

QA/QC in the IPCC GLs and NEC/LRTAP inventories

Kristin Rypdal

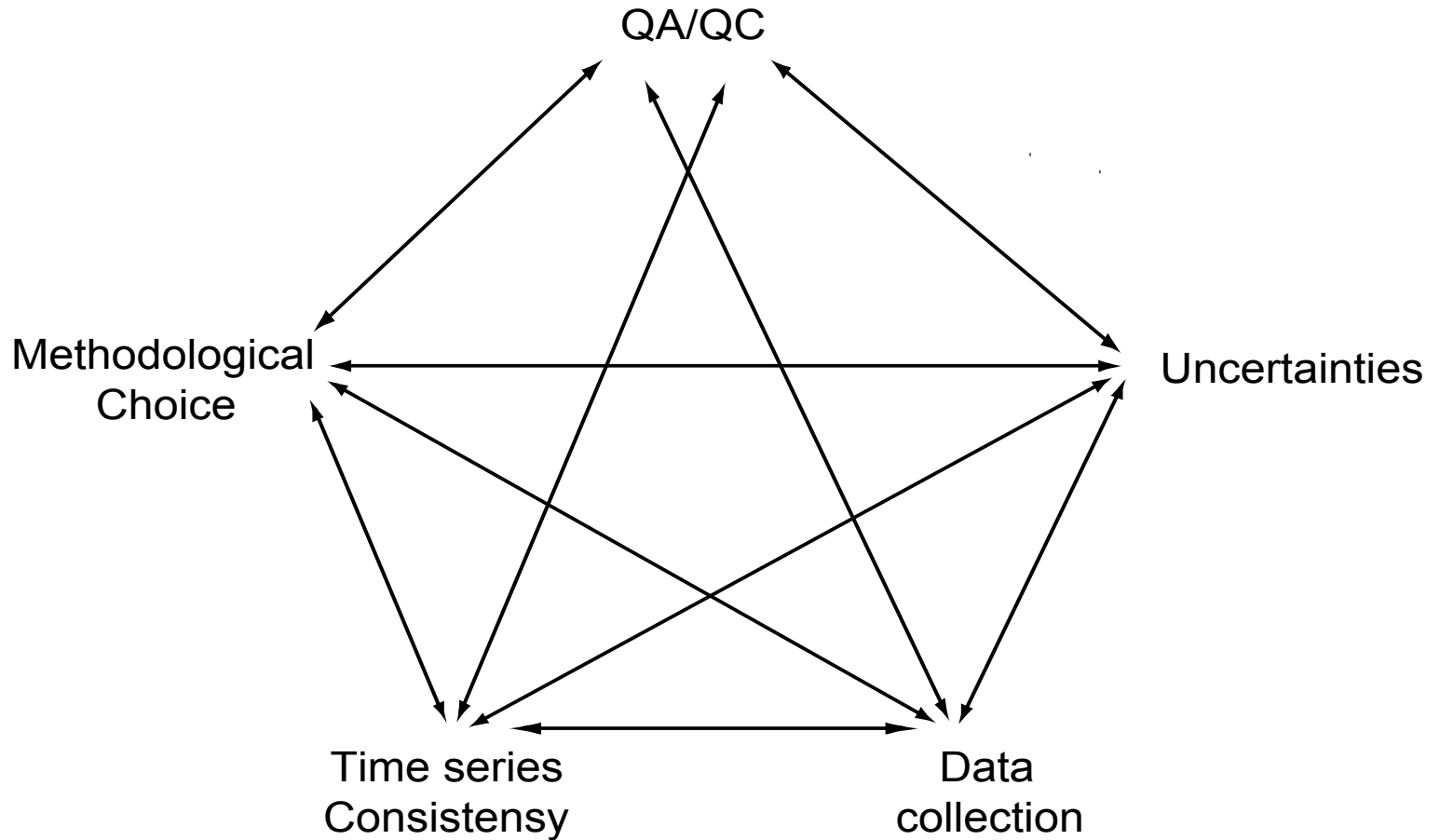
Background

- IPCC good practice guidance
- IPCC revised guidelines (under development)
 - No major changes in basic methods anticipated
- QA/QC
- Time-series consistency
- Uncertainties
- Methodological choice – key categories
- Data collection (for 2006 GLs)

Purpose

- To assist in compiling accurate, consistent and comparable emission estimates
- **Development of national systems**
 - Integrated not "last minute"
- Most of the guidance is not generic to GHG inventories and can be applied to LRTAP/NEC as well!

Connections



QA/QC

- QC:
 - Consistent checks to control the correctness and completeness and integrity
 - Identify and address errors and omissions
 - Document and archive inventory material and record all QA/QC activities
- QA review procedures by someone not directly involved in the inventory compilation
- *Verification* to establish reliability using external methods and data

QC

- General
- Source category specific
 - Specific types of data used
- Practical
 - Resource prioritization
 - Key categories
 - High uncertainties
 - Changes in methods, trends, technologies etc. (or contrary...)
 - QA/QC plan

QC

- Cannot check all aspects annually!
 - Need a plan
- General checks include a long list....
- Can be automated
 - Comparing with previous estimates
 - Comparing implied emission factors over time
 - Highlight unusual trends
- EPER and point source data/measured emissions

Verification

- Comparisons between countries
- Applying another method
- Comparing with independent inventories
- Comparison with atmospheric measurements
 - Difficult to perform for a country
 - Potentially more feasible for LRTAP pollutants?

Time-series consistency

- Guidance on consistent time-series
- Recalculations
- Incorporation of mitigation (proposal)

Time-series consistency

- Methods to splice estimates
 - When methods have changed and cannot be applied consistently
 - When data are not available annually
- Overlap
- Use of surrogate data
- Extrapolations
- Interpolations

Recalculations of previous estimates

- Available data have changed
- Mitigation (need to capture in estimates)
- Implementation of a new method
 - Change in resources or priorities
- New methods are available
- Correction of errors
- Periodic data

National systems

- Often common data for several pollutants
 - For example energy statistics
- Or more or less constant ratios between pollutants if no abatement, for example CO₂ to NO_x
- Therefore both data collection and QA/QC would gain from inventory systems including "all" pollutants
 - Increased quality
 - Overall less resources required

Applicability of methods to all countries

- The circumstances of countries that have undergone structural and economic changes will be emphasised
 - Time series-consistency
 - Data collection
 - Institutional issues (how to get the data)
 - Short-cuts for verification

Conclusions

- IPCC methods are generally applicable
- Resources for implementation of good practice may be reduced if used in automated systems including a long range of pollutants
- QA/QC can be fun!!! (?...)