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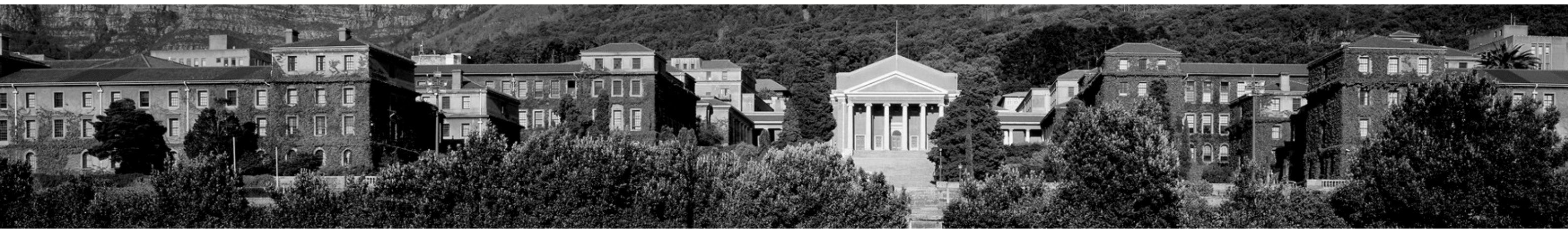

The balance sheet summary: An essential tool for transparency and robust accounting in mitigation and markets

Policy brief

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Background

This policy brief presents the concept of a nationally determined contribution (NDC) greenhouse gas (GHG) balance sheet. The concept was elaborated in a technical paper,[(1)] which informed an official submission by South Africa.[(2)] This brief should be read together with both of those documents. It adds a table, highlights the practical steps to be taken and answers some frequently asked questions about the NDC GHG balance sheet. The brief thereby seeks to focus on the issues requiring attention at COP24.

1) Principles and fundamentals

Accounting, reporting and transparency are fundamental bases of strengthening the multilateral, rules-based regime. Operationalising robust accounting for cooperative approaches and mechanisms, tracking progress and accounting is aimed at ensuring environmental integrity, promoting sustainable development and avoiding double counting. In transparency, flexibility in the implementation will be provided to those developing country Parties that need it in the light of their capacities. At the same time, the principle of progression means continuous improvement, including in relation to Articles 4, 6 and 13 of the Paris Agreement.

2) Balance sheet

a) Purpose: An all-encompassing tool for mitigation accounting, including cooperative approaches and tracking progress

The purpose of a NDC GHG balance sheet is to enable mitigation accounting (Art 4.13), track progress in implementing and achieving NDCs (Article 13.7 a and b), and ensure that the use of cooperative approaches and mechanisms has environmental integrity and avoids double counting (Article 6). This policy brief takes an inventory-based approach to mitigation accounting.

This inventory based approach is useful for cooperative approaches, using balance sheet for corresponding adjustments and accounting for transfer of units. Under transparency, the balance sheet is essential for information necessary to track progress made in implementing and achieving a Party's NDC under Article 4. It is under Article 13 that the balance sheet is reported every two years. In this way, a Party is enabled to account for its NDC. Specifically a main mitigation target(s) is the benchmark set in a NDC and can be accounted for using the balance sheet. Biennial reporting of balance sheets thus enables mitigation accounting, and enables each Party to explain in a responsible manner how it implemented and achieved its NDC, including through the use of cooperative approaches.

The balance sheet is illustrated in Figure 1. The various elements of the figure are explained in the following text. Table 1 (further below) illustrates what the balance sheet might look like in tabular format.

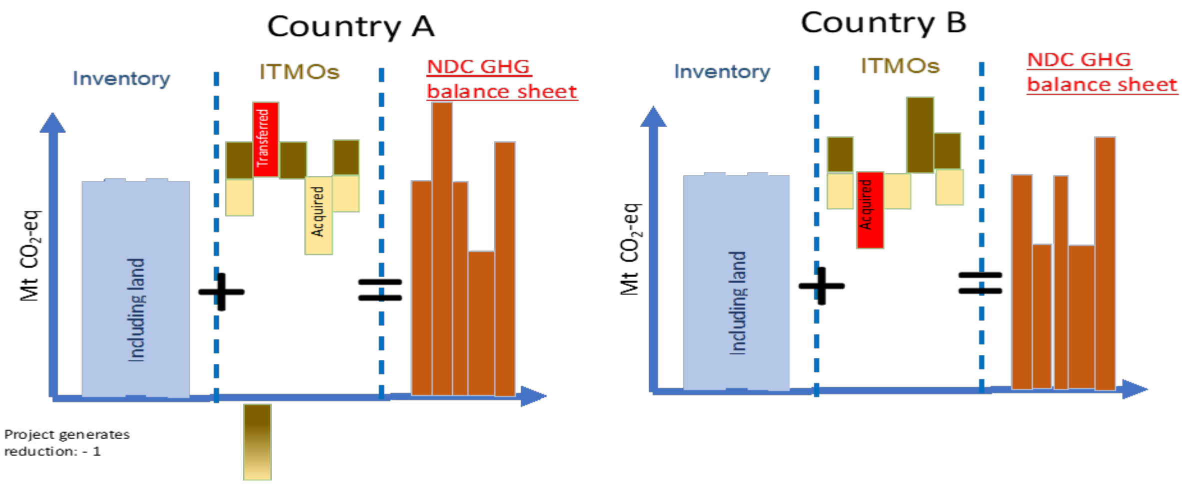

Figure 1: Illustrative diagram showing balance sheet and corresponding adjustment

The basis of a balance sheet is the country's GHG inventory. The balance sheet starts (at left) from the GHG inventory. The middle section of illustrates that internationally transferred mitigation outcomes (ITMOs) acquired are a 'minus', while ITMOs transferred are a 'plus', which would be done by counting under Article 6 resulting in net ITMOs (transfers minus receipts). The right-hand side is simply the sum of net GHG emissions and the net ITMOs for each of the five years in a period of implementation.

The balance sheet is shown for two countries, to illustrate how balance sheets enable corresponding adjustments. For example, assume that a project (or mitigation measure) generates a reduction, notionally 1 Mt CO_2-eq. Corresponding adjustment requires that Country A and Country B make adjustments which correspond. In this example, Country A has +1 and Country B -1. More generally, the adjustment is corresponding if the units are reflected for the same year, and are of identical magnitude, with opposite signs; that is, they must add up to zero.

The above description is for a simple two-country situation. However, variations may occur with respect to ITMOs across more than two countries, and robust accounting must apply across multiple transfers of the units in differing magnitudes. For example: Country A transfers 100 units to Country B, which may then transfer 20 units to country C and 30 units to Country D and keep 50 units for itself. In this case Country A will include +100 in the year it transfers the units; Country B will include –50 units in the year it uses the units towards its NDC, Country C –20 units in the year it uses the units towards its NDC, and Country D –30 units in the year it uses the units towards its NDC. All of these adjustments must be made within the NDC period and the net sum of all adjustments must be zero.

b) Reporting on multiple years

Balance sheets report on each of the years in a period of implementation. This is related to the question of single- or multi-year targets. Unfortunately, from the perspective of environmental integrity, many countries have single-year targets. For the time being, those countries with single-year mitigation targets would keep them in their NDCs, and here are reporting accountable emissions towards that target. A straight line can be drawn between the current emission level and the target year. This illustrates the problem: it is not known how emissions will vary over time. With progression, they should move to multi-year targets. And indeed multiple years provide a form of temporal flexibility.

c) Must be in gigagrams over five years

The units for a balance sheet must be Gg CO_2-eq.

d) Support for mitigation accounting

Continuous and adequate support must be provided to developing country Parties to increase their relevant capacities on implementing the guidance on accounting;

3) Table and key steps to complete it

What might a balance sheet look like? Table 1 shows a simple format for a balance sheet, which would be included in each biennial transparency report.

Table 1: Illustrative format of a NDC GHG balance sheet

		Units required	*Optional: other units*	*1 (start year)*	*2*	*3*	*4*	*5 (end year)*
				Time-frame and /or period of implementation				
1	Emissions and removals in GHG inventory	Gg CO_2-eq						
2	Net land sector emissions and removals (if not in inventory)	Gg CO_2-eq						
3	Net ITMOs	Gg CO_2-eq						
4	Accountable emissions	Gg CO_2-eq		1+2+3	1+2+3	1+2+3	1+2+3	1+2+3
5	Restate mitigation target(s) in NDC	Gg CO_2-eq	Units in NDC					
	On track / achieved?							Y/N

The values in rows 1 to 3 are entered for each year during the time-frame and / or period of implementation. Each of these rows has more detailed calculations underlying them, summarising the results from other worksheets:

- GHG inventory would report emissions, removals and net Gg CO_2-eq.
- It may report totals with and without AFOLU.
- It may be useful to report the land sector emissions, removals and net result separately, as this is a major source of uncertainty relevant to understanding whether a target is being achieved. For those Parties that do not include the land sector in their inventory, this is essential.
- ITMOs may be reporting as acquired (minus), transferred (plus) and net ITMOs (or possibly only net ITMOs).

The accountable emissions in row 4 are the sum of rows 1, 2 and 3.

That sum total is compared against the benchmark of the mitigation target(s) in the NDC. The targets are merely restated in the table, without changing them. If the target is not expressed in Gg CO_2-eq, then the mitigation outcome is to be reported. This is not a new requirement –

guidelines for biennial reports and biennial update reports already include the mitigation outcome of mitigation actions.

Accounting is comparing the value of an indicator against a benchmark. Hence the comparison between rows 4 and 5 is mitigation accounting.

4) What is reported before, during and after implementation

Before implementation, the Party identifies the mitigation target(s) in its NDC and key indicators. This defines key parameters for the balance sheet. In biennial transparency reports, the NDC GHG balance sheet, is reported. The sheet information is necessary to track progress in implementing its NDC (i.e. *during* the period); *after* the period of implementation of the relevant NDC, the Party accounts for its NDC, including the main target identified upfront.

a) Before implementing a NDC – upfront information

i) Mitigation target(s) against which Party will account

A Party identifies a main mitigation target against which the Party will account for its NDC, when the NDC is communicated and thus *before* it is implemented. These indicators should be a part of the information communicated together with NDCs – starting in 2025 and applicable post-2030. It can also be encouraged, in updating or submitting new NDCs in 2020.

ii) Indicators, sources of information, methodologies

A party defines the key indicators for accounting, sources of information and methodologies when communicating successive NDCs, from those identified in modalities, procedures and guidelines (MPG) on information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4 of the Paris Agreement.

b) During implementation – tracking progress

i) GHG inventory

An inventory-based approach to mitigation accounting provides a sound basis. Thus the starting point for the balance sheet is a GHG inventory that uses the prescribed IPCC methodology, consistent with para 31 of decision 1/CP.21.

This does not mean that a Party has to include all the gases in its GHG inventory in its NDC. If a Party includes only some gases, for now, in its NDC, then those gases are relevant in the balance sheet. We would add that both scope and coverage should progress over time: the scope of gases would increase on the basis of ‘once in always in’ (i.e. once a source or sinks is included, it must continue to be included); and targets for all countries will become economy-wide over time, under Article 4.4.

Some have countered that GHG inventory does not capture a party’s NDC. So let us argue further here that that is not what we are saying, but rather that the GHG is the ‘pulse’ we check to determine the level towards the target expressed in the NDC. That is, the NDC is a projection, while the GHG inventory captures the actual emissions. This comment goes above where we explain the the balance sheet

It should be noted that GHG emissions are reported for historical years (x–2 for developed countries and x–4 for developing countries), while ITMOs have specific vintages (established under Article 6), the year in which it is used.

ii) ± Land: Net emissions and removals from the land sector

Emissions from sources in AFOLU sectors would add to those from other sectors. Removals by sinks can be subtracted. Many countries include land with all other sectors. This is reasonable as, in most respects, the same accounting principles and procedures apply. However, there is a high degree of uncertainty in land sector net emissions and removals, so it is useful to report this element separately in the balance sheet.

iii) ± ITMOs: net transfers and acquisitions, to avoiding double counting in markets)
ITMOs transferred to another country should be added to the GHG inventory total to produce the accountable emissions. ITMOs acquired can be subtracted.

As discussed earlier, corresponding adjustment must mean that the adjustments add up to zero – to ensure environmental integrity, so that the atmosphere sees no extra ton of GHG after the transfer of an ITMO. Careful counting is important and requires that ITMOs are reflected for the same year (vintage of ITMO), are of the exact same magnitude, with opposite signs; and information about ITMOs must include the proposed quantity, given year, and year of transfer of the covered ITMOSs.

When might double counting occur?

- When two or more Parties count the same emissions reductions towards the achievement of their NDCs, including when a host Party and the financing Party both account for the same emissions reductions.
- When a Party counts the emissions reductions towards their NDC and another Party counts the same emissions reductions in their inventories (and that inventory is the basis for accounting, as is South Africa's view).
- When financing and emissions reductions are counted towards a Party's targets.
- When the same emission reductions are accounted by multiple parties (more than two). When two or more Parties count the same emissions reductions towards the achievement of their NDCs, including when a host Party and the financing Party both account for the same emissions reductions.
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- When the same emission red uctions are accounted by multiple parties (more than two).

Some participation criteria must apply for use of cooperative approaches: being a Party; mitigation targets quantified in GHG terms, reported in a balance sheet defined in Gg CO_2-eq over a period of implementation.

iv) Tracking progress toward mitigation targets
All of the above is included in biennial transparency reports (BTRs) during the period of implementation. There would be two or three BTRs during a five-year period (two if years 2 and 4, or three if years 1, 3 and 5). In that way, there are two or three data points, together with values in a reference year or level. This enables clarity, transparency and understanding as to whether the Party is on track to achieving the mitigation target in its NDC. No final answer is possible, as anything could happen in the remaining period.

c) After achievement of targets in NDC

After an NDC is implemented, another sheet is submitted in a BTR. The difference is that, at this point, all information is data known *ex post*. Hence, at this point, the comparison of the accountable emissions to the restated mitigation target(s) in the NDC can produce a Yes / No result, as the Party has or has not achieved the targets in the NDC.

5) Frequently asked questions

a) Does the balance sheet change the NDC?

No, the balance sheet is a tool. It is not the NDC, nor does it change the contents of a NDC in any way.

b) You say the balance sheet starts from the GHG inventory, so does it change inventories?

No. The provisions and guidelines for producing GHG inventories are not changed. The balance sheet takes the GHG inventory as an important starting point, but does not alter the inventory. The balance sheet does not lead to recalculations.

c) Is any further work needed ?

Yes. Further work on methodological approaches is needed. This should take place under the Subsidiary Body for Scientific and Technological Advice , which should develop a tabular format for the balance sheet and provide facilitative guidance on how to complete a balance sheet.

d) What is meant by 'sheet'?

We mean a balance sheet as in a table, used in accounting. The balance sheet would bring together in one place information that is important for tracking progress, mitigation accounting and markets.

e) How do we deal with single-year targets?

Single-year targets lack environmental integrity. While countries can choose what targets to put into their NDCs as they wish, for the purposes of transparent accounting and aggregation for the global stock-take more information is needed. The end-year is reported in the balance sheet, but also prior years. This is indeed essential to track progress in implementation. Countries with single-year targets could draw a straight line between their current emission levels to the target-year levels.

f) Are cooperative approaches limited to sectors covered by the NDC?

For cooperative approaches under the Paris Agreement, the activities are limited to sectors covered by the NDC (that is – inside the scope of the NDC). You have to trade against a cap. However, should developing countries identify the opportunity for a cooperative approach in a sector outside its NDC, this cooperative approach can continue so long as the transfers are carefully tracked, accounted and reported in the balance sheet and accompanying table and the sector is then included in the next NDC or NDCs of the Parties involved.

g) Won't there be duplication of accounting guidelines and transparency MPG?

Yes, this is a risk. When two sets of guidance apply to the same thing, the risk is that there will be inconsistency between the two documents. This risk increases when guidelines (typically annexed to decisions) go into detail. Furthermore, a person compiling a report or reviewing it will be uncertain which guidance applies. When a country reports on achieving a mitigation target or targets in its NDC and compares it against the benchmark, the target in its NDC, it is accounting. Hence, the sensible approach is to include details of mitigation accounting in the transparency modalities, procedures and guidelines – particularly sections C.3 and C.4 in the Joint Refelctions Note 'textual proposal'.

h) Are financing and emissions reductions counted by two parties double counting?

Yes. All countries have obligations under the Paris Agreement. Finance and emissions reductions are both obligations, with developed countries having additional commitments to provide support. Two countries may count both the same activity, even if expressed in different units. This is not the same situation as in the Clean Development Mechanism world, where emissions credits are sold. We need to consider how the emission reductions are 'shared'.

i) What is meant by corresponding adjustment done at 'use'?

By 'use', we mean the year in which the ITMO is used for NDC achievement. For example, if an ITMO acquired counts as a minus in year 2 of a NDC, the Party does the corresponding adjustment in Year 2; and the transferring Party counts a plus in year 2.

j) Does 'net zero' mean you do not support overall net mitigation?

No. We do support the overall mitigation goal (OMG), the question is how this works in practice. However, markets if well designed will lead to net zero emissions. That is what we seek to achieve with 'net zero' when looking at ITMOs: the 'plus' cancels the 'minus' by corresponding adjustment. Zero means a result with neither a surplus nor a deficit collectively, when the gains and losses of individual countries are added together. One way markets could go beyond 'net zero' would be if Parties acquired ITMOs and then voluntarily retired or cancelled them, as a contribution to the atmosphere; another would be by applying a discount on the emissions reductions. However, OMG must apply to 6.4 and 6.2 – otherwise it is simply not 'overall'.

k) What about double counting of emissions from other schemes like CORSIA?

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is a market-based mechanism agreed under the International Civil Aviation Organisation. Any tons of CO_2-eq generated by CORSIA are outside of mechanisms governed by rules under the Paris Agreement. Adjustments to the balance sheet would be only additions ('plus') for acquiring such units; there are no corresponding deductions ('minus') as they come outside of the system. This raises some concern that there could be double counting of emission reductions outside of the Paris Agreement. Rather than including CORSIA units in the balance sheet, they must be reported. Even then, rigorous methodologies would be needed to avoid double counting and to ensure environmental integrity. Such provisions should be limited to schemes overseen by other UN bodies (other than the UNFCCC).

Resources and further reading

Winkler, H. & Marquard, A. Mitigation accounting under the Paris Agreement. ERC research report series. (2018). https://bit.ly/2yR0un1

RSA (Republic of South Africa) Accounting across Articles 4, 6 and 13 of the Paris Agreement. Submission by South Africa to the Ad Hoc Working Group on the Paris Agreement and Subsidiary Body for Scientific and Technological Advice. 31 August United Nations Framework Convention on Climate Change, Bangkok, Published 2018) https://bit.ly/2wJzT75