I for a full list of participants.

assessed the level and range of statistical competence in Caribbean NSOs and sought to gauge the level of statistical literacy of NSOs, stakeholders in ministries, departments, and agencies. The findings informed suggested measures to promote statistical literacy that are organized and designed to meet the needs of different data users, including businesses and government, mass media, civil society, academia, and the ordinary citizen.

7. A statistical literacy survey of staff of NSOs in the Caribbean was administered jointly by ECLAC and the CARICOM Secretariat during September–December 2021. The survey broadly explored the levels of statistical competency and expertise, and statistical literacy of NSO staff. The survey, which was conducted online, relied on self-assessment of statistics and statistical-related skills. Fifty-six respondents from 11 NSOs across the Caribbean completed the online questionnaire. The responses received were in varying degrees of completeness.

C. SUMMARY OF PROCEEDINGS

1. Opening of the meeting

8. In his welcoming remarks, the Coordinator, Statistics and Social Development Unit of ECLAC welcomed all participants. He stated that enhancing the statistical capacity of member States is one of the key functions of ECLAC and that executing this function would be a daunting task in an environment where statistical literacy is at a low level. It is even more challenging in the current era where advancement in technology has made data collection an easier task for non-statisticians and those with little to no knowledge of statistics. He expressed gratitude for the collaboration with the CARICOM Secretariat in examining statistical literacy in the subregion. The collaboration resulted in a survey which was designed to get information on the areas of statistical skills and competency of NSO staff, perception of statistical literacy of NSO staff and perception of statistical literacy of data users in government ministries, departments, and agencies. He noted that ECLAC had analysed the data and the results were indicative of a perceived low level of statistical literacy among general citizens and journalists. This is particularly noteworthy because these groups can shape public opinion and their misinterpretation or misuse of data and statistics can hinder progress on sustainable development.

2. Overview and presentation of the study

9. The Coordinator, Statistics and Social Development Unit of ECLAC introduced the study “Advancing statistical literacy towards promoting sustainable development in the Caribbean”. He explained that statistical information and messaging is everywhere, and citizens should be able to understand, interpret, critically evaluate, and make sense of data and statistics. In the Caribbean, technical competency in statistics is often limited to the statisticians. Therefore, to ensure the better use of statistics, he urged that greater effort be put into improving statistical literacy among all actors in society. The NSO is a key player in helping ensure that statistical literacy is improved at the country level.

10. He noted that with an increased use of statistics and data, statistical fallacies have become more prevalent. COVID-19 has made this even more apparent. There has been a lack of technical and critical reasoning skills as well as misuse, misunderstanding, and misinterpretation of data and statistics in the media. Furthermore, there has been a proliferation of data, including from unreliable sources with inconsistent reporting practices. With more “fake news” and conspiracy theories, statistics are perceived as falsehoods, resulting in increasing public distrust. Recent studies have linked statistical literacy to enhanced understanding of the risks associated with COVID-19. They also revealed that statistically literate persons were more likely to follow health protocols and guidelines and were more likely to have a positive attitude toward vaccinations. Those who had challenges understanding and interpreting data may be unlikely to take actions to mitigate the risks associated with COVID-19.

11. As regards the sustainable development framework, he noted that to ensure a proper data ecosystem to advance the sustainable development process, statistics should be understood by all, although not everyone need be an expert. Data and statistics are essential for monitoring the progress of the the SDGs. Statistical literacy is required to understand the social issues represented by the SDGs. Statistical competency and data skills are vital to civic participation and social progress. A large part of the national statistical system (NSS) of developing countries has minimal statistical capacity and many staff do not possess the requisite statistical literacy to meet the demands of the 2030 Agenda. NSS need to increase their statistical capacity to produce timely and reliable data to monitor SDG targets and indicators. NSS must also lead the promotion and advocacy of statistical literacy among data users and citizens.

12. The Coordinator noted that CARICOM has developed a Regional Strategy for the Development of Statistics (RSDS) to be fulfilled by 2030. The RSDS contains strategies to improve statistical literacy as part of the communication and advocacy priorities. International cooperation through agencies such as the Inter-American Development Bank (IDB), European Union and PARIS21, has also promoted statistics and data literacy in the subregion through various training initiatives and activities as part of the implementation of the RSDS.

13. He explained that respondents reported performing all eleven statistical activities measured on the statistical literacy survey. Report writing and data dissemination and communication were the most reported activities (91 per cent each). Advanced users and intermediate users indicated performing a greater proportion of the activities than basic users. Approximately half of the respondents who indicated performing reporting, analysis and methodological tasks were advanced users. The respondents reported expertise in performing statistical activities parallel to their statistical proficiency. As expected, the advanced users were more likely than others to report advanced competency for the statistical activities done at the NSO. The intermediate users also mostly reported intermediate or advanced proficiency in the statistical activities.

14. He also noted that more than half the respondents, in performing statistical activities, identified survey sampling, methodology and inferential statistical analysis as the most common challenges. These were also the least performed tasks. Overall, only 12 per cent of respondents reported experiencing no difficulties in performing statistical activities.

15. The Coordinator highlighted that advanced users were more likely to respond to requests for data. Most advanced users (41 per cent) reported continuous interaction with other data users. Most intermediate users (59 per cent) reported often interacting with other data users. Equal proportions of basic users indicated that they somewhat or often interacted with other data users. Most interaction was with the public sector (government officials, and government ministries, departments, and agencies) (39 per cent), followed by interaction with international organizations (18 per cent), academics/students (14 per cent), and businesses (14 per cent). Engagement with ordinary citizens and journalists was not very common (8 per cent and 7 per cent, respectively). A lack of data sharing policy was identified as the most common challenge in communicating data and statistics to data users (75 per cent).

16. He indicated that in terms of the perception of government ministries, departments, and agencies staff, NSO staff who reported that they interact with data users had a fair to good perception of the statistical literacy of government ministries, departments, and agencies staff. Of all data users, staff of NSOs perceived government ministries, departments, and agencies staff to be the least likely to misuse or misinterpret data and statistics. On the other hand, the perceived statistical literacy of NSO staff who do non-statistical work was low to moderate.

17. Lastly, he explained that the results indicate perceived fair to good statistical literacy among the staff of government ministries, departments and agencies that interact with NSOs on data needs and requests. Misuse and misinterpretation of data and statistics by the ordinary citizens and journalists are also

considered prevalent. These two groups, which should play important roles in curbing misinformation and shaping public opinions, should constitute key cohort in any statistical literacy programme. There is encouraging indication that the NSOs facilitate continuous education for staff to enhance their skills and are engaged in promoting statistical literacy among the general population. However, the results are indicative of the need to improve the statistical literacy of staff who do non-statistical work at the NSOs. At the policy level, the lack of data sharing agreements and coordinating mechanisms in the NSS appear to be posing challenges for statisticians in communicating data and statistics to data users.

3. Discussion of study

18. The Project Director of Regional Statistics at the CARICOM Secretariat provided an expert review of the study. She noted that the study focused on the CARICOM RSDS which underpins all future work in statistical literacy in the Caribbean subregion. The main objectives of the RSDS are to ensure that good and reliable statistics are available for assessing progress on the SDGs, as well as the status of the CARICOM Single Market and Economy (CSME) which is the subregion's flagship programme for integration, and to facilitate, in particular, transparency and accountability on data. This is essential in guaranteeing transparency and accountability of governments and national institutions in the development process of member States.

19. She noted that the study also looked at the priority area of advocacy and communication that underpins statistical literacy. She emphasized that these were key areas to raise the profile of the use and value of statistics, to effect change and to empower institutions and individuals to use statistics in decision making. Furthermore, advocacy and communication contribute to statistical strengthening, which create a culture in which all persons in the community can become more statistically literate and to engender understanding of basic Internet interpretation of statistics that can assist in detecting inaccurate reporting.

20. She highlighted the Action Plan for Statistics in the Caribbean which was endorsed by CARICOM Heads of Government in 2016, as a critical framework that should be considered in the study. The Action Plan called for the strengthening of statistics in the context of the post-2015 development agenda but is still important in the current time as it prioritized training in statistics for staff of national statistical systems. The Action Plan also recommends that governments pursue the upgrading of information and communication technology for data collection and dissemination, including production of key guidelines to encourage greater use of the of information technology (IT) statistical software. In terms of the sustainability of statistical literacy, the Action Plan calls for statistical development particularly in the area of education where young people should be encouraged to develop mobile applications in statistics, and training of new data scientists which should be embedded in school curriculums at the primary and secondary levels. She stated that in moving forward, there should be more focus on statistical education in the school setting. In this context she referenced the Director of the General Bureau of Statistics of Suriname, who has asserted that statistical thinking will one day be as necessary a qualification for enhanced citizenship as the ability to read and write. For critical statistical thinking and reasoning, the school setting should become a fundamental part in the process of designing, evaluating, and communicating data.

21. The Project Director made observations and offered recommendations on the instrument used to conduct the study. She suggested that similar to the identification of fields of study at the tertiary level the questionnaire could have included subjects studied at the secondary level as well. She expressed her reservation for opinion-types surveys and suggested that questions to test statistical competencies would have been more appropriate than self-assessment questions. She noted that while the questions on self-assessment provided some interesting results that showed persons' perception of their understanding of statistics, she cautioned that the findings could have limited use because the opinions expressed by the respondent could not be validated.

22. She commended ECLAC on this piece of work and congratulated the organization for its continued collaboration with CARICOM in the area of statistics, which she hoped would continue in the future.

23. In responding to the review, the Coordinator thanked the Project Director for a comprehensive assessment of the study. He acknowledged the limitations of the study, noting that it was intended more as exploratory rather than inferential research. He cautioned against conducting a study that tests staff of NSOs on their statistical competencies and recommended instead that such tests be commissioned by the NSOs themselves. He also explained that a means of cross validating the perception responses was built into the study but limited responses on the validation questions undermined the effectiveness of that assessment. He noted, however, that opinion questions are a valid method of providing indicative assessment on issues that may require further rigorous analysis.

4. Questions and answers

24. The Deputy Director, Research and Planning, General Bureau of Statistics in Suriname, suggested that a readable version of the questionnaire be disseminated before any group meeting so that the participants could familiarize themselves with it beforehand. The Coordinator, Statistics and Social Development Unit of ECLAC assured participants that the survey used in the preparation of the study would be included as an annex.

25. The Director General, Statistical Institute of Jamaica, referring to the issue of statistical literacy for stakeholders, wondered whether they understood basic terms such as inflation, gross domestic product (GDP), gross fixed capital formation, and other economic indicators. She noted that these are terms that NSOs stakeholders who are statistically literate should understand. She added that data literacy should be taught in schools along with statistical literacy.

26. The Director of Statistics (a.i.), Central Statistical Office of Trinidad and Tobago, noted that NSOs within the region have been largely grounded on a foundation of socio-economic statistics, with many of its officers formally trained in economics and sociology. The future of NSOs, including an anticipated increase in statistical literacy will require staff with a broader range of competencies and qualifications. This would include those with math and statistics backgrounds who would increase the statistical capabilities of the NSOs and change the culture of the organizations. More emphasis should also be put on promoting statistics to increase the public's understanding. While these efforts can be considered as boosting data literacy, it is important to acknowledge that the level of statistical literacy will inevitably differ between those stakeholders with a quantitative background and members of the public without.

27. The consultant from the Statistics and Social Development Unit of ECLAC suggested that there should be special sessions for the media to raise statistical literacy with a view to mobilizing their support in enhancing public awareness and capacity in statistical literacy. He further highlighted the usefulness of intuitive learning from practical life examples.

5. Conclusions

28. In his closing remarks, the Coordinator, Statistics and Social Development Unit of ECLAC thanked all the participants for attending the meeting. He expressed his gratitude to the CARICOM Secretariat for the collaboration on the study and expressed his hopes that more collaboration would be forthcoming. He mentioned that ECLAC would be looking forward to working with all the NSOs and hoped to enhance the findings and conclusions of the study by incorporating the valuable contributions received during this meeting.

Annex I**LIST OF PARTICIPANTS****A. Member States****ANTIGUA AND BARBUDA**

- Rohan Anthony, Senior Statistician, Statistics Division, Ministry of Finance, Economics and Public Administration, email: Rohan.Anthony@ab.gov.ag

JAMAICA

- Carol Coy, Director General, Statistical Institute of Jamaica, email: ccoy@statinja.gov.jm

SAINT KITTS AND NEVIS

- Carlton Phipps, Director of Statistics, Statistics Division, Ministry of Sustainable Development, email: juniorhipps@gmail.com

SAINT LUCIA

- Richard Harris, Economic Statistician, Central Statistical Office, email: richard.harris@govt.lc
- Uranda Caesar, Statistician, Central Statistical Office, email: uranda.caesar@govt.lc
- Urmain Gray, Statistical Clerk Central Statistical Office, email: urmain.gray@govt.lc
- Maureen Lubin, Statistician III, Central Statistical Office, email: maureen.joseph-lubin@govt.lc
- Sean Mathurin, Deputy Director (a.i.), Central Statistical Office, email: sean.mathurin@govt.lc
- Sherma Small, Mapping Supervisor, Central Statistical Office, email: sherma.lawrence@govt.lc
- Olympia Joseph, Gender Statistician at Central Statistical Office, email: olympia.joseph@govt.lc

SURINAME

- Eartha Groenfelt, Deputy Director Research and Planning, General Bureau of Statistics, email: egroenfelt@gmail.com

TRINIDAD AND TOBAGO

- Andre Blanchard, Director of Statistics (a.i.), Central Statistical Office, email: Andre.Blanchard@statistics.gov.tt; cso.statistics@gmail.com

B. Associate members**MONTSERRAT**

- Alphege Browne, Statistician, Statistics Department, Ministry of Finance and Economic Management, email: browneAL@gov.ms
- Siobhan Tuitt, Chief Statistician, Statistics Department Ministry of Finance and Economic Management, email: tuittsn@gov.ms

TURKS AND CAICOS ISLANDS

- Sabrina Williams, Deputy Chief Statistician, Department of Economic Planning and Statistics, Ministry of Finance, email: svwilliams@gov.tc

C. Regional organizations

Caribbean Community (CARICOM)

- Philomen Harrison, Project Director, Regional Statistics, CARICOM Secretariat, email: Philomen.Harrison@Caricom.org

D. Secretariat

ECLAC subregional headquarters for the Caribbean

- Abdullahi Abdulkadri, Coordinator, Statistics and Social Development Unit, email: abdullahi.abdulkadri@eclac.org
- Catarina Camarinhas, Social Affairs Officer, Statistics and Social Development Unit, email: catarina.camarinhas@eclac.org
- Candice Gonzales, Economic Affairs Officer, Statistics and Social Development Unit, email: candice.gonzales@eclac.org
- Iskuhi, Mkrtchyan, Statistics Assistant, Statistics and Social Development Unit, email: iskuhi.mkrtchyan@eclac.org
- Colleen Skeete, Programme Management Assistant, Statistics and Social Development Unit, email: colleen.skeete@eclac.org
- Dave Clement, consultant, Statistics and Social Development Unit, email: davemclement@gmail.com
- Shirelle Floyd, consultant, Statistics and Social Development Unit, email: shirellefloyd@gmail.com
- Shari Johnson, consultant, Statistics and Social Development Unit, email: sharijohnson17@gmail.com
- Gina Marajh, consultant, Statistics and Social Development Unit, email: gina.hannah7@gmail.com

Annex II**PROGRAMME**

10.00 – 10.10 a.m.	Opening of the meeting Welcome remarks Abdullahi Abdulkadri, Coordinator, Statistics and Social Development Unit ECLAC subregional headquarters for the Caribbean
10.10 – 10.40 a.m.	Overview and presentation of the study Abdullahi Abdulkadri, Coordinator, Statistics and Social Development Unit ECLAC subregional headquarters for the Caribbean
10.40 – 10.50 a.m.	Discussion of Study Dr. Philomen Harrison, Project Director Regional Statistics, CARICOM Secretariat
10.50 – 11:20 a.m.	Questions and answers
11:20 – 11.30 a.m.	Conclusions Abdullahi Abdulkadri, Coordinator, Statistics and Social Development Unit ECLAC subregional headquarters for the Caribbean



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