





Task Force M&R Discussion Paper

Closure of Data Gaps – Conservative Estimation

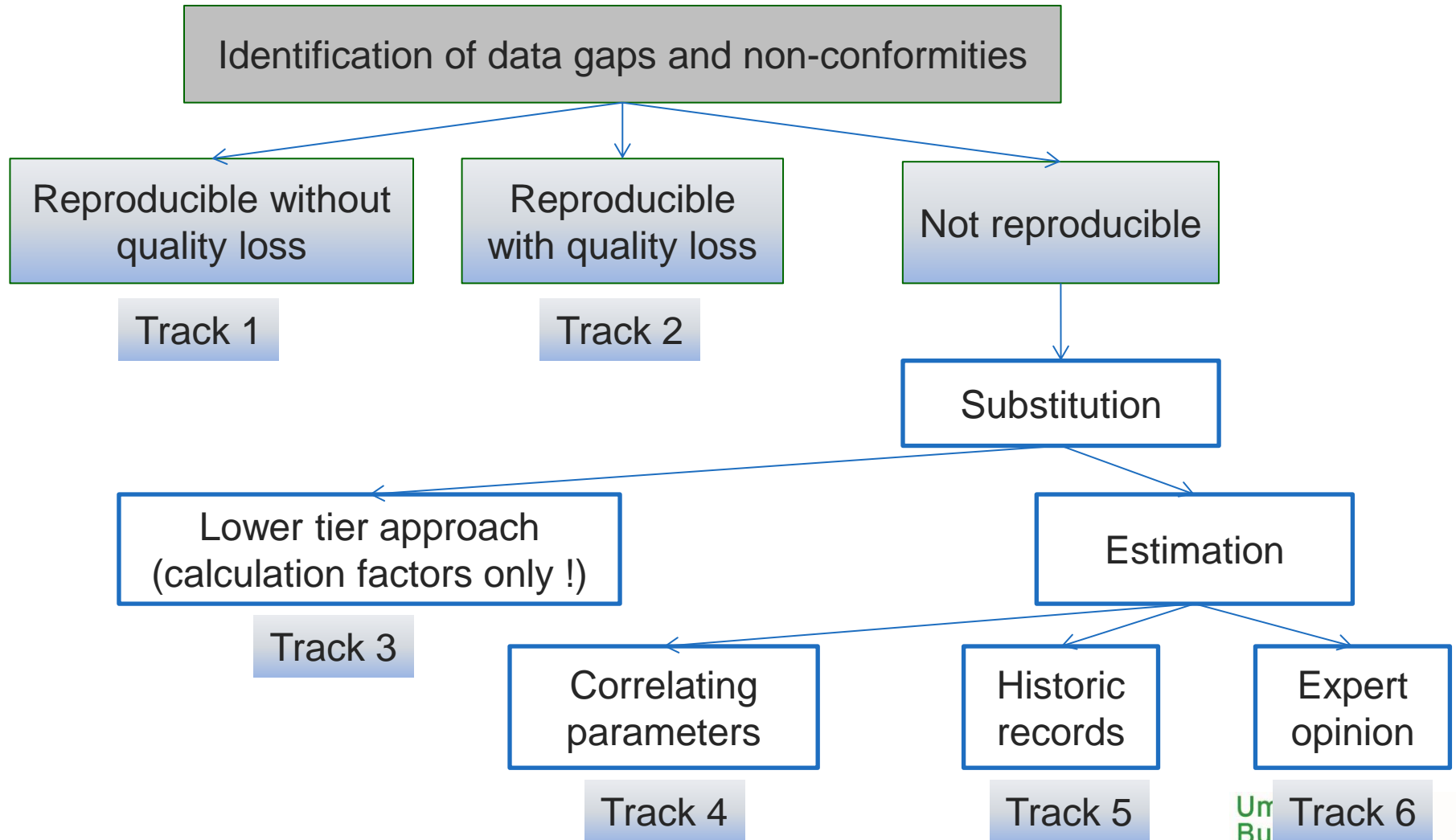
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German Emissions Trading Authority, Section E 1.5
Compliance Conference,
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Legal Background

- Handling of deviations from approved monitoring methods regulated by e.g.
 - ⇒ Art. 23 MRR (temporary changes of methodology)
 - ⇒ Art. 63, 65 MRR (correction of data & closure of data gaps)
 - ⇒ Art. 70 MRR (estimation by competent authority)
 - ⇒ Art. 27 (3n) AVR (verifiers confirmation of conservatism)
- “Conservative” means **avoiding underestimation** by using best available data
 - ⇒ Art. 3 (19), 63 (1) MRR
- Relevant for defining “**safety margins**” ⇒ **confidence interval of 95 %**
 - ⇒ Art. 3 (6) MRR

Suggested Hierarchy



Data reproducible

- Without quality loss \Rightarrow no safety margin needed, surrogate data used 1:1 in AER
- With quality loss (example: activity data)

- $D_r = S + S * (U_s - U_t)$

- If not quantifiable: $D_r = S + S * x\%$

D_r = data to be used in emissions reporting

S = surrogate data derived from a redundant system/process

U_s = quantified uncertainty of the secondary system

U_t = uncertainty of the approved tier

$x\%$ = individually demonstrated safety margin, otherwise **2% (suggestion; tbd)**

Substitution of Data not reproducible

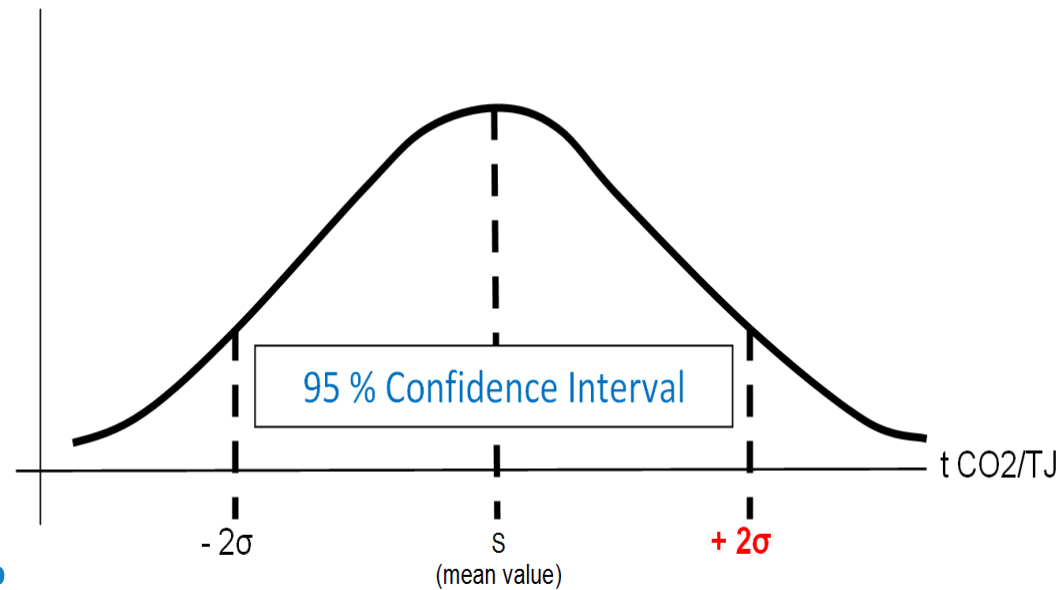
Example: Calculation factors

- Using historic records for calculation factors
 - ≥ 20 records: mean value * σ (standard deviation of historic data set)
 - < 20 records: maximum value of historic data set
- Using regulated default values for calculation factors or literature values
 - Default value + uncertainty (if not included already)
 - Uncertainty unknown: default value + default value * x%
x% = individually demonstrated safety margin or **10% (suggested; tbd)**
- Calculation by using correlating parameters
 - Safety margin: $2 * \sigma$ / individually demonstrated / **10% (suggested; tbd)**
- Other “conservative” estimation

Safety Margins

+ 2 σ

- If uncertainty is known
- Based on idea of Art. 3 (6) MRR
- $S + 2\sigma$ = conservative in 95 % CI



Fall back values of 2% and 10%

- Suggestions to discuss (!)
- Reason for difference: different reliability of surrogate data
- Surrogate data directly measured/analysed \Rightarrow 2%
- Surrogate data only derived \Rightarrow 10 %

Next Steps – Discussion

- To be done in Task Force (and TWG?)
 - Via SharePoint or E-Mail
 - [Next meeting: 1st July 2013 in Berlin](#)
- Suggestions in line with MRR?
 - No underestimation of emissions?
 - Need for deviating approaches under special circumstances?
- Suggestions proportionate?
 - Safety margin can be quite high in some cases
 - But “self-imposed” by operator
 - Incentive to ensure high data quality

Further Information

- Working paper “Data Gaps and Non-Conformities” on Task Force SharePoint
- Presentation “Note on conservative estimates” by Christian Heller held in TWG
23 May 2013



Thank you for your attention!

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