

Overview and review of flexibilities in the amended Gothenburg Protocol

*Paper prepared by the Gothenburg Protocol Review Group
30 April 2021*

1. Scope

This paper provides a general overview and evaluation of the flexibility provisions available in the amended Gothenburg Protocol and can serve as input for section J “Flexibility provisions” of the report on the review of the Gothenburg Protocol.

Section J “Flexibility provisions”

Description of the complexity of the amended Gothenburg Protocol and its main barriers to ratification. Assessment of the adequacy and effectiveness of current flexibility provisions to facilitate further ratifications. Proposals for alternative solutions and new approaches, with pros and cons, to overcome barriers and increase ratification.

Question 6.1(a): “Are current flexibility provisions adequate and/or effective for ratification and implementation (focus on Eastern, South-Eastern Europe and Turkey, the Caucasus and Central Asia)?”

Question 6.1(b): “What new flexibilities and/or approaches would potentially help non-Parties to move towards ratification and implementation?”

Question 6.1(c): “What are other options for achieving emission reductions (in lieu of technical annexes)?”

2. Background

The amended Gothenburg Protocol contains a number of flexibility provisions, some of which are addressed to all parties in order to facilitate full implementation of all requirements and some of which are specifically intended to facilitate ratification by the EECCA and other countries that have not yet ratified the Protocol. The flexibility provisions vary in type, scope and impact. The amended Gothenburg Protocol, like the original Protocol, also contains alternative provisions and specific arrangements for Canada and the USA (e.g. indicative values for reduction, automatic incorporation upon ratification). The use of a designated pollutant emission management areas (PEMA) is reserved only for large countries such as Canada, the USA and the Russian Federation.

Some of these flexibility provisions, like the use of equivalent emission reduction strategies as an alternative to comply with limit values and the possibility to derogate from limit values (see articles 3.2, 3.3 and technical annexes), were already available in the original 1999 version of the Gothenburg Protocol (with extension to the new requirements added to the amended Protocol, for instance with respect to PM). Several new flexibility provisions were added to the amended 2012 version of the Gothenburg Protocol. By decision 2019/23, the Executive Body amended Annex VII “Timescales under article 3” to the amended Gothenburg Protocol and extended the deadline from December 31, 2019 to December 31, 2024 (paragraph 4), for when a Party to the Convention becomes a Party to the amended Protocol to declare if it will extend any or all of the timescales for the application of limit values in this Annex.

In addition to the flexibility provisions contained in the Protocol, a number of related guidelines and decisions implementing the Protocol also include several flexibility provisions.

The following section gives an overview of the flexibility provisions available in the original and amended Gothenburg Protocol. It demonstrates which new flexibility provisions were added to the amended Gothenburg Protocol, mainly with the aim to facilitate ratification by EECCA countries. The subsequent section gives a brief review of the available flexibility provisions, as possible input for responding to questions 6.1(a) to (c) of Annex I to the preparations for the review document ECE/EB.AIR/WG.5/2020/3.

3. Overview of the main flexibility provisions

The following table gives an overview of the original flexibility provisions already included in the 1999 version of the Gothenburg Protocol and the new flexibility provisions added to the 2012 amended version of the Gothenburg Protocol.

Article /annex of GP	Description of flexibility provision
Flexibility provisions already available in the original Protocol (extended to new requirements added to the amended Protocol, for instance with respect to PM)	
Art 3.2 and 3.3	The use of equivalent emission reduction strategies for new and existing installations as an alternative to comply with emission limit values specified in annexes IV, V, VI and X. For Parties outside the geographical scope of EMEP the use of different reduction strategies that are necessary to achieve national/regional goals or standards. The option to derogate from emission limit values for existing installations specified in annexes IV, V, VI and X insofar these are technically or economically not feasible.
Art. 3.6 and 3.8(b)	The non-mandatory application of best available techniques (BAT) ('should' or 'where it considers it appropriate') for sources covered by annexes IV, V, VI, VIII, IX and X.
Art. 3.9, 3.10 and Annex III	The potential use of a designated pollutant emissions management area (PEMA) for countries with large areas like Canada, Russia and the US. The protocol obligations of article 3 and annex II are only applicable within the geographical scope of these designated PEMA's. Ammonia requirements (article 3.8) are not applicable to PEMA's. Annex III lists a PEMA for the Russian Federation. A potential SO ₂ -PEMA for Canada is specified in a footnote to the table 1 in Annex II. The US declared upon ratification to act in accordance with article 3.9 (PEMA for NO _x and VOC differ from PEMA for SO ₂)
Art 3.11	Automatic incorporation of submitted emission reduction commitments for SO ₂ , NO _x and VOC upon ratification by US and Canada into annex II. Exemption for NH ₃ .
Art. 13.1	Adding new names (of Parties to the Convention) and emission ceilings/emission reduction commitments to annex II at any time (can be used by e.g. EECCA countries when ratifying the protocol)
Annex II, tables 1, 2, 3 and 4	Indicative ceilings for US and Canada for SO ₂ , NO _x and VOC No ceilings for US and Canada for NH ₃ . US and Canada are exempt from commitments on NH ₃ .

Annexes IV, V, VI, VIII and IX	For a variety of reasons the technical annexes sometimes contain special provisions to derogate from or offer an alternative to the standard technical requirements. Specific carve-out sections for US and Canada in the technical annexes: see sections B and C of technical annexes IV, V, VI and VIII.
Annex VII (timescales under art. 3)	Timescales of application of the limit values referred to in article 3.2, 3.3, 3.5 and annex IV, table 2. Longer timescales for the application of limit values for existing stationary sources and for fuels and new mobile sources are granted to countries with economies in transition (5 to 8 year).
New flexibility provisions added to the amended Protocol	
Art 3.1 and annex II (tables 2, 3, 4, 5 and 6)	Introduction of relative emission reduction commitments in the amended Protocol compared to the absolute ceilings of the original Protocol. Note that relative ceilings (percentage reduction targets) are not in themselves a flexibility mechanism, but can be considered as a good alternative to address issues where flexibility is required. <u>Canada and US</u> <ul style="list-style-type: none"> ○ Indicative reduction values expressed as percentages for SO₂, NO_x, VOC and PM_{2.5}. ○ No emission reduction commitments for NH₃ (US and Canada are exempt from commitments on NH₃). <u>EECCA and other non-Parties</u> <ul style="list-style-type: none"> ○ No targets set yet (see further article 13.1), except for Belarus.
Art. 3.2bis and 3.2ter (and art. 1.16)	Flexible application of emission limit values for Parties that were already Party to the original Protocol prior to the entry into force of the amended version (and adjustment of the definition of "new stationary source") <ul style="list-style-type: none"> ○ In the event of the introduction of a "new source category". ○ In the event of the introduction of new emission limit values applicable to a "new stationary source"
Art. 3.6	The non-mandatory application of measures ("as it considers appropriate") to control BC as component of PM.
Art. 3.7	The option to derogate from the limit values for VOC contents of products as identified in annex XI insofar as these are technically or economically not feasible
Art. 3.9, 3.10 and Annex III	PEMAs for Canada and US were added to Annex III. PEMA for the Russian Federation in Annex III is extended to the European territory of the Russian Federation.
Art 3.11	Automatic incorporation of submitted emission reduction commitments for SO ₂ , NO _x , VOC and PM _{2.5} upon ratification by US and Canada into annex II (preserved flexibility from the original Protocol and extended to PM _{2.5}). Exemption for NH ₃ .
Article 3.11bis	Automatic incorporation of relevant limit values upon ratification by Canada into annexes IV, V, VI, VIII, X and XI.
Art 3.11 quinquies	Enabling clause for the adjustment procedure: flexibility on compliance with reduction commitments of art. 3.1 / Annex II by adjusting national emission totals.
Article 3 bis	Flexible transitional arrangements (flexibility on compliance with emission limit values until 31 December 2030 for Annex VI (VOC) and VIII (mobile sources)): only applicable when the amended protocol is ratified

	by a Party before 31 December 2019: these flexibility provisions have expired in the meantime.
Art. 7.6	Flexibility on reporting (reporting of a limited emission inventory for a particular pollutant or pollutants, but at minimum covering large point sources): allowed until 2021 for reporting of emissions of the year 2019, so expired in the meantime.
Art. 13.2	Enabling clause for the adjustment procedure: flexibility on compliance with reduction commitments of art. 3.1 / Annex II by adjusting emission reduction commitments.
Annex II, §5	Three-year averaging of national annual emission totals to comply with applicable emission reduction commitments (to account for a particularly cold winter, a particularly dry summer or unforeseen variations in economic activities). Averaging national emissions for the year in question, for the preceding year and for the following year.
Annex II, tables 2, 3, 4, 5 and 6	Indicative emission reduction commitments for US and Canada for SO ₂ , NO _x , VOC and PM _{2.5} . No emission reduction commitments for US and Canada for NH ₃ . (US and Canada are exempt from commitments on NH ₃). NO _x emissions from agricultural soils (NFR 3D) are not included in the 2005 emissions for EU Member States and therefore not subject to their emission reduction commitments.
Annexes IV, V, VI, VIII, IX, X and XI	For a variety of reasons, the technical annexes sometimes contain special provisions to derogate from or offer an alternative to the standard technical requirements. New derogations were added compared to the annexes to the original Protocol: as an example: see §5 of annex IV on special provisions for LCP's. Specific carve-out sections for US and Canada in the technical annexes: see sections B and C of technical annexes IV, V, VI, VIII, X and XI.
Annex VII (timescales under art. 3)	Timescales of application of the limit values referred to in article 3.2, 3.3, 3.5 and 3.7. Compared to the original Protocol, even longer timescales for the application of limit values are granted to countries not Party to the present Protocol yet (previously called countries with economies in transition): paragraph 4 of annex VII stipulates that if a Party ratifies the amended Protocol between 1/1/2013 and 31/12/2019 a delay of compliance with emission limit values for existing installations can be granted up to 15 years after entry into force of the protocol for the Party in question; for fuels, mobile sources and VOC's in products up to 5 years after entry into force of the protocol for the party in question. Decision 2019/23 postponed the expiry date to 31/12/2024.

Also worth noting are the changes introduced to the original article 13 on amendments. New article 13bis of the amended Protocol now includes the following three different amendment routes:

- the classic ratification route for amendments to the text of the protocol and Annex II (art. 13bis, §3) (burdensome procedure that takes a long time);
- the expedited amendment route (opt-out option) for annexes I and III (art. 13bis, §4 and 5);
- the option to apply the expedited amendment route (opt-out option) for Annexes IV to XI (art. 13bis, §6 and 7).

Below also some examples of flexibilities allowed in guidelines and decisions implementing the protocol obligations:

- Guidelines for Reporting Emissions and Projections Data under the Convention on Long-range Transboundary Air Pollution:
 - several Parties may choose to use their national emission total calculated on the basis of fuels used (instead of fuels sold as default) as a basis for compliance with their respective emission ceilings (i.e. Austria, Belgium, Ireland, Lithuania, Luxembourg, the Netherlands, Switzerland and the United Kingdom of Great Britain and Northern Ireland);
 - by default, gridded emissions shall be reported in a grid of 0.1 x 0.1 degrees. As an alternative, a Party may calculate gridded emissions in a grid of approximately 50 x 50 square kilometres (km²) until it is technically and economically feasible to switch to a grid of 0.1 x 0.1 degrees.
- Decisions 2012/3, 2012/4, 2012/12 and 2014/1 specify the guidance for adjusting emission inventories or emission reduction commitments

4. Review of the flexibilities

Although the amendments have been agreed to since 2012, the amended Gothenburg Protocol only recently entered into force on 7 October 2019. As a result there is limited insight into the extent to which the new flexibility provisions are considered useful, used and potentially effective. This makes the review of these provisions difficult. In part, we can fall back on our experience and knowledge with the flexibility provisions of the original Gothenburg Protocol.

The 2012 amendment to the Gothenburg Protocol introduced several flexibility provisions to specifically accelerate / encourage ratification by non-Parties (e.g. EECCA countries): see in particular **article 3bis (flexible transitional arrangements), article 7(6) (reporting of limited emission inventories) and annex VII(4) (longer timescales for application of limit values)**. The expiry date in paragraph 4 of annex VII was extended by Decision 2019/23. The flexibility provisions in articles 3bis and article 7(6) have expired in the meantime. None of these provisions have been used so far or have led to further ratifications.

Article /annex of GP	Review of flexibility provisions available in the amended Protocol
Art 3.1 and annex II (tables 2, 3, 4, 5 and 6)	<p>Relative emission reduction commitments.</p> <p>Relative targets are able to absorb many, but not all, of the effects of future inventory developments and improvements and are easy to implement. The transition from absolute to relative targets will very likely reduce the need and use of the adjustment procedure from 2022 onwards. This means a reduction of the workload for CEIP and the emission inventory review teams.</p> <p>A comparison of the 2005 base-year figures, which are included for information in Tables 2 to 6 in Annex II, with the most recent reported updates of the national emission totals for this year (reporting year 2021) will show to what extent the basis for setting the 2020 emission reduction commitments has changed in the meantime. It can give a first indication on the possible need to use the adjustment procedure with respect to compliance checking with the 2020 emission reduction commitments.</p>

In regards to the EU Member States, NO_x emissions from agricultural soils (NFR 3D) are not included in the 2005 emissions for EU Member States and therefore not subject to their 2020 emission reduction commitments. This is different from the scope used for the EU NEC Directive: for the purpose of complying with the 2020 emission reduction commitments of the EU NEC Directive (with identical 2020 emission reduction commitments as in the amended Protocol) NO_x emissions as well as VOC emissions from both agricultural soils (NFR 3D) and manure management (NFR 3B) are not accounted for. The reason why all these emissions were not covered by the emission reduction commitments under the NEC Directive was that reporting of these emissions at the time was very incomplete, ranging from reporting nothing for these categories to reporting significant amounts, and information on available reduction measures was scarce. It is unclear to what extent the 2005 baseline figures in annex II of the amended Protocol (included for information only) cover the NO_x and VOC emissions from agriculture. This is likely to vary from one Party to another, including also for Parties outside the EU.

Most NO_x emissions from agriculture originate from activities that are reported under category NFR 3D (soil emissions). Most VOC emissions from agriculture originate from activities that are reported under category NFR 3B (manure management). At the time when the 2020 emission reduction commitments for the Gothenburg Protocol were set (2012) the following emissions were reported for 2005 for EU28 with regard to NO_x from NFR 3D and VOC from NFR 3B (reporting 2012):

- NO_x NFR 3D (2005): 127.6 kt
- VOC NFR 3B (2005): 91.4 kt

In the meantime NO_x and VOC emissions reported for EU28 for these categories for the year 2005 have increased significantly (reporting 2020):

- NO_x NFR 3D (2005): 531.0 kt
- VOC NFR 3B (2005): 1055.1 kt

(similar findings for countries outside the EU?)

As can be seen, especially for NMVOC, emissions have increased drastically (due to new guidance on reporting). The inclusion of new NMVOC emissions from agriculture (NFR 3B) in the reported emission inventories has led to several Parties (EU Member States) exceeding the 2010 VOC ceilings. For this reason, several parties applied for an adjustment under LRTAP, proposing to exclude these additional NMVOC emissions from compliance. It remains to be seen whether these adjustment applications will need to be renewed for compliance with the 2020 emission reduction commitments. This is likely as emissions from this category are significant for some parties, while measures to reduce these emissions (in line with established emission reduction commitments) are not planned or may not even be available.

For next steps, in case VOC and NO_x reporting for NFR 3B and 3D is sufficiently complete and measures to reduce VOC and NO_x emissions from these activities are available, it would make sense to include these emissions in any new optimization exercise.

	<p>The inclusion of the condensable particles in the reporting of PM_{2.5} for residential wood combustion will also change the impact of current 2020 emission reduction commitments for PM_{2.5}.</p>
<p>Art 3.2, 3.3, 3.5 and 3.7 and technical annexes IV, V, VI, VIII, IX, X and XI</p>	<p>Use of equivalent emission reduction strategies to comply with limit values and options to derogate from limit values (preserved from the original Gothenburg Protocol and extended to PM_{2.5} and VOC contents) (art. 3.2, 3.3 and 3.7).</p> <p>For the previous review, we were able to draw on the results of the 2007 in-depth review of the original Protocol, carried out by the Implementation Committee on the basis of the responses to the biennial questionnaires, to assess the extent to which the obligations of the technical annexes have been implemented/applied and, <u>by extension, the extent to which certain flexibility provisions in articles 3.2 and 3.3 or included in the technical annexes have been applied</u>. See part III of the tenth report of the Implementation Committee for more information. The introductory paragraphs 64 to 70 in the report explain the great difficulties the Committee faced when conducting the in-depth review: https://www.unece.org/fileadmin/DAM/env/documents/2007/eb/EB/ec_e.eb.air.2007.3.e.pdf.</p> <p>This 2007 in-dept-review of the Gothenburg Protocol relied on the responses of Parties to the 2006 questionnaire. Since then in-depth (compliance) reviews by the Implementation Committee or by any other body of the Convention on the technical provisions in the technical annexes to the Gothenburg Protocol have not been repeated.</p> <p>From the 2007 in-depth review it could be concluded that three Parties had applied different emission reduction strategies but that the submitted information was insufficient to determine whether these strategies achieve overall emission levels equivalent with those achieved by application of limit values.</p> <p>Meanwhile, the biennial questionnaires have been replaced by reporting on strategies and policies during WGSR sessions. Systematic and complete information on the application of the emission limit values and other provisions of the technical annexes is no longer available. This means that we have little or no information on the extent to which Parties to the present Gothenburg Protocol (original or amended) (still) (will) make use of certain flexibilities allowed by Articles 3.2, 3.3 and 3.7 or included in the technical annexes.</p> <p>Points of attention and criticism:</p> <ul style="list-style-type: none"> ➤ as far as known, there has been no reporting for a long time on the application of different emission reduction strategies and derogations from limit values, mandatory, if applied, under Article 7(1)(a). Does this necessarily mean that this flexibility is not being used? ➤ If it is used, there is a lack of reporting on and enforcement of this flexibility. The Implementation Committee generally does not check compliance with limit values and other technical requirements.

<p>Art. 3.2bis and 3.2ter (and art. 1.16)</p>	<p>Flexible application of emission limit values for Parties already Party to the original Protocol prior to the entry into force of the amended version (and adjustment of the definition “new stationary source”).</p> <p>The introduction of intermediate sets of limit values between limit values applicable to existing and new sources (by partially allowing the continuation of previously applicable limit values) and the linking of the distinction between these three categories of limit values to the time of entry into force of the amended Protocol for the party concerned (rolling definition of “new stationary source”), results in a non-transparent variety of applicable emission limit values for the different parties to the amended Protocol.</p> <p>In the event of a new revision of the Protocol and a new shift of the timeline between what should be considered an existing and a new installation, this mechanism is no longer tenable. The distinction between new and existing may become problematic with new updates of BAT and a new revision cycle.</p>
<p>Art. 3.6 and 3.8(b)</p>	<p>The non-mandatory application of BAT / measures (“should”, “where it considers it appropriate” or “as it considers appropriate”) for sources covered by annexes IV, V, VI, VIII, IX and X.</p> <p>BAT for stationary and mobile sources have been established in several guidance documents: see https://unece.org/gothenburg-protocol. They form non-binding, guiding documents that can also be used to update the requirements in the technical annexes.</p> <p>The BAT approach applied in the Gothenburg Protocol seems to be in line with the current practice in most Parties, with a focus on the environmental performance that can be achieved with a BAT and not on the BAT itself.</p> <p>Therefore, instead of imposing BAT (techniques), it is recommended to keep the focus on the associated emission levels that can be achieved by applying BAT (in order not to inhibit innovation). The limit values in the technical annexes should therefore best be set according to the emission levels that can be achieved with BAT. Updates of the BAT guidance should therefore ultimately result in updates of the limit values in the technical annexes (if the use of technical annexes is maintained in a future revision). The review of the technical annexes should include an assessment of the limit values in relation to the updated BAT since 2012.</p>
<p>Art. 3.9, 3.10 and Annex III</p>	<p>The use of a PEMA.</p> <p>A PEMA is applied by the US upon ratification: see footnotes to tables of Annex II (https://unece-modl.dotsoft.gr/DAM/env/documents/2017/AIR/Gothenburg_Protocol/Annex_II_and_III_updated_clean.pdf)</p> <p>Potentially still useful for Russia as Russia only reports emissions for the European territory of the Russian Federation, which coincides with its PEMA as defined in annex III of the amended Protocol.</p>

<p>Art 3.11</p>	<p>Automatic incorporation of submitted emission reduction commitments upon ratification by US and Canada into annex II.</p> <p>Both US and Canada have made use of this provision to incorporate emission reduction commitments into annex II (respectively in 2017 and 2018)</p> <p>US: see https://www.unece.org/fileadmin/DAM/env/documents/2017/AIR/Gothenburg_Protocol/Annex II and III updated clean.pdf</p> <p>Canada: see https://www.unece.org/fileadmin/DAM/env/documents/2018/Air/EB/Note verbale to UNECE for Canada s Gothenburg Protocol commitments.Julypdf</p>
<p>Article 3.11bis</p>	<p>Automatic incorporation of relevant limit values upon ratification by Canada into annexes IV, V, VI, VIII, X and XI.</p> <p>A list of Canadian emission limit control measures for inclusion in the amended Gothenburg Protocol has been provided in 2018: see https://www.unece.org/fileadmin/DAM/env/documents/2018/Air/EB/Canadian emission limit control measures for the Gothenburg Protocol ann....pdf</p>
<p>Art 3.11 quinquies</p>	<p>Enabling clause for the adjustment procedure: flexibility on compliance with reduction commitments of art. 3.1 / Annex II by adjusting national emission totals.</p> <p>This flexibility mechanism to adjust national emission inventories in case of further developments on the emission inventories can be used in the following three circumstances:</p> <ul style="list-style-type: none"> ○ new emission source categories ○ significantly different emission factors ○ significantly different methodologies <p>The adjustment procedure is one of the few flexibility provisions that has been widely used so far (by countries with emission reduction commitments). For the time being, however, its experience is limited to assessing compliance with the 2010 fixed ceilings (provisional application since 2014). The adjustment procedure has not yet been applied to the 2020 relative emission reduction commitments of the amended Gothenburg Protocol. This may happen for the first time in 2022 (based on emission data reported in 2022 for the year 2020).</p> <p>As explained above it is expected that the transition from absolute to relative targets will likely reduce the need and use of the adjustment procedure from 2022 onwards.</p> <p>Guidance on how to apply, report and review adjustments to emission inventories has been established in a series of EB decisions (2012/3, 2012/4, 2012/12, 2013/3, 2014/1 and 2018/1), with additional technical guidance available in document ECE/EB.AIR/130. In principle, these guidelines are still fit for use for adjustment applications for the post-2020 scheme. However, it may be useful to revisit the technical guidance in document ECE/EB.AIR/130 to update and improve it (e.g. replace</p>

	<p>references to 1999 EMEP Guidebook with references to 2009 EMEP Guidebook, a new attempt to define what "significant" means, ...).</p> <p>A few issues to possibly further review and address:</p> <ul style="list-style-type: none"> ○ further guidance on how to assess/interpret “significant changes”; ○ further clarification on the reference point for adjustment applications: which version of the EMEP Guidebook to use as a reference (see Spanish case: see informal document to the 39th session of the Executive Body https://unece.org/fileadmin/DAM/env/documents/2019/AIR/EB/item_5_a_Cover_note_and_Legal_advice_Article_13_GProtocol_October_2019_Final.pdf); ○ possible gaps, overlaps and inconsistencies between the EU and LRTAP adjustment practices in order to avoid different outcomes (and to reduce review burden).
<p>Article 3 bis</p>	<p>Flexible transitional arrangements.</p> <p>The flexibility regarding compliance with the VOC and mobile source limit values granted to non-Parties that ratify the amended Protocol before 31 December 2019 has now expired. This flexibility mechanism, which was introduced to encourage ratification by EECCA countries and other non-Parties, has not been used. As a mechanism it was therefore not sufficient on its own to accelerate ratification by these Parties. The flexible transitional arrangements also partly overlapped with the extended timescales for the application of limit values granted in annex VII to countries not yet parties to the present Protocol.</p>
<p>Art. 7.6</p>	<p>Flexibility on reporting.</p> <p>The possibility to report limited emission inventories has now expired. It was permitted until 2021 for reporting of emissions for the year 2019. It was not used, also because the amended Protocol only entered into force on 7 October 2019. According to article 7.6(b) of the amended Protocol it is at the Executive Body's (EB) discretion to grant a request to report a limited inventory. Such a request has to date not been discussed or approved by the EB. As a new additional flexibility option this was not enough to trigger any new ratifications.</p>
<p>Art. 13.1</p>	<p>Adding new (Party) names and emission ceilings/emission reduction commitments to annex II at any time.</p> <p>Tables 2 to 6 of Annex II set out 2020 emission reduction commitments for 32 Parties to the Convention at the time of the adoption of the amendments to the Gothenburg Protocol (27 EU MS + UK, EU, BY, CH and NO). For a some of the countries no targets were set yet in annex II.</p> <p>This provision allows non-Parties (e.g. EECCA) to the present Protocol to delay the setting of emission reduction commitments until such time as their emission inventories are further developed and of sufficiently good quality. It allows for the establishment of meaningful reduction commitments at a later stage, when these countries are well and ready to ratify.</p>

	<p>This is a useful provision for current non-Parties. The alternative would have been to include emission reduction commitments in the tables of annex II on the basis of incomplete emission inventories when the amended Protocol was adopted (2012).</p>
<p>Art. 13.2</p>	<p>Enabling clause for the adjustment procedure: flexibility on compliance with reduction commitments of art. 3.1 / Annex II by adjusting emission reduction commitments.</p> <p>While Article 3(11) quinquies provides for the possibility of adjusting national emission totals for comparing with the emission reduction commitments, to account for developments and improvements in emission inventories, article 13(2) provides for a similar flexibility, but instead of adjusting national emission totals for compliance purposes, it allows for the adjustment of emission reduction commitments. As this is a more permanent adjustment, the procedure outlined in article 13(2) is brought to the policy level and has to be approved by the EB, whereas the procedure outlined in article 3(11) quinquies remains a technical procedure and does not go beyond the EMEP Steering Body level.</p> <p>The technical adjustment procedure was requested by the EU and has so far been used mainly by EU Member States (in relation to compliance with the 2010 ceilings). The EB procedure, which is not to be used by EU Member States, was negotiated at the request of the US. The flexibility clause in Article 13(2) has not been used so far. There is a reference to Article 13(2) in Decision 2017/3 (establishing a method to take account of changes in membership of the European Union, a specific situation for which article 13.2 was actually not intended), but this decision has not been used subsequently.</p>
<p>Annex II, §5</p>	<p>Three-year averaging of national annual emission totals to comply with applicable emission reduction commitments.</p> <p>This is a new flexibility added to the amended Protocol that can be used by any Party. It could be applied for the first time in 2022 when emission data for 2020 are reported (averaging over 2019-2021).</p> <p>There is a precedent with Cyprus, where a serious incident near the largest power plant in Cyprus, which caused it severe damage, resulted in a temporary increase in NO_x emissions (due to the temporary deployment of diesel generators) (see the old case of Cyprus' non-compliance with the NO_x ceiling).</p> <p>This flexibility mechanism seems easy to apply and report without significant additional burden on the parties. The disadvantage is that using this option will postpone the achievement of compliance by one year.</p> <p>If used, it is expected that it will most likely be in relation to compliance with the PM_{2.5} emission reduction target to compensate for higher wood consumption for heating during cold winters.</p>

	Guidance on how to apply and report this option is still missing. It may be useful to include in an EB decision some instructions on how to apply and report for the three year averaging option (e.g. instructing to provide the supporting documentation in the IIR).
Annex VII (timescales under art. 3)	<p>Longer timescales of application of the limit values referred to in article 3.2, 3.3, 3.5 and 3.7. for Parties becoming a Party to the amended Protocol before 31 December 2019.</p> <p>This flexibility mechanism, which was introduced to encourage ratification by EECCA countries and other non-Parties, has not been used to date. The expiry date for using this flexibility mechanism has been postponed to 31/12/2024. So far it has not triggered any new ratifications.</p>

5. Findings and conclusions

Provisional findings of reviewing the main flexibility provisions available in the amended Gothenburg Protocol are:

- The additional flexibility mechanisms introduced in the amended Protocol to facilitate further ratifications have not met expectations;
- Several of these flexibility mechanisms (flexible arrangements, limited reporting) have already expired and were never used;
- Article 7.1(a) requires reporting to the EB of the use of equivalent emission reduction strategies and derogations from the limit values as specified in the technical annexes, together with the necessary documentation and justification. Such reporting has never taken place. Thus, either these flexibility provisions are not applied or not reported;
- Lack of reporting on the use of flexibility provisions makes monitoring or enforcement difficult;
- The adjustment procedure is a widely used mechanism and seems (for certain parties) indispensable;
- Some of the new flexibility provisions have not yet been applied because the amended Protocol has only recently entered into force (e.g. 3-year average).

In general, it can be concluded that, so far, the current flexibility provisions have not proven effective and/or adequate for further ratifications.

The amended Heavy Metals and POPs Protocols contain some flexibility mechanisms similar to those added to the amended Gothenburg Protocol. These new flexibility provisions have not contributed to increased ratifications by EECCA countries either. The amended Heavy Metals and POPs Protocols have not yet entered into force.

There may be a number of reasons for the non-ratification of the amended Gothenburg Protocol by EECCA and other countries. It is likely that one of the primary reasons this has been the case is that the Gothenburg Protocol and its eleven technical annexes may be too complicated and partly too demanding on a country and that adding a bundle of flexibility provisions as a remedy may not be the best approach.

6. Responses to the three questions - new options and approaches (to be further developed)

Responses to the three questions

Question 6.1(a): "Are current flexibility provisions adequate and/or effective for ratification and implementation (focus on Eastern, South-Eastern Europe and Turkey, the Caucasus and Central Asia)?"

Answer: Based on current information, this does not appear to be the case.

Question 6.1(b): "What new flexibilities and/or approaches would potentially help non-Parties to move towards ratification and implementation?"

Answer: The following mechanisms and approaches could, be considered (amongst others):

- applying a bottom-up approach for the current non-Parties, building i.a. on the voluntary commitments submitted under the Batumi Action for Cleaner Air (BACA), rather than imposing the EU acquis (which largely forms the basis for the requirements in the technical annexes) top-down on non-EU parties;
- automatic incorporation of relevant limit values in the technical annexes upon ratification by EECCA and other countries that are not yet parties to the present Gothenburg Protocol into the technical annexes (similar to approach for Canada);
- applying a tiered approach over time (or staged approach), prioritising key categories and having a set of minimum requirements (harmonised for all Parties);
- Including in the technical annexes sections specifically dedicated to current non-Parties (EECCA countries, etc.);
- revise the amended Gothenburg Protocol in a way that allows piecemeal (incremental) ratifications of separate groups of new (bundled) amendments;
- develop a completely new and novel instrument that has flexibility at its core
- develop a new instrument that includes sector-based approaches and commitments that address multiple pollutants (perhaps using BACA and the Paris Agreement for inspiration)
- seek inspiration from flexibility options already applied in legislation from the EU (IED, NECD, ...), North America and other current Parties to the Convention (review Gothenburg Protocol flexibilities compared to what is available in national legislations).

Question 6.1(c): "What are other options for achieving emission reductions (in lieu of technical annexes)?"

Answer: A framework protocol with enabling clauses, followed at later stages, by implementing decisions that gradually impose soft or binding technical requirements on Parties that have ratified the framework protocol.

It will remain a difficult balance to maintain a meaningful (increased) level of ambition and to strive for more ratification and implementation.

7. Proposal

The circulation of a short questionnaire to the parties with a few questions on what flexibilities are currently being used or considered useful, could help the review exercise on flexibilities. The findings of the responses to the questionnaire could be anonymized.

8. Useful documentation

TFEIP:

- A Technical Assessment of Incorporating Correction and Flexibility Mechanisms into the Gothenburg Protocol Revision Process
https://www.unece.org/fileadmin/DAM/env/documents/2011/eb/wg5/WGSR49/Informal%20docs/2_TFEIP_Gothenburg_Flexibility_Mechanisms_FINAL1.pdf
- Comments concerning possible impacts on future emissions reporting associated with implementation of potential flexibility mechanisms under a revised Gothenburg Protocol
https://www.unece.org/fileadmin/DAM/env/documents/2011/eb/wg5/WGSR48/Informal%20docs/Info.doc.22_TFEIP_Gothenburg_Flexibility_Mechanisms_v10.pdf