Breakout Session 2

Question 8

PAVEMENT LCA 2014

Question 8

- Regarding explicit consideration of uncertainty through reporting of impacts as probability distributions:
  - Is this important?
  - What are the pros and cons?
  - What are the difficulties envisaged with this approach?
- Should variability be included in EPDs – particularly for averages?

Group 5

- Facilitator
  - W. Steyn
- Members:
  - A. Kendall
  - B. Killingsworth
  - A. Loughalam
  - L. Miller
  - C. Slocum
  - S. Vanikar
  - L. Tiefenthaler
  - B. Yang

Q8

- Yes, uncertainty is critical
- Advantages
  - Risk management, analysis is possible
  - Additional confidence in results
  - Assisting motivation to invest in more data to increase data accuracy
  - Better comparative analysis
  - Sensitivity analysis
  - Supports collaborative discussion (international, national, local, interdisciplinary, etc.)

Q8

- Disadvantages
  - Cost of more data
  - Added complexity in correctly understanding the results

- Education is necessary

Q8

- EPDs
  - Industry-wide distributions can be useful that includes a wide range
  - Individual products can be compared to these
    - User determines need
    - Can be an interval improvement process for manufacturer

Group 6

- Facilitator
  - A. Jullien
- Members
  - S. Muenech
  - D. Reger
  - S. Sullivan
  - S. Thyagarajan
  - M. Wasilko
  - J. Willis
  - M. Akbarian
  - S. Sen

Q8a: Is this important?

- Yes
- Uncertainty creates a metric for risk analysis
- It needs to be tied in with sensitivity analysis to find out important parameters and phases in uncertainty
- Uncertainty is needed for decision making under comparative assessment

Q8b: What are pros and cons?

- Pro: Helps with making reliable decisions
  - Preserves information detail
- Con: Hard to understand and adds a level of complexity
- Could lead to an expensive study

Q8c: What are difficulties envisaged with this approach?

- Research on determining uncertainty in LCI data of major LCA parameters: use a range in processes and inputs as a surrogate for uncertainty
  - Rating of data quality: Do it nominally, as a score
  - Look at separability of result distributions rather than just the confidence bounds (ie. 95th percentile)

Q8d: Should variability be included in EPDs? Particularly for averages?

- Yes. Can be simplified through scoring matrix as metric for reliability of data
- Do literature review of statistical techniques in handling uncertainty without having detailed input data