Regional Climate Week

Asia-Pacific

Johor, Malaysia – 13-17 November 2023

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The Article 6 accounting

Article 6 Accounting

- Challenge: different types of NDCs

  o Not all of them expressed in tCO_2e

  o Not all of them with a multi-year carbon budget

- Corresponding adjustments to be applied to all ITMOs

  o Including activities out of scope of NDC

  o <u>Transferrer:</u> adjust the quantity of ITMOs in which the mitigation occurred (=vintage year of ITMOs)

  o <u>Recipient:</u> can choose the year of ITMO use – but NDC implementation period has to be the same as when mitigation outcomes occurred
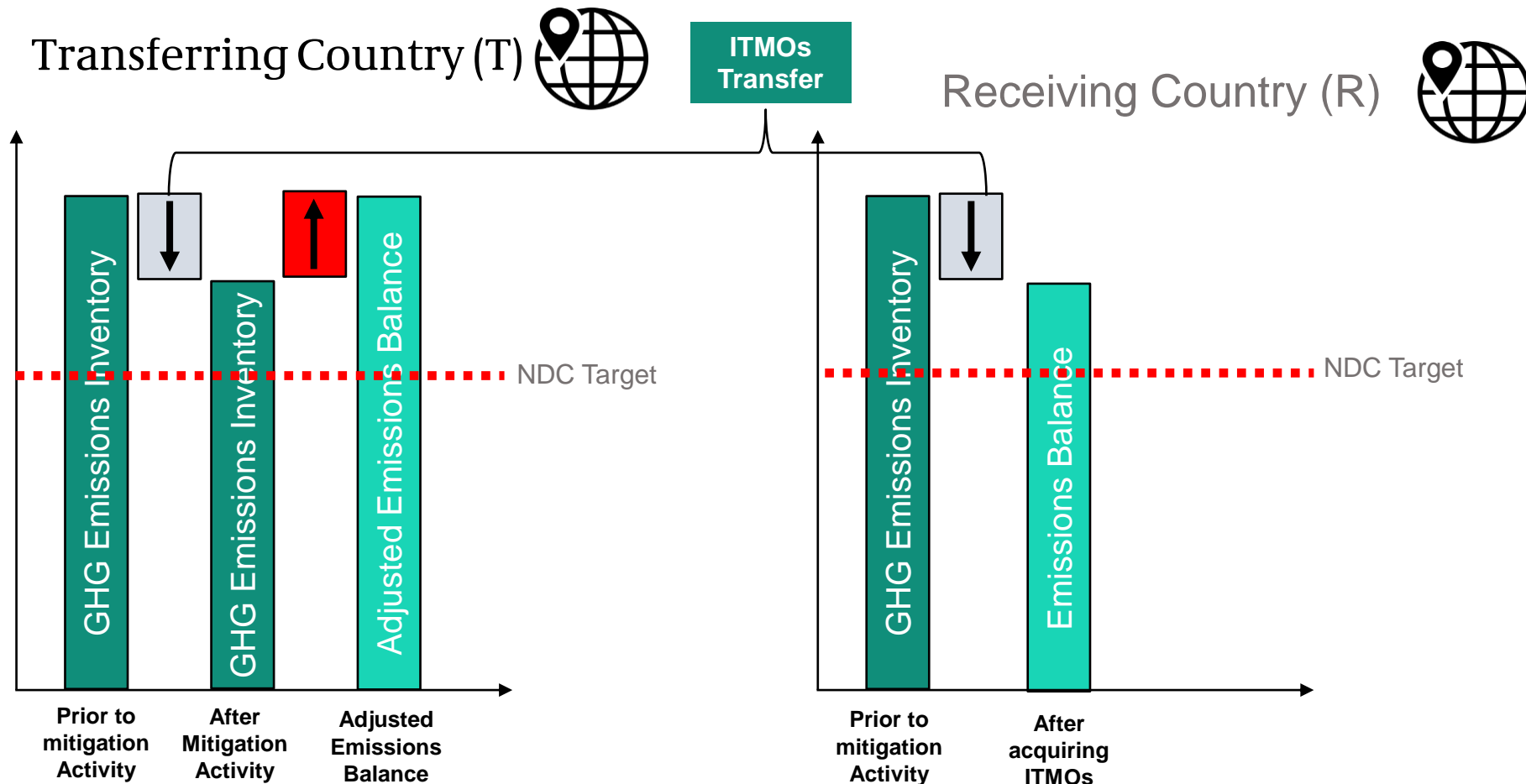
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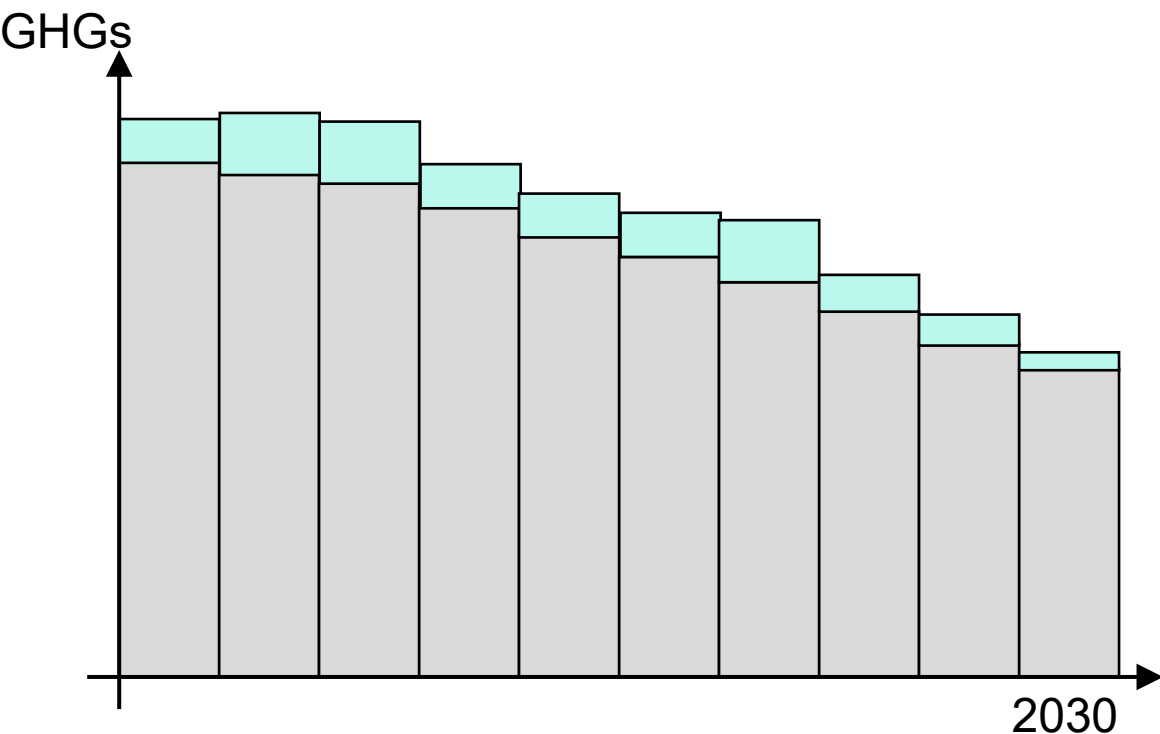Climate Change

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Article 6.2 - Key Concepts & Participation Requirements

Corresponding adjustments - countries' emissions levels, as reported when they track the progress towards achieving the NDC, should be adjusted to reflect the transfer (export) or receipt (import) of mitigation outcomes.
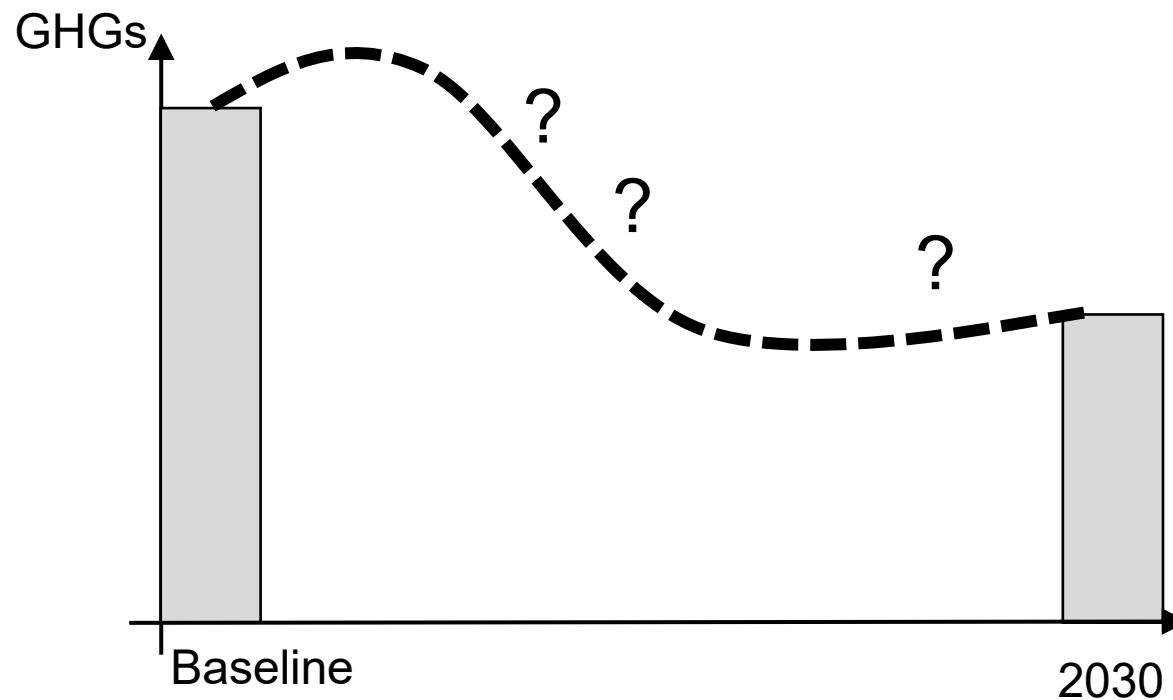
Article 6 Accounting (for the transferring country)

MULTI-YEAR TARGET: clear carbon budget – easiest case of applying corresponding adjustments

SINGLE YEAR TARGET: how to apply corresponding adjustments?

Article 6 Accounting

(a) (ii) Single year target NDC 2 Methods	(a) (i)	Multi-year target NDC 1 Method (b)
Calculating the average annual amount of ITMOs first transferred and used over the NDC implementation period, by taking the cumulative amount ~~and dividing by the~~ number ~~the NDC~~ imple~~~~ applying ~~~~ adjustments equa~~~~ amount for each year in the N~~DC~~ implementation period and applying corresponding adjustments equal to this average amount in the NDC year	Providing indicative…	Calculating….
	multi-year emissions trajectory, trajectories or budget for the NDC implementation period	
	that is consistent with implementation and achievement of the NDC	that is consistent with the NDC
	annually applying corresponding adjustments for the total amount of ITMOs first transferred and used for each year in the NDC implementation period;	
		and cumulatively at the end of the NDC implementation period.

See the math (example)

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Article 6 Accounting

- Challenge: different types of ITMOs

  - tCO_2e or absolute metrics
  - non-GHG metric consistent with NDC of participating Parties

  Implications that the metric has consistency with the NDC of (ALL) participating Parties: e.g., Party A can only transfer an achievement in kWh renewable energy if Party B has a target in kWh renewable energy

- Questions: who should subtract? Who should add? How is the math done?

- Guidance: *Each participating Party shall apply corresponding adjustments in a manner that ensures transparency, accuracy, completeness, comparability and consistency; that participation in cooperative approaches does not lead to a net increase in emissions across participating Parties within and between NDC implementation periods; and that corresponding adjustments shall be representative and consistent with the participating Party's NDC implementation and achievement.*

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Article 6 Accounting

- Adding or subtracting?

	The "bads" tCO_2e (emissions) Deforestation (e.g., km^2/year) ETS emission allowances	The "goods" Km^2 afforested MWh green electricity Number of E-Vehicles tCO_2e reduction / removal
A - Transferrer	↑ Add	↓ Subtract
B - Recipient	↓ Subtract	↑ Add

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Article 6 Accounting

- Adding or subtracting?

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A - Transferrer	⬆ Add	⬇ Subtract
B - Recipient	⬇ Subtract	⬆ Add

- Note: if A sells to B and A has a target of emission reduction, B has a target of absolute emissions, A needs to subtract (less emission reductions achieved as part of them are sold), and B will also subtract (less emissions caused).

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Hands-on Exercise

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NDC Accounting - Example

Example 1:

- Party A sells ITMOs

- Party A has a single year target

  o It can use the (a) (ii) <mark>averaging approach</mark> or

  o It can use the (a) (i) trajectory approach

Reminder of some rules:

- Transferring Party (seller): the corresponding adjustment needs to be applied for the vintage year of the ITMOs
- Acquiring Party (buyer): can apply the adjustment for any year of the NDC during which the ITMOs are used (but has to be in the same NDC period)

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NDC Accounting - Example

Exercise 1: **Averaging approach**

Country A sells ITMOs: does it achieve its target to emit only 2600 ktCO$_2$e in its target year (2025) ?

A	Year	2021	2022	2023	2024	2025
B	Year (n)	1	2	3	4	5
C	Gross emissions (ktCO$_2$e)	2800	2700	2600	2500	2400
D	ITMOS transfers (ktCO$_2$e)	400	300	300	200	200
E	Cumulated ITMO transfers					
F	CA to be made (ktCO$_2$e)					
G	Adjusted emission balance					?

NDC Accounting - Example

Exercise 1: **Averaging approach**

Calculating the <u>average annual amount of ITMOs first transferred and used over the NDC implementation period (E)</u>, by taking the <mark>cumulative amount of ITMOs (D)</mark> and <u>dividing</u> by the <mark>number of elapsed years in the NDC implementation period (B)</mark> and annually applying indicative corresponding adjustments equal to this average amount for each year in the NDC implementation period and applying corresponding adjustments equal to this average amount in the NDC year

A	Year	2021	2022	2023	2024	2025
B	Year (n)	1	2	3	4	5
C	Gross emissions (ktCO$_2$e)	2800	2700	2600	2500	2400
D	ITMOS transfers (ktCO$_2$e)	400	300	300	200	200
E	Cumulated ITMO transfers	400	700	1000	1200	1400
F	CA to be made (ktCO$_2$e)					
G	Adjusted emission balance					?

$$F = \frac{E}{B} = \frac{\text{Cumulative amount of ITMOs up to year (n)}}{\text{Number of elapsed years (n)}}$$

NDC Accounting - Example

Exercise 1: **Averaging approach**

Calculating the <u>average annual amount of ITMOs first transferred and used over the NDC implementation period (E)</u>, by taking the cumulative amount of ITMOs (D) and <u>dividing</u> by the number of elapsed years in the NDC implementation period (B) and annually applying indicative corresponding adjustments equal to this average amount for each year in the NDC implementation period and applying corresponding adjustments equal to this average amount in the NDC year

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C	Gross emissions ($ktCO_2e$)	2800	2700	2600	2500	2400
D	ITMOS transfers ($ktCO_2e$)	400	300	300	200	200
E	Cumulated ITMO transfers	400	700	1000	1200	1400
F	CA to be made ($ktCO_2e$)	=400/1	=700/2	=1000/3	=1200/4	=1400/5
G	Adjusted emission balance					?

$$F = \frac{E}{B} = \frac{\text{Cumulative amount of ITMOs up to year (n)}}{\text{Number of elapsed years (n)}}$$

NDC Accounting - Example

Exercise 1: **Averaging approach**

Calculating the <u>average annual amount of ITMOs first transferred and used over the NDC implementation period (E)</u>, by taking the <mark>cumulative amount of ITMOs (D)</mark> and <u>dividing</u> by the <mark>number of elapsed years in the NDC implementation period (B)</mark> and annually applying indicative corresponding adjustments equal to this average amount for each year in the NDC implementation period and applying corresponding adjustments equal to this average amount in the NDC year

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C	Gross emissions (ktCO$_2$e)	2800	2700	2600	2500	2400
D	ITMOS transfers (ktCO$_2$e)	400	300	300	200	200
E	Cumulated ITMO transfers	400	700	1000	1200	1400
F	CA to be made (ktCO$_2$e)	400	350	333	300	280
G	Adjusted emission balance					?

$$F = \frac{E}{B} = \frac{\text{Cumulative amount of ITMOs up to year (n)}}{\text{Number of elapsed years (n)}}$$

NDC Accounting - Example

Exercise 1: **Averaging approach**

Country A sells ITMOs: does it achieve its target to emit only 2600 $ktCO_2e$ in its target year (2025) ?

A	Year	2021	2022	2023	2024	2025
B	Year (n)	1	2	3	4	5
C	Gross emissions ($ktCO_2e$)	2800	2700	2600	2500	2400
D	ITMOS transfers ($ktCO_2e$)	400	300	300	200	200
E	Cumulated ITMO transfers	400	700	1000	1200	1400
F	CA to be made ($ktCO_2e$)	400	350	333	300	280
G	Adjusted emission balance	=2800+400	=2700+350	=2600+333	=2500+300	=2400+280

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NDC Accounting - Example

Exercise 1: **Averaging approach**

Country A sells ITMOs: does it achieve its target to emit only 2600 $ktCO_2e$ in its target year (2025) ?

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E	Cumulated ITMO transfers	400	700	1000	1200	1400
F	CA to be made ($ktCO_2e$)	400	350	333	300	280
G	Adjusted emission balance	3200	3050	2933	2800	2680

NDC Accounting - Example

Exercise 1: **Averaging approach**

Country A sells ITMOs: does it achieve its target to emit only 2600 $ktCO_2e$ in its target year (2025) ?

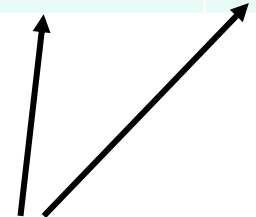| A	Year	2021	2022	2023	2024	2025	Total
B	Year (n)	1	2	3	4	5	
C	Gross emissions ($ktCO_2e$)	2800	2700	2600	2500	2400	
D	ITMOS transfers ($ktCO_2e$)	400	300	300	200	200	1400
E	Cumulated ITMO transfers	400	700	1000	1200	1400	
F	CA to be made ($ktCO_2e$)	400	350	333	300	280	1663
G	Adjusted emission balance	3200	3050	2933	2800	2680	

The adjusted emission balance exceeds the target: the NDC is not achieved !!!

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NDC Accounting - Example

Example 1: Averaging approach

A	Year	BL	2021	2022	2023	2024	2025	Target
B	Year (n)		1	2	3	4	5	
C	ITMOS transfers (ktCO$_2$e)		400	300	300	200	200	
D	Cumulated ITMO transfers		400	700	1000	1200	1400	
E	CA to be made (ktCO$_2$e)		400	350	333	300	280	
F	Gross emissions	3200	2800	2700	2600	2500	2400	
G	Adjusted emission balance	3200	3200	3050	2933	2800	2680	2600

The adjusted emission balance exceeds the target: the NDC is not achieved !!!

NDC Accounting - Example

Example 1:

- Party A sells ITMOs

- Party A has a single year target
  - o It can use the (a) (ii) averaging approach or
  - o It can use the (a) (i) trajectory approach

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NDC Accounting - Example

Exercise 2: Trajectory approach

Year	BL	2021	2022	2023	2024	2025	cumulated
Year (n)		1	2	3	4	5	
Trajectory	3200	3200	3050	2900	2750	2600	
ITMOS transfers (ktCO$_2$e)		400	300	300	200	200	
Gross emissions	3200	2800	2700	2600	2500	2400	
Adjusted emission balance	3200						

Is the NDC achieved for each year? and in aggregate?

NDC Accounting - Example

Exercise 2: Trajectory approach

Year	BL	2021	2022	2023	2024	2025	cumulated
Year (n)		1	2	3	4	5	
Trajectory	3200	3200	3050	2900	2750	2600	14500
ITMOS transfers (ktCO$_2$e)		400	300	300	200	200	1400
Gross emissions	3200	2800	2700	2600	2500	2400	13000
Adjusted emission balance	3200	3200	3000	2900	2700	2600	14300

The NDC is achieved for each year and in aggregate

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NDC Accounting - Example

Exercise 3: Trajectory approach

Year	BL	2021	2022	2023	2024	2025	cumulated
Year (n)		1	2	3	4	5	
Trajectory	3200	3200	3050	2900	2750	2600	
ITMOS transfers (ktCO$_2$e)		400	300	300	300	300	
Gross emissions	3200	2800	2700	2600	2500	2400	
Adjusted emission balance	3200						

Is the NDC achieved for each year? and in aggregate?

NDC Accounting - Example

Exercise 3: Trajectory approach

Year	BL	2021	2022	2023	2024	2025	cumulated
Year (n)		1	2	3	4	5	
Trajectory	3200	3200	3050	2900	2750	2600	14500
ITMOS transfers (ktCO$_2$e)		400	300	300	300	300	1600
Gross emissions	3200	2800	2700	2600	2500	2400	13000
Adjusted emission balance	3200	3200	3000	2900	2800	2700	14600

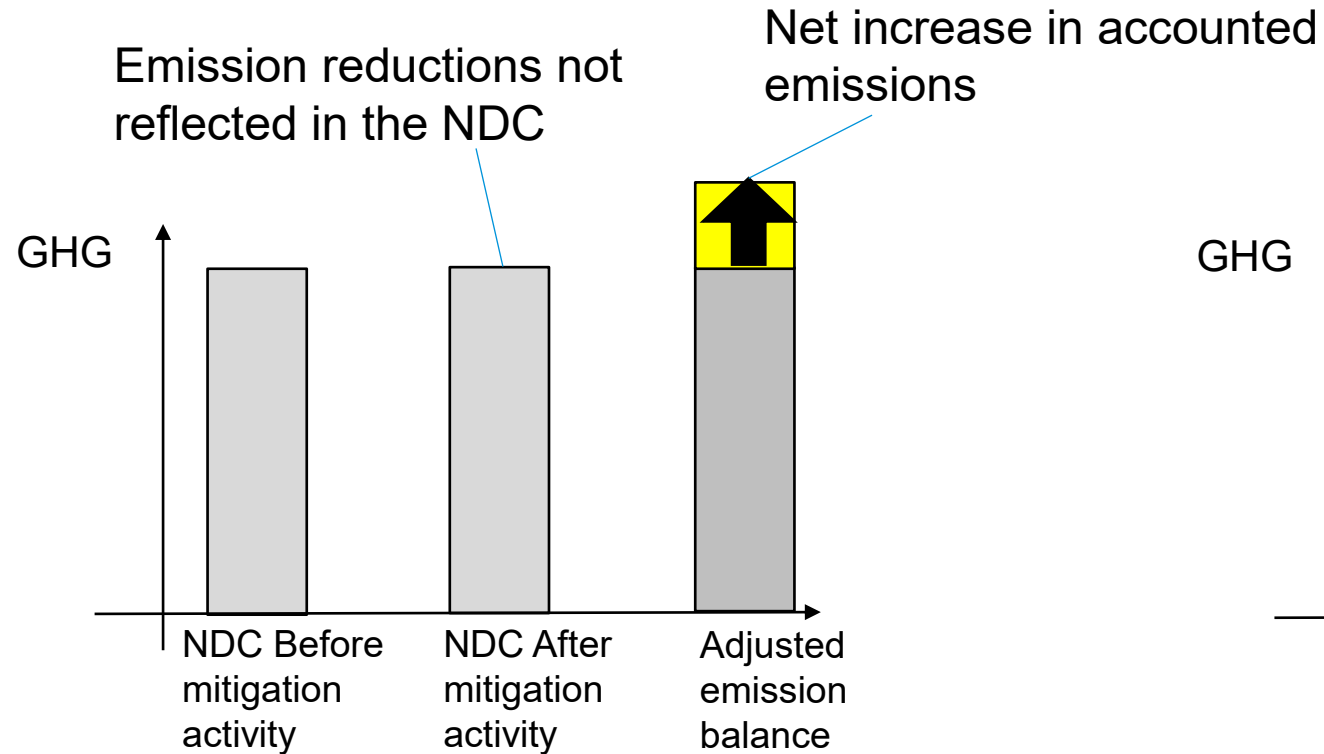The NDC is NOT achieved for each year and is also NOT achieved in aggregate
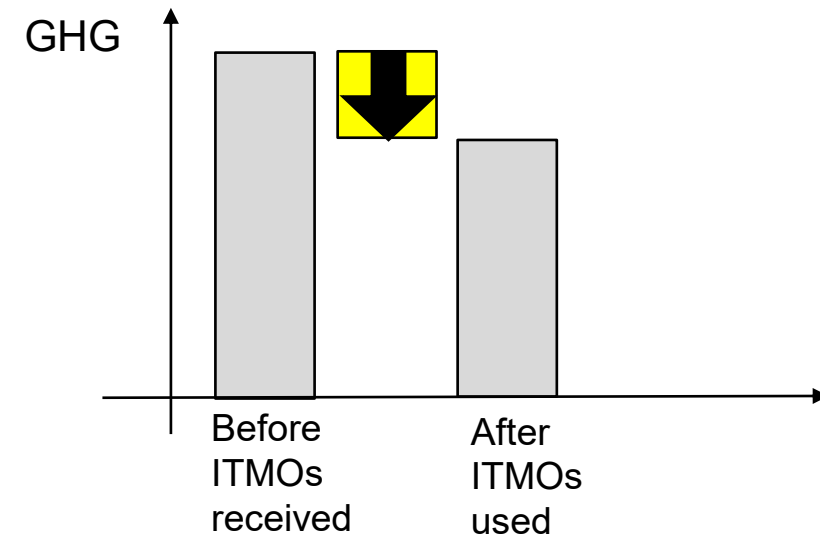
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NDC Accounting - Example

Example 3: Mitigation action occurring outside the NDC

Transfering Country (T)

Receiving Country (R)

Emission reductions not reflected in the NDC

Net increase in accounted emissions

GHG

NDC Before mitigation activity

NDC After mitigation activity

Adjusted emission balance

GHG

Before ITMOs received

After ITMOs used

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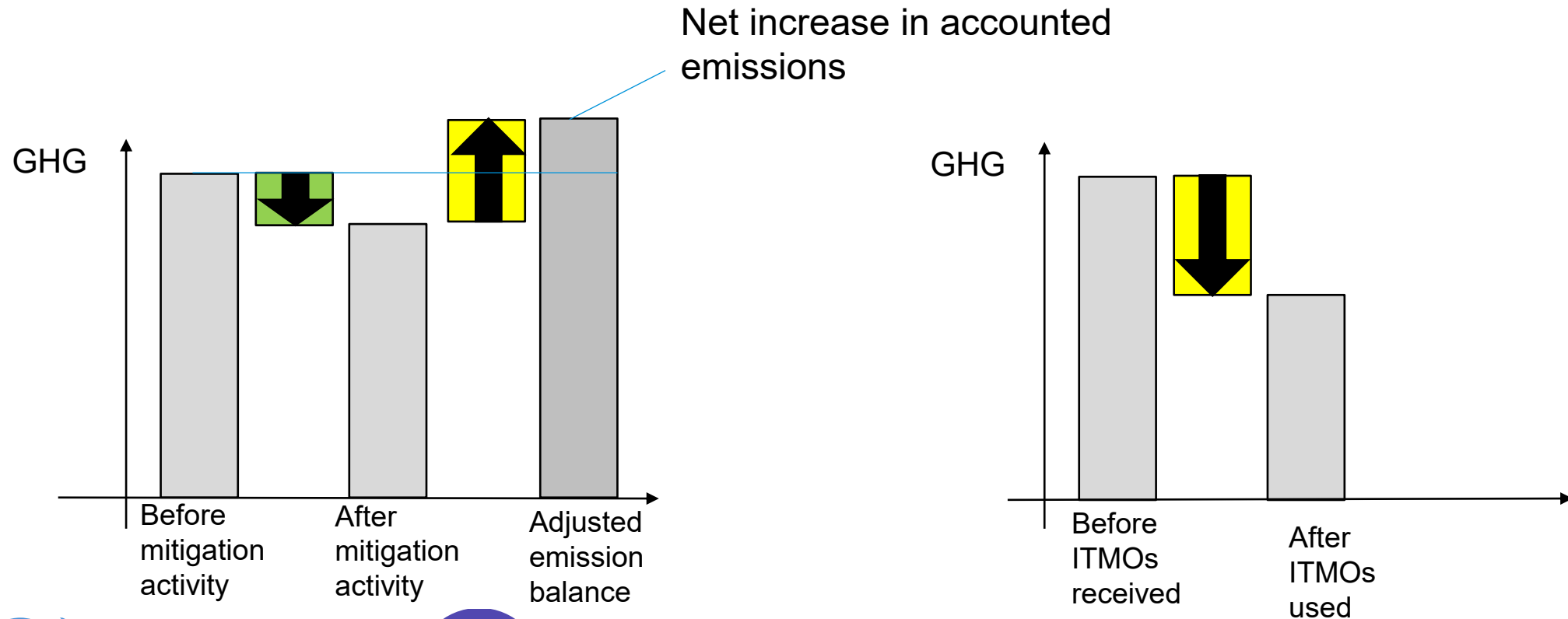
Example 5: Selling more ITMOs than mitigation actually occured

Transfering Country (T)

Receiving Country (R)

Net increase in accounted emissions

GHG

Before mitigation activity

After mitigation activity

Adjusted emission balance

GHG

Before ITMOs received

After ITMOs used

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THANK YOU FOR ATTENDING

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