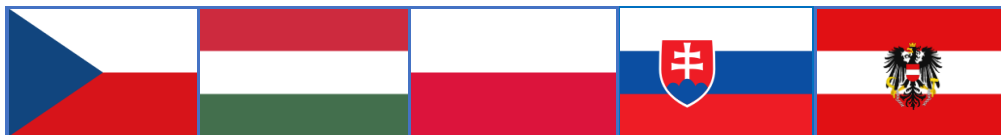


MINUTES

QA/QC meeting with focus on LULUCF issues



Quattro lateral meeting of CZ, HU, PL, SK and AT experts of NIS

Warsaw, Poland, KOBIZE, 6.-7. June 2019

Participants:

	Poland	
1	Anna Paczosa	Deputy Head of the KOBIZE
2	Sylvia Waśniewska	Coordinator of GHG and air pollutant inventories
3	Anna Olecka	Agriculture, GHG inventory coordinator
4	Janusz Rutkowski	Waste
5	Jacek Skośkiewicz	CRF compiler, F-gases, Uncertainties
6	Marcin Żaczek	LULUCF
	Austria	
7	Günther Schmidt	National System
8	Peter Weiss	LULUCF
	Czechia	
9	Eva Krtková	National System
10	Risto Saarikivi	Waste, QA/QC
	Hungary	
11	Gábor Kis-Kovács	National System
12	Judit Szakálas	QA/QC
13	Tamás Tobisch	Uncertainty in the forestry sector
	Slovakia	
14	Janka Szemesová	National System
15	Lenka Zetochová	Emission and air quality
16	Martin Gera	Uncertainty in the forestry sector
17	Kristína Tonhauzer	Agriculture
18	Ivan Barka	LULUCF
19	Zuzana Jonáček	GHG vs air pollutants
20	Ján Horváth	Transport

Presentations were available distributed among participants. Please contact Jacek Skośkiewicz (jacek.skoskiewicz@kobize.pl) to obtain copies.

1. Outcomes and recommendations - report back in the next QA/QC meeting

Besides quantity of presentations (more than 20), discussion was constructive and useful. Recommendations were identified in the several areas.

General QA/QC:

- Discover possibility for public consultation during the year of the inventory results and outcomes including expert presentation on main changes in the methodologies or models. Results of this public consultation can be incorporate into next inventory.
- Use the forum of this meeting for multilateral consideration of selected categories/sectors among experts (based on the list of participants, principle of reciprocity) – part of the national QA activity.
- Improve QA activity within the country by using short translation of the NIRs – such as executive summary.
- To create an email list for planning the QA between the Parties by the sectoral experts invite experts to agree on the first issues for the QA.
- Meetings outcomes and conclusions used as a part of the QA activity – description in the NIRs.
- Communicate data, research and other needs arising from the ERT findings to the Ministry, and not other way around. Ministry does not affect the values.
- Summary Table2 is first to be checked after inserting data to CRF.
- Difficulty of consistency of data sets in different national documents was observed by HU and SK. Different data providers are different to bring together to discuss about the data quality. In CZ big issue with Waste data.

LULUCF and uncertainty:

- PL used a free software called SimulAr for Monte Carlo analysis. SK created their own by Frontrun. HU created their own with R. AT uses @Risk Software for Monte Carlo analysis. AT has LULUCF categories with higher tier method and good data, but still analysis gives high uncertainty results. Higher tier methods raise the uncertainty of the LULUCF sector instead of decreasing it in cases when pools under Tier 1 are allowed to be reported as “no emission/removal” and consequently without uncertainties, while higher tier methods provide estimates for these pools including also related uncertainties - although the quality of NIR has increased by the higher Tier method. The soil of the forest land category is the main cause of high uncertainty in LULUCF in AT.
- Monte Carlo is suitable model for uncertainty assessment in LULUCF.
- Key source analysis is essential before start of the uncertainty analysis, the most contributing categories shall be prioritized in the UE assessment.
- Changes in legislation after 2020 shall be carefully considered on country level, institutional cooperation is essential, coordinator shall manage the summarizing of categories in the LULUCF.
- QA/QC activities shall be in place before the UE analysis is performing.
- Keep consistency of definition in the time line.
- Satellite data resolution, what would be enough? 1 m resolution for satellite data would be good, but expensive, and a task for a company.

2. Plans for the next meeting

- Next meeting in Budapest, exact date will be estimated after the announcement of the NECD and ESD review (probably second half of June or the first half of July 2020).
- The Austrian colleagues will be invited too.
- Topic: Follow-up of the implemented improvements from the previous meetings and tricky ERT recommendations from the UNFCCC reviews
- Report back from last meetings.
- Possibility to share NECD recommendations and issues from review
- Proposal to have the meeting on smaller scope of issues in order to be able to discuss more in details

3. 6.6.2019 – 1. Day: Summary of presentations and discussions

3.1. Presentation, Eva Krtková, Follow-up and improvements in Agriculture sector in the Czech inventory

IMPROVEMENTS

- New project funded by Czech Technological Agency 2019-2022, main task – update to higher tier – start of cooperation of various Agri institutes
- Expected output: nitrogen flow model, testing of projections, update of AWM system (all animals)
- Update of zootech activity data, start cooperation with Institute of Animal Sciences

PROBLEMS

- Animal experts are not familiar with IPCC methodology

3.2. Presentation, Risto Saarikivi, Follow-up and improvement in Waste sector in the Czech inventory, issues found

IMPROVEMENTS

- Discrepancies exist between two data sources. Solution was to combine the data sources as suggested by the UNFCCC review.

PROBLEMS

- Missing historical data on waste
- When NIR draft is published at web site - is it public hearing?
- Waste chapter exchange and analysis – will we pursue after Warsaw?

3.3. Presentation, Kristína Tonhauzer, Improvements in Agricultural sector in the Slovak Republic

IMPROVEMENTS

- Move to higher Tier 2 for swine in 3.B.1.3 Enteric Fermentation and 3.B.2.3 Manure Management categories
- Estimation of N₂O emissions from nitrogen leakages is planned in 2020
- Methodological change and switch to country specific values: FracLEACH-H -> FracLEACH-National
- Emissions decrease comparing to default value is 60%

PROBLEMS

- No appropriate methodology on gross nitrogen intake – resulting in emissions decrease of category 3.B.1.3 Manure management/Swine

3.4. Presentation, Janusz Rutkowski, Follow-up and improvement in Waste sector in the Polish inventory

IMPROVEMENTS

- Improving accuracy by implementing D10/R1 division of municipal and medical waste
- Upgrade of methodology in category 5.D.1 Domestic wastewater in result of cooperation with SK expert after Quattro lateral meeting 2018 in Prague

PROBLEMS

- Current modernization of Waste Database causing temporary problems with data
- Late data verification in the Database

3.5. Presentation, Gábor Kis-Kovács, Waste sector follow-up

IMPROVEMENTS

- Data from collected from 70 disposal sites – new and better waste composition became available. Country-wide averages of waste composition might differ significantly from data from the capital.
- For the first time, fossil and biogenic parts of mixed industrial waste was reported separately. There seems to be a trend for burning wastes with higher biomass content.

PROBLEMS

- EU change of energy questionnaires layout, resulting in problems with inconsistent data
- Identified mistake in textile waste emission factor in IPCC 2006 Guidelines (wrong values for a few waste types in column “Fossil carbon fraction in % of total carbon” in Table 2.4)

3.6. Presentation, Eva Krtková, Uncertainties assessment in the Czech inventory and connection to the QA/QC procedures

IMPROVEMENTS

- Actually Tier 1 used but thanks to project mentioned earlier Tier 2 is planned
- IPCC categories covering transport and LULUCF are done every year, rest of the categories is only analyzed when changes occur
- QA/QC procedures are performed differently for every sector depending on uncertainty
- Suggestion how to deal with negative numbers in uncertainty assessment

PROBLEMS

- Uncertainty identified for LULUCF is very low 2-4%
- It is not clear if provided solution for negative/positive summing in the uncertainty assessment is statistically acceptable.

3.7. Presentation, Janka Szemesová, LULUCF legislative requirements

IMPROVEMENTS

- Legislative plan to upgrade methodology in LULUCF to Tier 2 started in 2021

PROBLEMS

- ESD (art. 8.1, 8.6, 9) connected to LULUCF
- Complicated system: 26 institutions under Ministry of Agriculture, difficult to coordinate
- Many new legal requirements not connected to UN process
- Regulations not only under Ministry of Environment, some under more than one
- Difficulties: coordination and QA/QC, responsibility, cross-institution requirements and responsibilities, multi-governance...

3.8. Presentation, Ivan Barka, Actual problems of the LULUCF reporting in Slovakia

IMPROVEMENTS

- SK uses cadastral data (available since 1969, summarized)
- Project „Advanced techniques for Biomass Mapping in abandoned Agriculture land...” (many in SK – optical and radar sensors)
- Dead wood data available, planned to use
- Model for projections developed – free to use – successful in historical data, the same approach
- LPIS data should be available

PROBLEMS

- Very high uncertainties, review recommendations to use Tier 2 uncertainty analysis
- Spatial data available since 2015

3.9. Presentation, Martin Gera, Uncertainty Analysis by Monte Carlo approach

- Monte Carlo simulation used to assess uncertainty for LULUCF sector
- Observed high uncertainty in LULUCF
- Focus on key categories only

3.10. Presentation, Jacek Skośkiewicz, National System and QA/QC for GHG Inventory + Uncertainty Assessment in the Polish GHG Inventory

IMPROVEMENTS

- New data becomes available because KOBIZE is appointed administrator of new national environmental databases on air emissions and wastes
- Since 2 years more detailed approach in uncertainty in LULUCF sector was applied
- Approach 2 (Monte Carlo simulation) – was applied in 2012
- Continuous improvement process is ongoing – new details are being incorporated to calculation sheets
- KP LULUCF analysis is done since 2017 and is planned to be extended

PROBLEMS

- Ministry approval procedure – waiting 30 days for Ministry of Environment opinion, approved without comments,
- High level consultations: Ministry of Environment and interministerial are necessary but time consuming
- No budget available to write code for or buy advanced software for Monte Carlo method
- CRF tables are needed to calculate uncertainty, resulting long awaiting time for first results. Some parts of the uncertainty analysis are prepared on synthetic data and then updated
- Problems with assessment of the uncertainty of the input data, because data providers do not provide information on involved uncertainty
- Results of the uncertainty analysis sometimes could be confusing for decision makers (for example when uncertainty is higher than obligatory reduction of emission)

3.11. Presentation, Marcin Żaczek, Internal inventory constraints and foreseen tasks

IMPROVEMENTS

- Ministry of Environment created 4 years ago expert team to develop GHG projections – 5 institutions are involved

PROBLEMS

- Noticed that review often is going beyond the LULUCF regulations

3.12. Presentation, Tamás Tobisch, Uncertainty analysis of the forestry sector in the Hungarian GHG inventory

IMPROVEMENTS

- Available results of case study

PROBLEMS

- Uncertainty of biomass audits are considered to be most important

3.13. Presentation, Peter Weiss, Uncertainties of the Austrian LULUCF sector

IMPROVEMENTS

- Approach 2 (Monte Carlo simulation) applied in LULUCF sector using @Risk software

PROBLEMS

- Lack of uncertainty values for several input parameters
- Use of higher tier methods and more complete estimates in LULUCF may increase the uncertainty of the LULUCF

3.14. DISCUSSION

Slovakia

- English language barrier, SK law forces documents to be in national language, too many pages in NIR
- Nobody commented NIR, during the hearing
- Ministries comment are mostly referring to style, language
- Reversed flow of the data – inventory team is feeding statistical office with data, while statistical office is cutting the surveys
- Statistical office is not under responsibility of any ministry

Czechia:

- Ministries changed approach and started to be more interested, more aware, check data
- Getting comments from ministries and Statistical Office
- As in Slovakia – Statistical office is not under responsibility of any ministry
- Sending to Ministry of Environment for approval, give other ministries 2 days for comment (some don't receive because of problem with sending email with big NIR attachment)

Poland:

- Draft is consulted by Ministry of Environment and its institutions, then other ministries and NGOs
- Problem with obligation to prepare NIR draft 30 days before submission – work has to be cut off early and some input data that becomes available is not included
- Short time for reaction to comments and implementing them

Hungary

- Ministry is uploading reports in March and December (gained from experts on the last day), experts upload in April, ministries don't give feedback, or do with few months delay
- Huge problem in contacts between ministries
- Air Policy Plan - public hearing initiated by ministry - conference for 60 people

Austria

- Significant change of methodology – then workshop for researchers and scientists is organized
- Public hearing is not possible because of dates
- Focal point in ministry is responsible for making submission
- Specific law for Agency defines legal obligation and accreditation under ISO standard ensures that expert team is independent
- Ministry of Environment is actively helping fulfill review findings
- Funding of AT inventory company: 25% government, 75% from market (EU commission, ministries if they want additional tasks, public entities, private enterprises, ...)

4. 7.6.2019 – 2. Day: Summary of presentations and discussions

4.1. Presentation, Judit Szakálas, QA/QC in the LULUCF sector

IMPROVEMENTS

- Improvement in the uncertainty assessment for the sector LULUCF

PROBLEMS

- Experts in 3 institutions working on 1 excel file

4.2. Presentation, Guenther Schmidt, QA/QC system in Austrian GHG inventory

- Inventory is prepared by institution independent from government
- Audit is done every 5 years

- Each function in the inventory team is double staffed – Junior and Senior expert
- Submission is done by Ministry of Environment
- Reports are published on authors company webpage
- Funding is fixed by law, but not updated by inflation
- Government is highly interested to fulfil the requirements, in case of problems additional budget becomes available
- Access to confidential data
- All results of performed checks are documented (checks done by person not directly involved in the inventory process)
- No bureaucratic barriers in cooperation with other institutions
- All experts in located in one building

PROBLEMS

- Contract with statistical office lasting few years (projects),
- Problem with time series consistency of the data achieved from statistical office

4.3. Presentation, Peter Weiss, The national system for cropland and grassland reporting in Austria

- Results from field experiments since 2-3 decades are available
- Estimates country specific factors for different types of management

4.4. Presentation, Ján Horváth, Quality control: COPERT model

IMPROVEMENTS

- Fuel consumption analyses, based on several statistics, cross-references available

PROBLEMS

- Identified problems with COPERT updates: version 5.2 don't open the database from 5.1
- Detailed review questions sometimes are not reasonable, like TERT question about fossil part of biofuels

4.5. Presentation, Zuzana Jonáček, First steps of harmonisation of GHG and Air pollutants waste emissions inventory

IMPROVEMENTS

- Ongoing process of harmonization GHG and pollutant inventories by increasing cooperation of experts

PROBLEMS

- Tier 1 is used for key sources for heavy metals & POPs – what makes it reviewer's favorite topics

- Fuel categorization is inconsistent
- Waste statistics are different than energy statistics, what leads to inconsistency
- Problems with cooperation with other institutes

4.6. Presentation, Risto Saarikivi, QA/QC updates in the Czech inventory

IMPROVEMENTS

- Main updates in categories 1.A.3 Transport, 2.D Non-energy Products from fuels and Solvent Use, 2.F Product uses as Substitutes for ODS, 2.H Other (introduction of HFO 1234yf), 3.A Enteric fermentation 4.A Forest Land and 4.E Settlements
- The main update was COPERT 5 for transport sector
- New experts involved in work in IPCC 1.Energy, 2. IPPU and 4.Waste sectors
- Common mistakes were analyzed during compilation of the inventory which resulted in updating QC Guidelines. The updates were discussed in a meeting with the sectoral experts.