Presentation on
South African Statistical Quality Assessment Framework (SASQAF)
&
SASQAF’s application to SA Tourism’s Departure Survey

To

The UNWTO Capacity Building Programme on Tourism Statistics

By
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National Statistics System Division (NSSD)
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Overview

- Stats SA Quality Policy
- The need for a quality framework
- South African Quality Assessment Framework (SASQAF)
- Purpose of framework
- Structure of framework
- Quality Dimensions
- Certification Process: Official Statistics
- Conclusion
- SASQAF applied to the SA Tourism Departure Survey
Stats SA is in the process of implementing a quality policy that will:

- make sure it’s products adhere to the agreed standards, procedures and guidelines (e.g. SASQAF)
- ensure that all Stats SA products shall include statements about data quality
- inform users about the quality of data and products
The need for a quality framework

Stats SA needed a quality assessment framework because:

• Of the drive to improve the quality of Stats SA products to realise its vision of being the preferred supplier of quality statistics

• For survey areas to produce official statistics by design and not by default (the SG is mandated in the Stats Act to certify statistics as official statistics)

• The need to certify as official statistics, statistics produced by other organisations who are members of the National Statistics System
The need for a quality framework: Definitions

**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.

**Practical criteria of official statistics**
- Must be used in the public domain
- Are from organs of state and other agencies that are partners in the National Statistics System [NSS]
- Are sustainable
- Have met quality criteria as defined by the Statistician-General [SASQAF]

**National statistics’ definition is implicitly statutory**

National statistics are statistics not designated as official statistics by the Statistician-General.
The need for a quality framework: Status Quo

Demand for information
[user groups or indicator categories]

Official statistics

Stats SA

Service providers

Other producers [departments, CSOs, etc]

International
National
Provincial
Municipal levels

Unknown quality

Insufficient supply of information
Uncertain quality
Insufficient statistical skills

Stats SA
Other producers [departments, CSOs, etc]
Service providers
Stats SA

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The need for a quality framework: the future

Demand for information
[user groups or Indicator categories]

- Adequate information
- Reliable information [quality, sustainable]
- Sufficient skills

Regulatory environment
- Statistics Law
- Governance structure
- **Quality standards**
- Advocacy programme
- Code of conduct

International
National
Provincial
Municipal levels

Other producers [departments, CSOs, etc]

Stats SA

Service providers

Coordination

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South African Quality Assessment Framework (SASQAF)

- Developed jointly by the NSSD and DMID divisions of Stats SA with the help of international consultants

  Based on the Data Quality Assessment Framework (DQAF) of the International Monetary Fund (IMF)

- It covers - all activities related to the statistical value chain for sample surveys and administrative records
Provides a **structure** for the **assessment** of statistical products based on
1. Dimensions of quality
2. Indicators, and
3. Benchmarks

Used in various contexts
- Reviews within NSS
- Self-assessment by data-producing agencies
- Assessment by data users
- Assessment by international agencies e.g. IMF
Structure of the framework

Each of the 8 quality dimensions consists of number of indicators

Within the indicators a number of benchmarks are identified relating to a 4-point scale;

Quality statistics (4)
Acceptable statistics (3)
Questionable statistics (2)
Poor statistics (1)
## Structure of the framework (2)

<table>
<thead>
<tr>
<th>Key components</th>
<th>Indicator</th>
<th>Assessment Levels</th>
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<tbody>
<tr>
<td></td>
<td>Quality Statistics</td>
<td>Acceptable Statistics</td>
</tr>
<tr>
<td>0. Prerequisites of quality</td>
<td>Refers to the institutional and organisational conditions that have an impact on data quality.</td>
<td></td>
</tr>
<tr>
<td>• Legal and institutional environment (including Memoranda of Understanding (MoUs) or Service Level Agreements (SLAs))</td>
<td>The responsibility for producing statistics is clearly specified.</td>
<td>Level 4</td>
</tr>
<tr>
<td>• Privacy and confidentiality</td>
<td>The responsibility for producing statistics is explicitly specified through a legal framework.</td>
<td>Level 3</td>
</tr>
<tr>
<td>• Resources are commensurate with the needs of statistical programmes</td>
<td>The responsibility for producing statistics is implied through a legal framework.</td>
<td></td>
</tr>
<tr>
<td>• Quality is the cornerstone of statistical work</td>
<td>The responsibility for producing statistics is not specified.</td>
<td></td>
</tr>
<tr>
<td>Standards and policies are in place to promote consistency of methods and results</td>
<td>All standards and policies are in place to promote consistency of methods and results, and are adhered to.</td>
<td>Level 4</td>
</tr>
<tr>
<td>Data sharing and coordination among data-producing agencies is clearly specified and adhered to</td>
<td>The majority of standards are in place to promote consistency of methods and results.</td>
<td></td>
</tr>
<tr>
<td>Data sharing and coordination among data-producing agencies is explicitly specified through a legal framework.</td>
<td>Some standards are in place to promote consistency of methods and results.</td>
<td></td>
</tr>
<tr>
<td>Data sharing and coordination among data-producing agencies is implied through a legal framework.</td>
<td>No standards are in place to promote consistency of methods and results.</td>
<td></td>
</tr>
<tr>
<td>Data sharing and coordination among data-producing agencies is not specified.</td>
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There are 8 dimensions of quality:

1. **Relevance**
   - the degree to which the data meets the real needs of clients. It is concerned with whether the available information sheds light on the issues of most importance to users.

2. **Accuracy**
   - the degree to which the output correctly describes the phenomena it was designed to measure.

3. **Timeliness**
   - refers to the delay between the reference point to which the information pertains, and the date on which the information becomes available.

4. **Accessibility**
   - of statistical information and metadata refers to the ease with which it can be obtained from the Agency. This includes the ease with which the existence of information can be ascertained, as well as the suitability of the form or medium through which the information can be accessed. The cost of the information may also be an aspect of accessibility for some users.
5. Interpretability
   • the ease with which users understand statistical information through provision of metadata

6. Coherence
   • the degree to which it can be successfully brought together with other statistical information within a broad analytic framework and over time

7. Methodological Soundness
   • the application of international standards, guidelines, and agreed practices to produce statistical outputs. Application of such standards fosters national and international comparability

8. Integrity
   • Integrity refers to values and related practices that maintain users’ confidence in the agency producing statistics and ultimately in the statistical product.
SASQAF identifies 8 quality dimensions

- **Integrity**
  - Free from political interference: Adherence to objectivity, professionalism, transparency, ethical standards

- **Relevance**
  - Meeting real needs of clients

- **Coherence**
  - Harmonisation of different info within broad analytical and temporal framework

- **Interpretability**
  - Availability of supplementary info and metadata

- **Accessibility**
  - Ease of obtaining info from agency

- **Timeliness**
  - Info available at desired reference point

- **Methodological soundness**
  - Sound methodologies:
    - International standards and guidelines - good practice
    - Agreed practices
    - Dataset-specific

- **Accuracy**
  - Correctly describes phenomena it is designed to measure

**SASQAF (data quality)**

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Annexure C: The process of assessing statistics and designating them as official

Request for Assessment

Meet the 3 criteria

Yes

Conduct Assessment

Quality Statistics

Certification by SGS as “Official Statistics”

Implement Feedback

Periodic Review

No

Do not qualify for assessment

Report

Acceptable Statistics

Questionable Statistics

Poor Statistics

Communique to stakeholder that further improvements need to be made
Conclusion

- SASQAF provides an universal framework for assessing the quality of statistics within Stats SA and the NSS

- The first and second phase implementation has started in Stats SA

- A number of pilot projects are being identified within the NSS to test the application of SASQAF
Sampling for the Departure Survey

- Sampling
  - stratified probability sampling
  - sample size 2200
    - 1192 at O.R Tambo
    - 408 at Cape Town International Airport
    - 600 at Land Border Posts

<table>
<thead>
<tr>
<th>Survey sample size</th>
<th>Margin of error</th>
</tr>
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<tbody>
<tr>
<td>3000</td>
<td>1.8</td>
</tr>
<tr>
<td>2500</td>
<td>2.0</td>
</tr>
<tr>
<td>2200</td>
<td>2.1</td>
</tr>
<tr>
<td>2000</td>
<td>2.2</td>
</tr>
<tr>
<td>1500</td>
<td>2.5</td>
</tr>
<tr>
<td>1000</td>
<td>3.1</td>
</tr>
</tbody>
</table>
Key findings (part 1)

- Departure survey strong methodologically
  - low imputation rates,
  - Low coding error rates,
  - low item and unit non-response rates

- Irregular publication of Stats SA P0351 for weighting departure survey data.
  - **Timeliness**

- Definition of tourist as used by Stats SA and SA Tourism not consistent (rationale for weighting)
  - **Methodological Soundness**

- Land Border Post intervention misses ± 37% of target population
  - **Accuracy, Methodological Soundness, Coverage**

- Initially self-completion of questionnaires then replaced by face to face interviews
  - **Integrity** (advance notice of changes in methodology)
Key findings (part 2)

- Imputation on total spend introduced in 2006
  - No advance notice given of changes in methodology

- Airport intervention reference periods (sample size constraints)
  - Cape Town International (2 weeks)
  - O.R. Tambo International (3 weeks)

- Insufficient provision of metadata
  - Process, definitional & system Metadata
  - **Interpretability**

- Inadequate consultation with stakeholders (sample size, use of imputations, survey frequency, timely access to P0351-Stats SA)
  - **Relevance**
Key Findings (part 3)

- High CV values for total spend
  - 1500% (okay if logarithmic transformation is applied)
- Quota sampling
  - Set quotas for target market countries
  - E.g. UK, USA, Continental Europe etc.
  - Accurate values for target market, but what about the rest? (Africa)

**Figure 4:** Total real spend by foreign tourists

**Source:** SA Tourism – A framework/model to benchmark tourism GDP in RSA (Sub-project 1 September 2006)
Recommendations

- SA Tourism is not a member of the NSS

**Conclusion:**

- Departure Survey classified as **acceptable statistics**
- Can be used as data source for the Tourism Satellite Account
Thank you