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<u>**PRELIMINARY REVIEW OF DATA QUALITY IN MEMBER COUNTRIES**</u>

1.   INTRODUCTION

Integral to the implementation of the CARICOM Single Market and Economy (CSME) are effective Data Quality Assessment (DQA) measures in member countries. An improvement in data quality is crucial to the success of work currently being undertaken to develop national statistical systems across the Region.

In this regard, the CARICOM Secretariat has embarked on a data quality assessment programme. A preliminary Data Quality Assessment questionnaire **(Attachment I)** was administered to 19 Member Countries and the results analysed.

2.   MAIN FINDINGS

The following are the main findings as inferred from the response of the six (6) Member Countries to the DQA questionnaires;

(i)   Quality Assessment Framework in Place

Of the six countries that responded, only one indicated that some form of quality assurance framework is in place, but that this framework is quite informal. Included in this "informal framework" as it was called, is a system of verification and comparative analysis with previous periods and publications.

Of the remaining five (5) countries, two (2) indicated that they have plans in place to develop and use a quality assurance framework in the near future.

(ii)   Possible Challenges to the Quality Assessment Framework

On the matter of the challenges to the development and use of a quality assurance framework, two member countries indicated that there were no major challenges impeding the development and implementation of same, as they are already employing informal checks governing the quality of their work. Among those countries that acknowledged challenges to the development and implementation and use of a quality assurance framework; a number of constraints were identified as impediments to achieving this goal, to include:

- Lack of adequate resources,
- Lack of technical capacity (need for technical assistance)
- The need to change systems and procedures to facilitate proper documentation

(iii)   Conducting Data Quality Assessment

Data quality assessment appeared to be of particular importance to respondents, as four of the six Member Countries reporting conducting an assessment within the last two years. Of the two countries that reported not having done any assessment, one has indicated that it currently has plans in place to conduct this assessment as part of its modernisation project, while the other has indicated the need for technical assistance to carry out this assessment.

(iv)   Documentation of Processes

Integral to the data quality assessment process is the availability of documentation of processes. **Attachment II** provides a tabular representation of the country responses to the level of documentation in specific areas.

It can be inferred from the responses that, for 11 of the 20 processes listed all countries had some form of documentation (either completely or partially) but only for surveys classification did all countries have complete documentation. No country reported complete documentation of methods of assessing customer needs. On average, 55 percent of the countries had complete documentation for the processes listed, while 33 percent had partial documentation. On average, there is no documentation for 7 percent of the countries on each process listed. The non response[1] rate is 5 percent. In one NSO 85 percent of its processes are completely documented. Two countries reported 100 percent documentation (either completely or partially).

All areas of survey (users, objectives, concepts, definition, design, methods and classification) and Methodology for National Accounts and indices calculations are well documented (100% documentation).

All respondents indicated that there are some documentation of the legal framework but in most countries (5 of the 6) documentation is only partial; indicating the need for improvement in this area.

(v)   Feedback on Needs of Customers

An area of concern is the low level of documentation for method of assessing customer needs which is pivotal to improvement in data quality.

(vi)   Other Areas of Importance not Included in Questionnaire

Respondents listed some areas of importance which were inadequately documented and was not covered in the questionnaire:
- Tourism Satellite Accounts
- Supply and Use Table

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[1] Non response could have resulted from a process not being relevant to the country and as such there is no documentation.

- Household budget Survey
- Labour force survey

(vii) Plans to Improve Documentation

Four of the five countries indicated that there are plans in place to improve the level of documentation.

(viii) Number of Trained Staff

The number of staff trained in the area of statistics in which they are currently working ranges from a low of 10 percent in some countries to a high of 100 percent in others.

(ix) Needs of National Statistical offices

Most countries indicated the need for technical assistance, training and resources. Five of the six respondents indicated that there is a need for a technical working group on data quality and volunteered their participation.

3. Conclusions

The findings of this Paper have pointed to a number of issues:

- More responses are needed from member countries to conduct a comprehensive analysis;
- The DQA questionnaire needs to be reviewed and expanded to allow for a more comprehensive analysis of the systems in place in member countries to facilitate quality;
- While there is no quality assurance framework in place to guide the structure and operations of the quality of work in member countries, a preliminary "inventory" of documentations on quality would reveal that documentation is relatively high and it is a work-in-progress in a number of countries. As such, there is a solid base to

conduct a more comprehensive data quality assessment as well as, a strong foundation on which to develop and implement a quality assurance framework;

- There is need for a regional framework for data quality assessment which will incorporate the already existing "informal" quality assessment structures in member countries;

- The method of assessing customer needs and documentation of the legal framework in member countries must be addressed;

- While there is a definite need to set up a working group on quality, the discussion forum can be used as a medium to initiate the necessary changes.

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<u>Preliminary Review of Data Quality in National Statistical Offices -Assessment Questionnaire</u>

1. Is your National Statistical Office (NSO) currently employing a quality assurance framework?

    Yes ☐   No ☐ (if no, go to question 4)

2. If yes, what framework is being used? (please provide copy of quality documents)

3. Are there plans to introduce such a framework in the near future?

    Yes ☐   No ☐

4. What are the challenges preventing an implementation of such a framework?

5. Has your NSO conducted any data quality assessment within the last 2 years?

    Yes ☐   No ☐

6. If no, do you plan to conduct such an assessment and when?

7. Are the following processes documented?

Processes	Completely Documented	Partially Documented	No Documentation
Surveys objectives	☐	☐	☐
Surveys users	☐	☐	☐

Surveys concepts	☐	☐	☐
Surveys definition	☐	☐	☐
Surveys classification	☐	☐	☐
Surveys design	☐	☐	☐
Other data sources (please provide a list of other sources in section 9)	☐	☐	☐
Classification convergence table (If needed)	☐	☐	☐
Data collection methods	☐	☐	☐
Data validation methods	☐	☐	☐
Data dissemination procedures (including periodicity and timeliness)	☐	☐	☐
Confidentiality and disclosure	☐	☐	☐
Data archiving procedures	☐	☐	☐
Method of assessing of customer needs	☐	☐	☐
Methodology used to compute indices (CPI, RPI, PPI, etc.)	☐	☐	☐
System of National Accounts Used (identify and documented variations)	☐	☐	☐

Metadata for all Estimates
(if partially please list missing estimates in section 8)

☐ ☐ ☐

Structure of national accounts unit
(optimal structure)

☐ ☐ ☐

Resource gaps (staff, training, financial, equipment, etc)

☐ ☐ ☐

Legal Framework (Statistics act, dissemination policy, confidentiality, etc.)

☐ ☐ ☐

8. Which areas of the metadata are not documented

    I. _____

    II. _____

    III. _____

    IV. _____

9. List any other procedures documented but not present in question 7

    i. _____

    ii. _____

    iii. _____

10. Is there a plan to improve documentation in your office?

    Yes ☐   No ☐

11. What percent of your staff are trained in the field of Statistics in which they are currently employed?

    _____

12. What are the needs of your office to facilitate improved quality?

      a. Technical Assistance ☐

      b. Training   ☐

      c. Resources   ☐

13. Do you think a technical working group on quality assurance would be useful?

      Yes ☐   No ☐

14. If yes, would your office be willing to participate as a member of this technical working group?

      Yes ☐   No ☐

Table 1: Level of Documentation in Member Countries

	Completely Documented	Partially Documented	No Documentation	Non Response
Surveys objectives	50%	50%	0%	0%
Surveys users	50%	50%	0%	0%
Surveys concepts	83%	17%	0%	0%
Surveys definition	83%	17%	0%	0%
Surveys classification	100%	0%	0%	0%
Surveys design	67%	33%	0%	0%
Other data sources	33%	33%	17%	17%
Classification convergence table (If needed)	50%	33%	0%	17%
Data collection methods	83%	0%	0%	17%
Data validation methods	50%	50%	0%	0%
Data dissemination procedures (including periodicity and timeliness)	33%	50%	17%	0%
Confidentiality and disclosure	83%	17%	0%	0%
Data archiving procedures	17%	50%	17%	17%
Method of assessing of customer needs	0%	50%	50%	0%
Methodology used to compute indices (CPI, RPI, PPI, etc.)	83%	17%	0%	0%
System of National Accounts Used (identify and documented variations)	83%	17%	0%	0%
Metadata for all Estimates	17%	50%	17%	17%
Structure of national accounts unit (optimal structure)	33%	50%	17%	0%
Resource gaps (staff, training, financial, equipment, etc)	17%	67%	0%	17%
Legal Framework (Statistics act, dissemination policy, confidentiality, etc.)	83%	17%	0%	0%