Improving statistical processes throughout the NSS

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Background - The objective of a functioning SANSS is to address the

- **Information gap**
- **Quality gap**
- **Capacity**

**SASQAF - Improvement of Quality through technical support**
To address the quality gap you need to measure and improve the existing level of quality.
Quality statistics

Quality is generally accepted as ‘fitness for purpose’ and this implies an assessment of an output with specific reference to its intended objectives.

Official statistics’ definition is statutory – see Statistics Act [No. 6 of 1999]

Official statistics are statistics designated as official statistics by the Statistician-General within the provisions of the Statistics Act.

National statistics’

National statistics are statistics not designated as official Statistics by the Statistician-General.
SASQAF codifies quality (9 dimensions), is a two-fold functioning tool for quality.

- Guide in assurance of quality and improvement of processes
- evaluate the quality of statistics produced by organs of state

Organs of state are advised to use SASQAF as a tool to assure and improve the quality of their statistical production system.
Credible information on indicators will be obtained through SASQAF

**Indicators (idct) Standards (std)**

- **Integrity** (6 idct 6 std)
- **Accuracy** (7 idct 36 std)
- **Relevance** (5 idct 5 std)
- **Interpretability** (3 idct 3 std)
- **Comparability & Coherence** (5 idct 5 std)
- **Pre-requisites** (8 idct 21 std)
- **Timeliness** (4 idct 10 std)
- **Accessibility** (12 idct 13 std)
- **Methodological Soundness** (6 idct 14 std)

**South African Statistical Quality Assurance Framework (SASQAF) 9 Dimensions**

**Credible information on indicators will be obtained through SASQAF**

**Indicators (idct) Standards (std)**
SASQAF identifies 9 dimensions of quality.

Each dimension has associated quality indicators, standards and benchmarks.

Chapter 1: Prerequisites of quality

1.1 Description

The prerequisites of quality refer to the institutional and organisational conditions that have an impact on data quality. It defines the minimum set of necessary conditions that have to be met in order to produce good quality statistics. It therefore serves as the foundation on which all other dimensions of data quality should be premised on.

1.2 Key components

- Legal and institutional environment (including Memoranda of Understanding (MoUs) or Service Level Agreements (SLAs)
- Privacy and confidentiality
- Commensurability of resources
- Quality as the cornerstone of statistical work

1.3 Quality indicators, standards and benchmarks

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Standards</th>
<th>Assessment Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>1.1.1</td>
<td>Quality Statistics Level 4</td>
</tr>
<tr>
<td>The responsibility for producing statistics is clearly specified.</td>
<td>A legal arrangement exists that explicitly mandates the production of statistics.</td>
<td>A law or legal arrangement exists that explicitly provides the mandate for the production of statistics.</td>
</tr>
</tbody>
</table>
Data quality is measured and improved across all 9 basic steps of the GSBPM (Statistical value Chain)

Hence quality requirements are build upon the GSBPM
Quality Management & Metadata Management

1. Need
   1.1 Determine need for information
   1.2 Consult & confirm information requirements
   1.3 Establish output objectives
   1.4 Check data availability
   1.5 Prepare business case

2. Design
   2.1 Outputs
   2.2 Frame and sample methodology
   2.3 Tabulation Plan / Variables
   2.4 Data collection
   2.5 Statistical processing methodology
   2.6 Define archive rules
   2.7 Processing systems and workflow
   2.8 Detailed project plan

3. Build
   3.1 Data collection instrument
   3.2 Process components
   3.3 Configure workflows
   3.4 Test end-to-end
   3.5 Finalise production systems
   3.6 Draw sample

4. Collect
   4.1 Set up collection
   4.2 Run collection

5. Process
   5.1 Standardize
   5.2 Load data into processing environment
   5.3 Integrate data
   5.4 Edit and impute
   5.5 Derive new variables
   5.6 Calculate weights

6. Analyze
   6.1 Acquire ancillary information
   6.2 Calculate aggregates
   6.3 Prepare draft outputs
   6.4 Validate
   6.5 Describe and explain
   6.6 Disclosure control & Anonymise
   6.7 Finalize outputs for dissemination

7. Disseminate
   7.1 Update output systems
   7.2 Produce products
   7.3 Produce “Quality Statement”
   7.4 Manage release of products
   7.5 Market and promote products
   7.6 Manage customer queries

8. Archive
   8.1 Manage archive repository
   8.2 Preserve data and associated metadata
   8.3 Dispose of data and associated metadata

9. Evaluate
   9.1 Gather inputs for audit
   9.2 Prepare audit report
   9.3 Quality plan
SANSS Phases Of Engagement

1. Problem Identification
2. Diagnostic Assessment
3. Problem Solution (Strategy & Plan)
4. Implement Solution
5. SASQAF Self Assessment
6. SASQAF Independent Assessment

Data quality Accreditation by Independent Assessment Unit

Quality improvement of processes through technical support
**Example of completed mapping template**

**Department of Justice and Constitutional development**

<table>
<thead>
<tr>
<th>Phases (SVC)</th>
<th>Sub-processes</th>
<th>Quality dimensions</th>
<th>Quality indicators</th>
<th>Standard and findings</th>
<th>Stats SA recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need</td>
<td>Determine need for information</td>
<td>1. Prerequisites of quality</td>
<td>1.1 The responsibility for producing statistics is clearly specified.</td>
<td>1.1.1 A legal arrangement exists that explicitly mandates the production of statistics ✓ Older Persons Act 13 of 2006 ✓ Children’s Act 38 of 2005 ✓ Child Justice Act 75 of 2008</td>
<td>Acceptable, the legislation available is adequate for the department to gather and produce court/criminal statistics in the country.</td>
</tr>
<tr>
<td>Design</td>
<td>Design outputs (questionnaire)</td>
<td>8. Methodological soundness</td>
<td>8.1 Concepts, definitions, and classifications used follow accepted standard, guidelines or good practice (national, international, peer agreed)</td>
<td>8.1.1 The concepts and definitions must satisfy accepted standards, guidelines or good practice in line with national, international and peer agreed norms and must be documented</td>
<td>Develop Concepts and Definitions (C&amp;D) manual for all statistical programs of the department. This will go a long way in ensuring that all definition and concepts in use are standardised.</td>
</tr>
</tbody>
</table>
Types of Technical Support

- SASQAF Training
- Diagnostic process (Walk in session)
- Capacity building on related GSPBM processes (electronic devices)
- Identification of data gaps if any
- Recommendations on improvement required
- Development of implementation strategy
- Support during implementation (setup the team of experts – e.g. IT experts)
- Etc.,
Outputs of Technical Support

- Mapping report
- Diagnostic report
- Implementation plan
2011
Establishment of the task team

2012
Diagnostic Assessments of Police Stations in NW/NC/LP
Study Tours to Mexico/US/UK
Draft policy

2013
Review of Crime Counting Rules and Margin of error

2014/15
2015/16
SG’s remarks to the Crime publications

2015
MoU signed
Development of the committees

2017
Policy approved
Self assessment

2018
Independent assessment of Crime Stats
ICCS implementation
Thank you