UNECE
AIR CONVENTION

WGSR62

27-31 May 2024

Review new approaches

for EECCA, WB and TR

Questions

Why are new approaches for EECCA/WB/TR needed?

What are these new approaches?

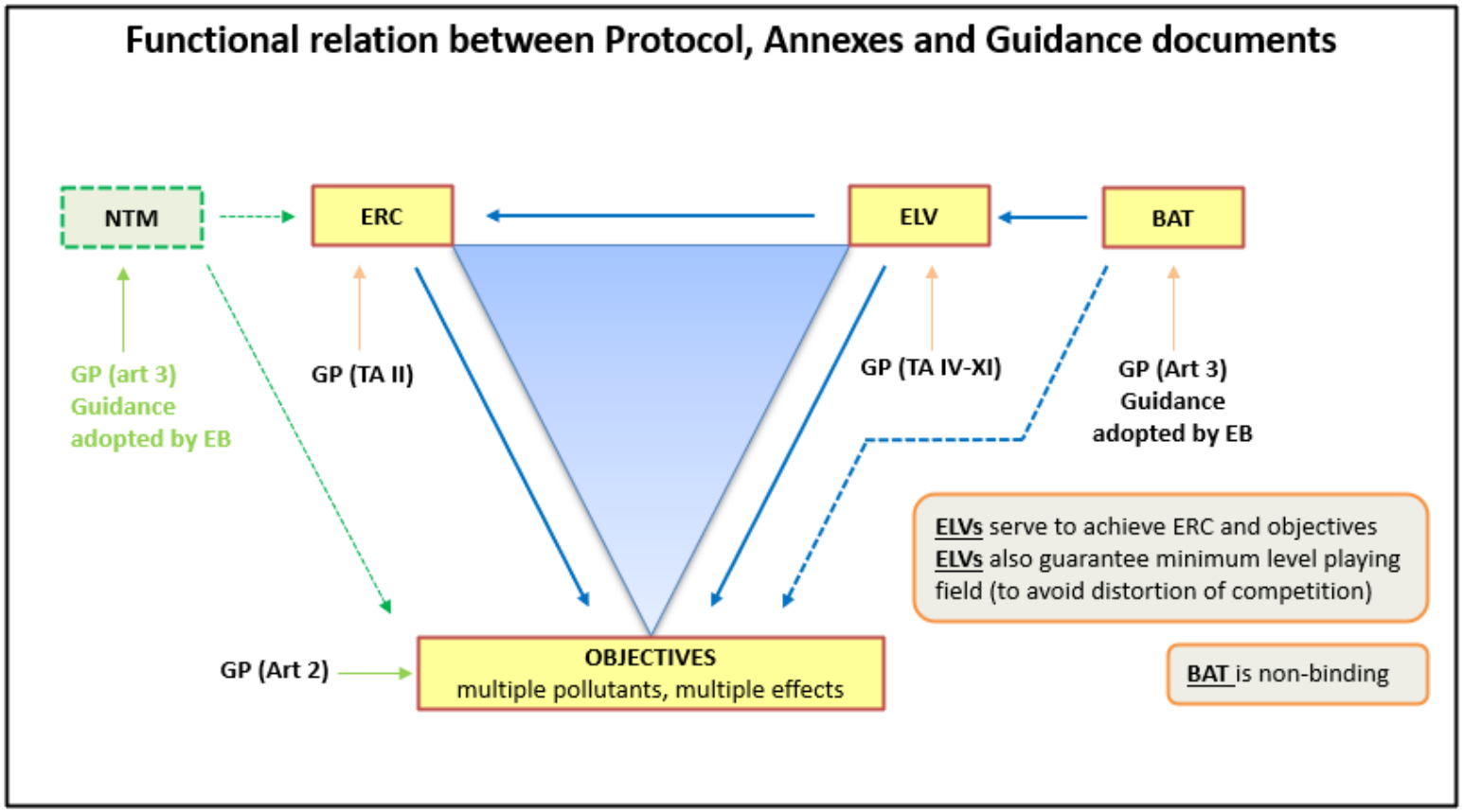
How to use new approaches ? How to incorporate them in the GP?

How to explore the potential of new approaches with the GAINS model?

- What are challenges /focus points for modelling new approaches with GAINS
- How to activate EECCA/WB/TR in revision process (CIAM work)?
- Data needs? What is needed from EECCA/WB/TR?
- What GAINS scenarios can be developed to inform policy making process?
- What GAINS results to report to WGSR?
- What further guidance from WGSR does CIAM/TFIAM need?

Functional relation between Protocol, Annexes and Guidance Documents

(To be revisited? Include NTM?)



Why are new approaches / flexibilities needed?

To address protocol related barriers

- Protocol and its annexes are too complex
- Large number of requirements in technical annexes
- Requirements that demand expensive retrofitting
- Unrealistic requirements for low-income countries on sectors affecting citizens (e.g. transport, residential heating) (no unpopular measures)
- Requirements not in line with key drivers like EU association agreements
- Uniform requirements not compatible with wide variety of applied technologies in industrial sectors
- Inadequate flexibility provisions (additional/different flexibilities needed)
- Inadequate emission data to set meaningful ERCs (tier 1)
- Base year too far in the past

To address political, financial, institutional, regulatory, capacity and knowledge barriers

Examples of new approaches

i. Staged ratification approach
ii. Phased commitment approach
iii. Separate section approach
iv. Sector-based approach
v. Individual commitment approach

Information on new approaches (description, pros and cons, legal issues)

see POD WGSR61 (link) and accompanying table (link)
see expert doc EB43 (link) and accompanying example (link)
see informal paper (link)

Staged ratification approach

Includes ratification of technical annexes (or parts of) in gradual steps, with one annex at a time, or in bundles.

Staged ratification of ELVs could be accomplished by series of separate EB amendment decisions to GP, to be ratified gradually over time, e.g.:

- Separate EB decisions amending existing annexes IV-XI
  (a separate decision for each annex or some bundled)
  (potentially with separate sections for EECCA/WB/TR, focus), or
- Separate EB decisions adding new annexes
  (a separate decision for each new annex)
  (potentially per sector / subsections / focus)

Staged ratification of ERCs (annex II): less obvious

- Use of adjustment procedure pursuant to article 13(1) and (2)

Phased commitment approach

Includes ratification of the whole Protocol at one time, with the basic obligations phased in over time (with increasing ambition) and explicitly described in the Protocol itself.

Requires setting commitments in different phases, with different target years: e.g. a first phase by 2035, a second phase by 2040

- Phased approach to ERCs (annex II) (use of adjustment procedure pursuant to article 13(1) and (2))
- Phased approach to ELVs / measures (annexes IV-VI / VIII-XI)

Challenge: setting ERCs in phases, aligned with phased in ELVs (pollutant versus sector)

Separate section approach

Currently, TA IV, V, VI, VIII, X and XI are divided into three sections: one for EMEP region, one for CA and one for US. Annex IX (NH3) only applies to EMEP region.

An option is to also provide separate section(s) or annex(es), with their own requirements, for EECCA, WB and TR.

Possible options are i.a. (can be combined with other approaches):

- Adding one separate section for EECCA, WB and TR (considered as one group) in each or some of the technical annexes
- Adding more than one separate section for EECCA, WB and TR (more than one group) in each or some of the technical annexes (more than one group)
- Adding (a) new technical annex(es) specific to EECCA, WB and TR, possibly with subsections for groups of countries / stages of commitment

Sector-based approach

A sector-based approach could be achieved by reorganizing the technical annexes by sector (source category) instead of by pollutant.

Currently

- TA IV, V, VI, and X: stationary sources by pollutant (SO2, NOX, VOC, PM)
- TA IX: agricultural sources (NH3).
- TA VIII: mobile sources and fuels (multiple pollutants)
- TA XI: products (limit values for the VOC content of products)

Large preference for sector-based approach of the TA

Aligns better with sector-based practice of guidance documents, BAT, domestic legislation.

Can be combined with other approaches.

Individual commitment approach

An individual commitment approach for EECCA, WB and TR could be achieved in several ways.

An option is to allow each of these states to submit, upon ratification, their own emission requirements to which they can commit (supplementary to minimum requirements already included in revised GP.

These (supplementary) requirements could be mandatory or indicative and be subject to review/scrutiny or not.

- Automatic incorporation of submitted ERCs upon ratification into annex II (not subject to review)
- Automatic incorporation of submitted ELVs upon ratification into TA (not subject to review)
- Adding names and ERCs to annex II upon ratification in accordance with article 13(1) (subject to review)

How to use new approaches

New approaches can be used as stand-alone approaches or in combination, and considered together with, amongst others

i. Moving (parts of) mandatory TA to non-mandatory GD
ii. Include (dynamic) references to domestic legislation in TA
iii. Targeted changes to TA (e.g. removing certain ELVs, adding derogations),
iv. Maintaining sets of minimum standards in the TA,
v. Focussing on (prioritizing) key categories / new installations / most cost-effective solutions; avoiding expensive retrofitting
vi. Improving current flexibility provisions, adding new flexibility provisions
vii. Allowing more time for decommissioning old installations (remove limits)
viii. Sectoral ERCs for certain sectors/pollutants (instead of ELVs / national ERCs)
ix. Allowing alternative base years for emission reduction commitments.

How to incorporate new approaches in GP

Legal points of consideration: *see informal doc 3 to WGSR45 (link)*

The present adjustment/amendment procedures of the AGP

- adjustment procedure (art. 13) : adjustments to annexes II and III
- amendment procedure (regular/expedited) (art 13bis): amendments to text and annexes (expedited for annexes I and III and optional for IV-XI)

Incorporate new approaches:

- make use of existing adjustment and amendment provisions
- amend existing adjustment and amendment provisions
- amend existing / include new provisions in text of GP (article 3, ….) / annexes
- declare that ratification only applies to GP in latest amended form, (not accept expedited procedure)

Challenges / focus points for modelling EECCA/WB/TR with GAINS

(check criteria of summary table II, POD)

How to balance equity against CE → identify CE-measures, priority sectors for CE-reductions, similarities across countries, a maximum on costs (as % of GDP)

How to preserve the benefits of integrated multi-pollutant / multi-effect approach (optimization for specific target year) when policies and measures in a phased /staged approach would be implemented successively → mismatch, importance? → sequential optimization (building on staged approach)?

How to preserve consistency with policies of other areas (climate, energy, …)?

How to align national ERCs with ELVs that are implemented gradually (phased/ staged approach) → recalculation of optimized allocated emission reductions, mismatch pollutant vs sector approach, sectoral ERCs

How to address lack of (reported) data (e.g. BIH), reliable data (e.g. UA); data availability for base year, data availability for BC, CH4, NH3? Spatial distribution?

How to include UA in modelling (UNECE wide modelling including UA?) Impact of misrepresentation?

How to activate EECCA/WB/TR in revision process?

How to involve current non-Parties in CIAM-work?

How to bring the right experts (EI experts, technical experts, policy experts) to the table?

How to increase communication with EECCA/WB/TR?

- with countries that are not participating in Convention meetings
- with countries that are not EU candidates (not covered by AA, EU4Green)

What to organize? Workshops at IIASA? Side-events during WGSR, EB meetings and/or informal delegates meetings? Intersession webinars? Questionnaires?

GAINS consultations with EECCA/WB/TR? When? How?

Funding? How to cover traveling expenses?

- cooperation with other ongoing work to save on expenses for travelling?

Data needs

Data required from EECCA/WB/TR

- Emission inventories of sufficient quality (complete, accurate, …)

  Tier 2 for key categories (tier 1 only proportional to activity levels)
  - Prerequisite for setting meaningful ERCs
  - Prerequisite to reflect emission reduction efforts and allow effective assessment of compliance with ERCs
- Preferred choice for base year (2005 may be too far in the past)
- National actions plans, AP control programs, road maps, AA info

Support from / cooperation with TFTEI, TFRN, TFEIP

- To improve data quality / availability for EECCA/WB/TR
- TFTEI: extend TFTEI analysis to other non-Parties (AZ): useful input for GAINS
- TFRN: extend TFTEI analysis to NH3
- TFEIP: gap filling, improving EI

GAINS scenarios for EECCA/WB/TR (1)

Options

- Optimized scenarios between baseline and MFTR
- Sequential optimized scenarios
- Baseline+ scenarios
- Optimized scenarios between baseline+ and MFTR
- Hybrid scenarios → see TFIAM policy paper (section VII)

  Combining a baseline+ simulation for EECCA/WB/TR region with optimization for other regions (to achieve domain-wide targets)
- Methane?

GAINS scenarios for EECCA/WB/TR (2)

Optimized Scenarios

- Optimization runs for different impact reduction targets (specific target year)
  1. Assess sectoral emission reductions for each run → mixed picture per country, identify similarities across countries;

     Assess national optimized emission reductions allocations
  2. Identify CE-measures → identify priority sectors for CE-reductions to be covered by TA (in stages), similarities across countries;

     Recalculate baseline scenario with implementation of selected CE-measures (in stages) → impact on emissions and effects → reiterations (readjusting health impact target)
- Sequential optimizations (consecutive target years) → to illustrate impact of phased-in implemented sectoral policies (ordering → prioritizing sectors)

GAINS scenarios for EECCA/WB/TR (3)

Baseline+ scenarios (BL simulations with more stringent controls for certain sectors)

- Scenarios aligned with NAP(existing or to be developed, EU4Green work, …), with new projections (submission March 2025)
- Scenarios aligned with EC agreements (NECPs 2024) / EU accession process (association agreements / EU acquis) (if not yet implemented in baseline)
- Runs to explore impact of more stringent controls (BAT) for key sectors
- Runs implementing feasible technological options according to TFTEI analysis
- Runs prioritizing measures already on the political radar (on basis of consultation of country concerned: what can be accepted?)
- Runs that simulate non-technical measures for selected sectors/activities (e.g. early scrapping/replacement of old residential wood stoves) → BACA
- → impact on emissions and effects (potentially in stages)

Results / information to report to WGSR

Clear description of baseline and alternative scenarios

- Implemented sectoral policies
- Control strategies

Documenting differences between GAINS and reported data

- Comparison of GAINS data with official reported data
- Documenting (remaining) large discrepancies with reported emissions and activities, in particular for base year(s), for key categories

Summaries of

- CE-measures, priority sectors for CE-reduction (with large reduction potential)
- Emission reduction results (national, sector level), effect improvement results

GAINS country data (open to public ?)

Guidance / instructions from WGSR

Further guidance/instructions from WGSR on suggestions for analysis that could inform revision options / approaches for EECCA/WB/TR?

- Priorities on (additional) scenarios, modelling modalities
- What deliverables, level of detail (GAINS results, documentation, suggestions for further analysis) to be reported
  - to inform policy making, and specifically
  - to allow selecting suitable approach / flexibities for EECCA/WB/TR, and
  - to allow conversion of GAINS data to suitable requirements (ERCs, ELVs, …) for EECCA/WB/TR within that approach

To be determined by WGSR

In conclusion: three questions to WGSR

1. **How can involvement of EECCA/WB/TR in the GP revision process / CIAM-work be strengthened? Viable options in the short-term?**

2. **What instructions can the WGSR give to CIAM (if any) in further (prioritizing) work to explore the potential of new approaches with GAINS (on scenario development, deliverables)?**

3. **Views, especially from EECCA/WB/TR, on preferred approaches / priority sectors (pollutants) to be addressed (by CIAM)?**