



Statistics Canada
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Data Quality Assurance and Dissemination

International Workshop on
Energy Statistics
Aguascalientes, Mexico



Statistics
Canada Statistique
Canada

Canada 

Promoting Quality at Statistics Canada



- Quality is a priority of senior management
- Quality assurance reviews are conducted for major surveys
- Data quality secretariat established
- Questionnaire Design Resource Centre established
- Quality assurance training delivered
- Mandatory training provided to new employees

Quality Assurance Framework



- Six Dimensions of Data Quality
 - Relevance
 - Accuracy
 - Timeliness
 - Accessibility
 - Interpretability
 - Coherence

Sample Verification



- “Front-end” research, checks and monitoring of:
 - Universe and sample counts
 - Births and deaths of units
 - Collection units
 - Classification (e.g. geography, industry)
 - Changes to sample units

Data Collection



- Interviewer training
- Monitoring of interviewers
- Pre-contact of new survey units
- Ongoing verification of coverage
- Consistency of editing
- Capture of respondent comments
- Feedback mechanisms

Edits, imputation, estimation



- Editing of data
 - Certification by company officer
 - Historical and consistency checks
 - Confrontation with other data
- Imputation of data
 - Use of tested and standardized methods
 - Identify outliers – monitor and address
- Estimation of data
 - Use standard estimating procedures
 - Application of tolerance parameters

Micro level analysis



- Certification by company officer
- Verification of the completeness of response
- Verification of consistency of data reported
 - Historical analysis
 - Comparison with data reported to other surveys
- Analysis and confrontation of the tabulations

Macro level analysis



- Coherence analysis with system of national accounts
- Pre-release review by major stakeholders
 - External peer, expert review
- Data sharing agreements with other departments

Dissemination



- Data releases announced in the ***Daily***
- Standard formats, production, review
- Checklists for quality assurance in production
- Handling the media
 - Key staff available on release day
 - Preparation for release: training, Q&A,
 - Quick response to erroneous statements

Documentation



- Policy on informing users of data quality
- Mandatory documentation -- standards
- Description of methodology
 - Survey objectives
 - Target universe
 - Methods of collection
- Data quality measures
 - Coverage
 - Sampling error
 - Response rates
 - Revisions

Accountability



- Periodic reviews of all statistical programs
- Periodic quality assurance reviews of major surveys
- Key indicators for regular monitoring of quality
- Data analysis and confrontation
- Outreach with key clients

Ongoing Quality Challenges



- Timeliness vs. quality
- Ensuring relevance with key users
- Harmonization of concepts with other organizations
- Remaining responsive to concerns of survey respondents
- Reacting to errors

For more information



Andy Kohut
Director
Manufacturing and Energy Division
Statistics Canada
Section B-8, 11th Floor, Jean Talon Building
Ottawa, Ontario, Canada K1A 0T6

Telephone: 613-951-5858
andy.kohut@statcan.gc.ca
www.statcan.gc.ca