COPERT 5

Approach
Outline

• Discussion with experts
  – May ’12: Bern TFEIP Meeting
  – Nov ’12: EEA Copert Workshop
  – Apr ‘13: Discussion with French experts
  – May ‘13: Istanbul TFEIP Meeting
  – Open to any additional requests

• 2012: Scoping document on C5 drafted
• 2013: Specifications
• 2014: Development, pending EEA/JRC approval
• 2015: Official launch, pending EEA/JRC approval
Aim of this presentation

• Inform experts on possible new developments for COPERT 5
  – Collect opinions on the priority of different issues

• Collect additional desires and requests
Offering both a Tier 2 and a Tier 3 interface

- Emission factors expressed in g/km values, encompassing cold, hot and evaporation
- Provide interface suitable for non advanced users
Deliver gridded information

- Gridded information is mandatory
- Various methods exist to allocate emissions (population density, activity, etc.)
- COPERT could implement a consistent method to allocate emissions to grids
Offer a higher temporal resolution

• Include urban ‘congestion’ and ‘non-congestion’ emission factors
  – May be used to refine urban inventories, if activity data (vkm) in congested/non-congested conditions exist
  – Would requires two versions of cold and hot emission factors, one for congested and one for non-congested conditions

• Be in the position to provide temporal profile of emissions
Fuel balancing and uncertainty

• It might be useful that a fuel / energy balance precedes the calculation of emissions to save time and effort.

• Fuel balance – to a certain extent – may be done in a semi-automatic fashion:
  – E.g. the expert provides ranges for some parameters (speeds, shares, split to categories, …) and the software finds a solution within this range, that also respects the fuel balance.
  – This procedure may also provide an indication for the uncertainty of the calculation.

• Whatever decided, transparency in the approach is necessary.
• Non-road mobile machinery were part of COPERT 2 but disappeared in COPERT 3 and on
• Methodology is easy to transfer in a software code
• Main problem is availability of activity data
Extend the list of technology coverage

• Include additional Euro classes (e.g. Euro 7, 8) with reasonable reductions
• Include alternative fuels (blends, H2, …)
• Include alternative vehicle concepts (e.g. electric, plug-in hybrids, etc.)
Provide a COPERT manual

• Guidebook not practical due to Tiered structure
• A manual might include use of the software and methodology in one place
• A difficulty arises to keep AEIG and the manual both updated and consistent.
Software issues

- Be able to interrupt a calculation to make changes. This is in particular important when time series are being calculated that take a lot of time to execute.
- A calculation for a complete year takes a few minutes (2-3 min) in most computers. Therefore, making adjustments to the numbers and run alternative scenarios is time consuming.
- Include road attrition as a source of PM – similar to the Tier 2 methodology in AEIG.
- Retaining long time series in one file (>15 years) may result to crashes in some computers due to the size and/or time execution problem (>40 mins).
- Improve flexibility in making number adjustments in the software. Now only typing is allowed which can be cumbersome for long time series.