Climate Change
CHIEF EXECUTIVES BOARD

Item 4

COVERSHEET: Item 4

To	Climate Change Chief Executives Board				
Meeting date	**5 December 2023**				
Agenda item name	**Update on initial review of NAP critical actions**				
Lead agency	IEB Unit				
Verbal update	**Yes**☐	**No**☒	**Supporting paper**	**Yes**☒	**No**☐
Reason for Board's consideration	To inform discussions with Ministers, this item provides a summary of the recent review of NAP critical actions to identify the most material actions for focus, the role the Board could play across these, and key messages for Ministers about how the NAP is tracking (ahead of the next six-monthly report).				

Recommendations	• **Note** the summary provided outlining how the most critical actions have been identified, the role for the Board across these actions, and key messages for Ministers. We will continue working with agencies on changes that need to be made to NAP actions and include these changes in the next six-monthly report.

Has the Board previously considered this item, if so, when?	**Yes**☒	**No** ☐	**Date**	12 October 2023
	At the strategy session on 12 October 2023, the Board sought assurance that sufficient progress is being made on the most material actions in the NAP.			
Has this item been considered/endorsed by Climate DCEs?	**Yes**☒	**No** ☐	**Date**	28 November 2023
	DCEs received an update on this work at their meeting on 28 November 2023, with feedback invited ahead of the update being finalised for the Board's consideration.			

Comments	The IEB Unit worked across agencies to develop the material and has taken it to Climate Directors and DCEs. We are presenting the slides for your information at this stage with a more substantive adaptation item to come to the Board in the new year. This will include refined focus areas for the Board, that reflect Ministerial priorities, a broader adaptation work programme for the Board's collective governance, along with work on a pragmatic set of adaptation indicators to help the Board assess the sufficiency of the adaptation response (one of the actions from its last six-monthly report). Following the Board's October strategy session, we have also been in touch with NEMA and DPMC regarding the Climate IEB's suggestion for a Hazards Risk Board meeting to discuss El Nino. HRB is now due to meet on20 December, and with the ODSEC Watch Group on 8 December.

Paper 4.1

Climate
IEB UNIT

Update on review of NAP critical actions

For noting at 5 December 2023 Board meeting

Supporting the Board's governance role across the NAP

- **At the Board's 12 October strategy session on adaptation, you discussed the key areas the Board wants to collectively focus on to ensure delivery of the most critical adaptation actions (within a context of more frequent and severe climate impacts).**
- **The Board also sought assurance that we are making sufficient progress on the most material actions in the NAP and has previously commissioned the development of a pragmatic set of potential indicators to help the Board assess the sufficiency of the adaptation response.**
- **The diagram shows the different areas of work being developed to support the Board's adaptation governance role. In early 2024 we will bring a refined adaptation work programme that reflects the Board's focus areas and Ministerial priorities, along with the proposed adaptation indicators to help the Board start to assess the sufficiency of the adaptation response.**

Assurance of progress of most material NAP actions

At the 12 October strategy session on adaptation, the Board sought assurance that sufficient progress is being made on the most material actions in the NAP.

The IEB Unit has worked with agencies to identify an initial list of the most material NAP actions for the Board to be alert to as you engage with new Ministers both individually and (potentially) collectively.

The slides that follow provide a summary of the recommended most material actions, their status, the potential role for the Board and key messages to support discussions with Ministers.

- Any recommended or actual changes to actions (if Ministerial or Cabinet decisions have been indicated/made) will be set out as part of the next six-monthly report. The six-monthly reports could potentially be refined to focus on these most material actions, including any new actions agreed to by Ministers.

- At your January meeting, we plan to present:
  - an adaptation work programme for the Board based on the focus areas discussed at the 12 October strategy session and reflecting new Ministerial priorities (to extent these are known); and
  - potential adaptation indicators to start to inform the sufficiency of the adaptation response in the next six-monthly report.

Criteria we used to assess NAP critical actions

We used the following criteria to provide an initial assessment of the most material of the critical actions:

- Addresses a significant risk in the National Climate Change Risk Assessment
- System-wide area where the Board can help
- Significantly contributes to a NAP objective or outcome
- Is a critical dependency for other actions
- Supports areas outlined in the new government's manifestos (to extent known).

For these actions we sought advice on:

i. Whether actions should be delivered faster or differently given the changing context

ii. Whether the actions are adequately resourced

iii. What the Board can do to unlock opportunities to make progress

s 9(2)(f)(iv)

s 9(2)(f)(iv)

s 9(2)(f)(iv)

s 9(2)(f)(iv)

Key messages on NAP1 progress to support early conversations with Ministers

The Board's BIM notes that:

- Risks are materialising now and on a larger scale, creating pressure to progress on all fronts at the same time.
- The government will need to make some important choices in the coming 12 months on significant adaptation policies to preserve future options and avoid setting precedents that are not fiscally sustainable.
- Specifically, these include:
  - how to support vulnerable communities at high risk of severe weather events,
  - how to pay for it, and
  - how to ensure resilience and climate adaptation is built into decisions on emergency management planning, infrastructure investment and resource management decisions.
- Making sure decision makers have access to robust and consistent information is an immediate priority, as it ensures the necessary legislative and institutional settings to support adaptation, including managed retreat.

The most recent review of NAP critical actions (completed in early November) found that:

- around 40% of the most material of the NAP critical actions are progressing well.
- others lack resources, are dependent on other actions or are areas where we will need Ministerial direction, such as:
  - process for progressing legislation to support managed retreat
  - changes to the RM system, and options for building in adaptation and resilience
  - options for managing risks around resilience of water availability and supply.

s 9(2)(f)(iv) [redacted]

s 9(2)(f)(iv)

- In the next six-monthly report, we will note any changes that have been agreed by Ministers or Cabinet or proposed changes where Ministerial decisions are still required.

Appendix One: Description of NCCRA risks

NCCRA risk code	Description of risk
B1	Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise
B2	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea level rise
B3	Risks to landfills and contaminated sites, due to extreme weather events and ongoing sea-level rise
B4	Risk to wastewater and stormwater systems (and levels of service), due to extreme weather events and ongoing sea-level rise
B5	Risks to ports and associated infrastructure, due to extreme weather events and ongoing sea-level rise
B6	Risks to linear transport networks, due to changes in temperature, extreme weather events and ongoing sea-level rise
B7	Risk to airports, due to changes in temperature, wind, extreme weather events and ongoing sea-level rise
B8	Risks to electricity infrastructure, due to changes in temperature, rainfall, snow, extreme weather events, wind and increased fire weather
E1	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme weather events and ongoing, gradual changes
E2	Risks to the financial system from instability, due to extreme weather events and ongoing, gradual changes
E3	Risks to land-based primary sector productivity and output due to changing precipitation and water availability, temperature, seasonality, climate extremes and the distribution of invasive species
E6	Risks to the insurability of assets, due to ongoing sea-level rise and extreme weather events
G1	Risk of maladaptation across all domains, due to the application of practices, processes and tools that do not account for uncertainty and change over long timeframes
G2	Risk that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for climate change adaptation.

NCCRA risk code	Description of risk
G3	Risks to governments and businesses from climate-related litigation, due to inadequate or mistimed climate change adaptation
G4	Risk of a breach of Treaty obligations from a failure to engage adequately with and protect current and future generations of Māori from impacts of climate change
G5	Risk of delayed adaptation & maladaptation, due to knowledge gaps from under-investment in research & capacity building
G6	Risks to the ability of the emergency management system to respond to an increasing frequency & scale of compounding and cascading climate change impacts in NZ and the Pacific region
G8	Risk to the ability of democratic institutions to follow due democratic decision-making processes under pressure from an increasing frequency and scale of compounding and cascading climate change impacts
H1	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities, due to climate change impacts
H2	Risks of exacerbating inequities and creating new and additional inequities, due to differential distribution of climate change impacts
H3	Risks to physical health from exposure to storm events, heatwaves, vector-borne and zoonotic diseases, water availability, and resource quality and accessibility, due to changes in temperature, rainfall and extreme weather events and ongoing sea-level rise
H4	Risks of conflict, disruption and loss of trust in government from changing patterns in the value of assets, and competition for access to scarce resources, primarily due to extreme weather and ongoing sea-level rise
H5	Risks to Māori social, cultural, spiritual and economic wellbeing from loss and degradation of lands and waters, as well as cultural assets such as marae, due to ongoing sea-level rise, changes in rainfall and drought
H7	Risks to mental health, identity, autonomy and sense of belonging and wellbeing from trauma, due to ongoing sea-level rise, extreme weather events and droughts
H8	Risks to Māori and European cultural heritage sites, due to ongoing sea-level rise, extreme weather events and increasing fire weather
N3	Risks to riverine ecosystems and species from alterations in the volume and variability of water flow, increased water temperatures, and more dynamic morphology (erosion and deposition), due to changes in rainfall and temperature
N7	Risks to terrestrial, freshwater and marine ecosystems, due to increased extreme weather events, drought and fire weather

Climate Change
CHIEF EXECUTIVES BOARD

Item 5

COVERSHEET: Item 5

To	Climate Change Chief Executives Board				
Meeting date	**5 December 2023**				
Agenda item name	**Approach to third monitoring and reporting progress report**				
Lead agency	Climate IEB Unit				
Verbal update	**Yes** ☒	**No** ☐	**Supporting paper**	**Yes** ☐	**No** ☒
Reason for Board's consideration	This item provides an oral update to the Board on the approach to developing the next six-monthly progress report, including confirming with new Ministers their reporting requirements.				
Key focus areas	Note that the current six-monthly monitoring period concludes at the end of December. The IEB Unit is working with your agencies to gather monitoring data. Progress report would ordinarily be due at the end of February. Given the need to understand the reporting requirements of the new government, a flexible and staged approach is proposed. The proposed sequencing is to collect data now to enable a simple report to be prepared for the Board's governance role, while we determine and seek direction from ministers on the most useful shape of, and areas prioritised in, the next report.				

Recommendations	• **Note** the oral update provided outlining the approach to developing the next six-monthly monitoring report

Has the Board previously considered this item, if so, when?	**Yes** ☐	**No** ☒	**Date**	
Has this item been considered/endorsed by Climate DCEs?	**Yes** ☒	**No** ☐	**Date**	15 November 2023
	DCEs endorsed the proposed approach to the July-December 2023 six-monthly report, and the commissioning of monitoring data from agencies.			

Comments	This approach has been tested with, and supported by, Climate DCEs and Directors. Note that the Climate Change Commission has advised that it will base its first progress report on the implementation of the NAP and ERP on the Board's reports. Copies of the Board's previous two reports will shortly be provided to the Commission and they have requested our third report once available. We anticipate that the underlying monitoring data will also be sought.

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Item 6

COVERSHEET: Item 6					
To	Climate Change Chief Executives Board				
Meeting date	**5 December 2023**				
Agenda item name	**Meeting administration**				
Lead agency	IEB Unit				
Verbal update	**Yes**☐	**No**☒	**Supporting paper**	**Yes**☒	**No**☐

Recommendations	• **Approve** the minutes of the meeting held on 25 October 2023 • **Note** the indicative forward calendar for January-March 2024

Comments	Due to time constraints, the minutes of the meeting held on 25 October 2023 were not formally approved; these are included in the meeting pack for the Board's approval. The meeting held on 21 November was a 30-minute meeting where the Climate Change Commission provided an update on their final ERP2 advice – no minutes were taken at this meeting.

Climate Change
CHIEF EXECUTIVES BOARD

Climate Change Chief Executives Board (IEB)

Paper 6.2
DRAFT

Indicative forward calendar: January to March 2024

Meeting date	Discussion item	Lead agency
31-Jan-24	Context sharing updates	All
31-Jan-24	External engagement: Climate Business Advisory Group (date tbc)	MfE
31-Jan-24	Adaptation indicators update	IEB Unit
31-Jan-24	Update on areas for Board's collective governance	IEB Unit
31-Jan-24	ERP2 status update	MfE
28-Feb-24	Context sharing updates	All
28-Feb-24	Third monitoring and reporting progress report	IEB Unit
28-Feb-24	ERP2 status update	MfE
27-Mar-24	External engagement: Adrian Orr, Reserve Bank Governor (date tbc)	-
27-Mar-24	Report back from IEB/MfE on progress against actions from research on views of Nzers towards climate change (27 Sept Board strategy session)	IEB Unit / MfE
27-Mar-24	ERP2 status update s 9(2)(f)(iv)	MfE

Climate Change
Chief Executives Board

Additional papers attached for information	
1.1	Final Climate IEB BIM Note: The final version of this paper can be found here
1.2	Updated 'November paper' on CCRA architecture, including legal advice Note: the final version of this paper can be found in the 10-25 meeting pack
1.3	Updated sufficiency analysis

Paper 1.3

Climate
IEB UNIT

Updated emissions projections: Key findings for the Board

November 2023

Draft at 27/11/23

These projections are produced through the following process:

- MPI, MBIE, MfE and MoT provide updated projections to MfE for each of their sectors (transport, agriculture, forestry, energy and f-gases, and waste).
- Agencies verify the accuracy of this data within their own sectors and sign it out before providing it to MfE. MfE then combines this information to create the aggregate projections used in these slides.
- This analysis is undertaken by MfE and is then peer reviewed by a cross agency working group, and by a separate staff member to confirm the accuracy of the aggregate information.

Purpose and context

Context:

Updated projections were last provided to the Board and Ministers in May 2023. Since then, the CCIEB Unit and MfE have led work with agencies to improve our modelling approach, including; better alignment of modelling assumptions across sectors, improved impact assessments of policies, and assessing a wider range of policies.

Agencies have also been able to make initial estimates of the impact on emissions of the incoming government's plans to discontinue three specific actions included in the first ERP. The impact of the broader commitments of the incoming government's plan to reduce emissions (e.g. investment in renewable energy and EV charging) will be included in projections once sufficient policy detail is available.

Purpose: This slide pack sets out for the Board the updated projections of emissions and an assessment of our ability to meet the first three emissions budgets.

These slides aim to:

- ***Inform the Board*** of the latest emissions projections and their limitations, which are particularly significant for the second and third emissions budgets.
- ***Provide the basis for agencies' initial advice to Ministers*** addressing our position on EB1.
- ***Set out our approach to build more robust*** projections for emissions budgets 2 and 3 before advising Ministers on this position.

This slide pack covers:

- The key assumptions and limitations of emissions projections.
- Updated projections for EB1 and EB2 under policy settings at 1 July 2023, the potential impact of some incoming government policies (from National's *Blueprint*) and potential measurement changes expected for the agricultural sector as part of the 2024 inventory.
- Projections for EB3 and the significant limitations they face.

Limitations to these projections

Emissions projections are always 'snapshots in time' and are subject to uncertainty and change over time. Models are simplified versions of the real world and are therefore limited in their ability to make future predictions. There are three main factors that affect projections, not all of which can be modelled:

a) ***external factors*** (e.g., economic activity, oil prices, hydro lake inflows etc). There is inherent uncertainty in forecasting these factors, including economic activity especially in high emissions intensity industries, energy and commodity export prices, and technology development and uptake.

b) ***policies to reduce emissions*** (e.g., those in our first emissions reduction plan) which are subject to assumptions over their timing and effectiveness.

c) ***how we measure emissions*** (methodology). Updates are made annually to improve the way emissions are measured, following UNFCC and IPCC guidelines.

Despite these limitations, projections and abatement estimates are a key tool for assessing whether policies are likely to be sufficient to meet emissions budgets.

This update, as of November 2023, sets out a range of projections with low and high emissions scenarios, to better reflect the uncertainty around projections. The upper and lower bounds of these ranges do not represent the lowest and highest possible future emissions levels, but represent a range of different modelling assumptions.

s 9(2)(f)(iv)

The sufficiency progress **analysis has had considerable improvements since May 2023, affecting the overall assessment of our ability to meet emissions budgets**. Rather than a separate 'adding up' exercise of individual policy impact, policies have been modelled through greenhouse gas emission projections which better accounts for how they interact. Agencies have also reviewed and updated their modelling input assumptions.

Process for providing updated and improved emissions projections

Emissions projections are updated annually, with a mid-year 'sufficiency' update to inform the Board's reporting to Ministers:

- New Zealand's official greenhouse gas inventory is updated annually in April. This incorporates methodological improvements in line with the UNFCCC best practice.
- MfE and agencies then work to update emissions ***projections and sufficiency analysis reflecting this latest inventory by January***. These projections are used in the Board's February six-monthly report on the ERP and NAP.
- Alongside this annual process, agencies provide a ***mid-year update of sufficiency analysis*** for the Board's mid-year (August) six-monthly report, to test if there have been material changes to policy settings.

Projections and sufficiency analysis are not updated more frequently because the underlying data informing the models e.g., population growth, GDP, and policy effectiveness do not change substantively over short periods of time, and because of the resourcing required.

Methodological improvements can have a significant impact on our ability to meet emissions budgets and are hard to predict. s 9(2)(f)(iv) [redacted]

A range of work is underway to provide more robust projections

s 9(2)(f)(iv) [redacted]

- **Modelling the Government's preferred policy options for the second ERP.** These projections only estimate the impact of removing some policies signalled by the incoming Government (GIDI, CCD, delayed agricultural emissions pricing).
- Agencies have not yet been able to assess the impact of the new government's wider policy changes to reduce emissions. These include an EV charging network, boosting the supply of renewable energy, and restrictions on whole farm conversions to forestry. s 9(2)(f)(iv) [redacted]
- Through the ERP2 process, agencies will work with the Government on options to achieve future emissions budgets and **provide updated modelling that includes a broader range of the incoming government's policies**.

Projections show we can land within emissions budget 1

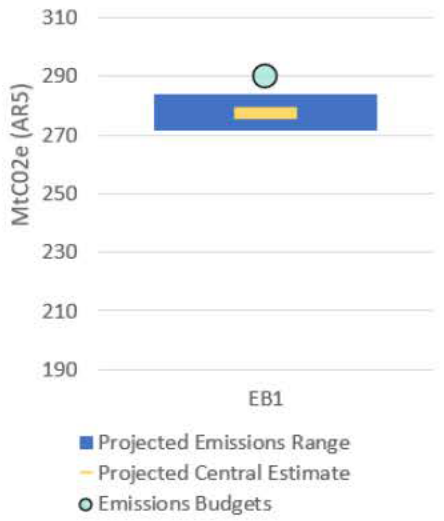
The latest projections find we can land within EB1 (2022-2025), s 9(2)(f)(iv)

- **Graph 1a** shows that with policy settings at July 2023 we are ***expected to land within EB1.*** Emissions are projected to be within a range of 272 to 284 Mt CO_2e. This is below the EB1 limit of 290 Mt CO_2e, with a 'buffer' of 13 Mt CO_2e (or 4.2%) from the central estimate of the range.

s 9(2)(f)(iv)

- We have highlighted these potential agricultural methodological changes because we anticipate the impact on measured emissions to be substantial. The overall impact of methodological changes in 2024 will also depend on changes in other sectors, but these are expected to be smaller scale.

Graph 1a: Projections as of 1 July, based on 2023 inventory

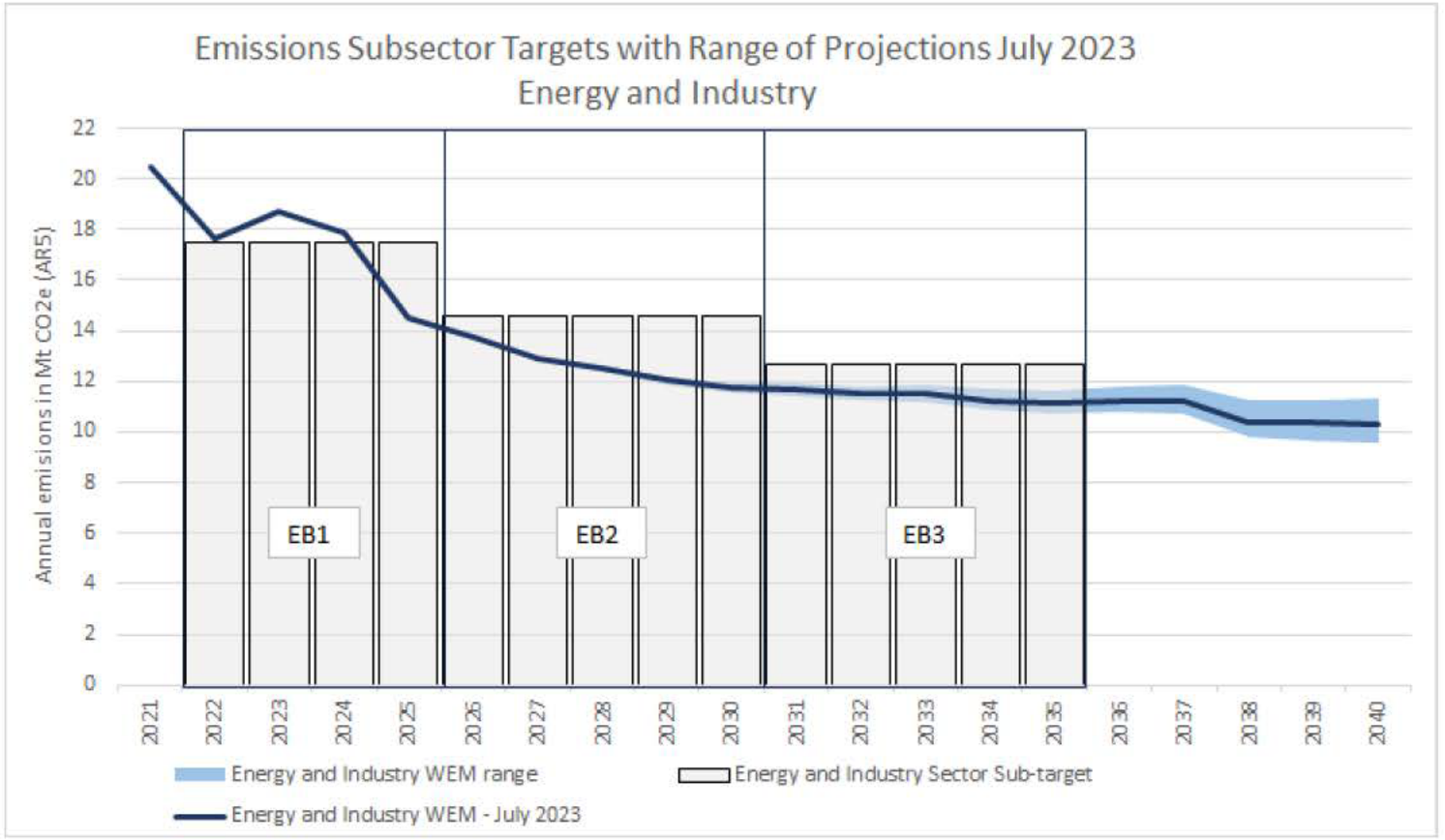


s 9(2)(f)(iv)

s 9(2)(f)(iv)

Sub-sector projections (as of 1 July)

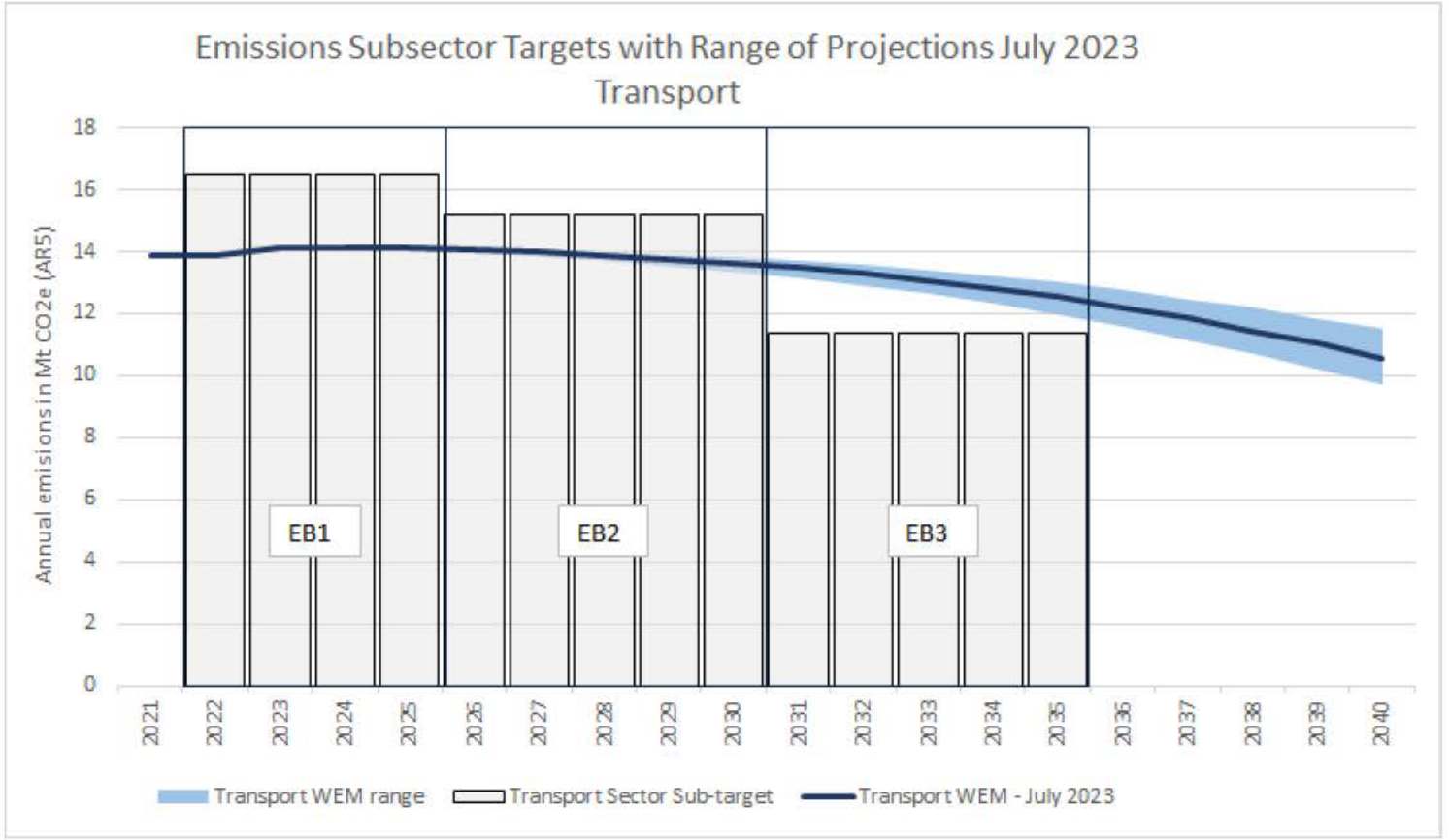
Energy and Industry



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
Energy and Industry	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	70.1	72.8	63.3	not set
Projections 2023 - existing measures	68.7	62.9	57.0	53.6
Projections range	68.7 to 68.7	62.4 to 63.4	55.4 to 59.0	50.5 to 57.5
Difference to Target -ve is below; red and highlight is above	-1.4	-9.9	-6.3	
Difference to Target range	-1.4 to -1.4	-10.4 to -9.4	-7.9 to -4.3	

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.

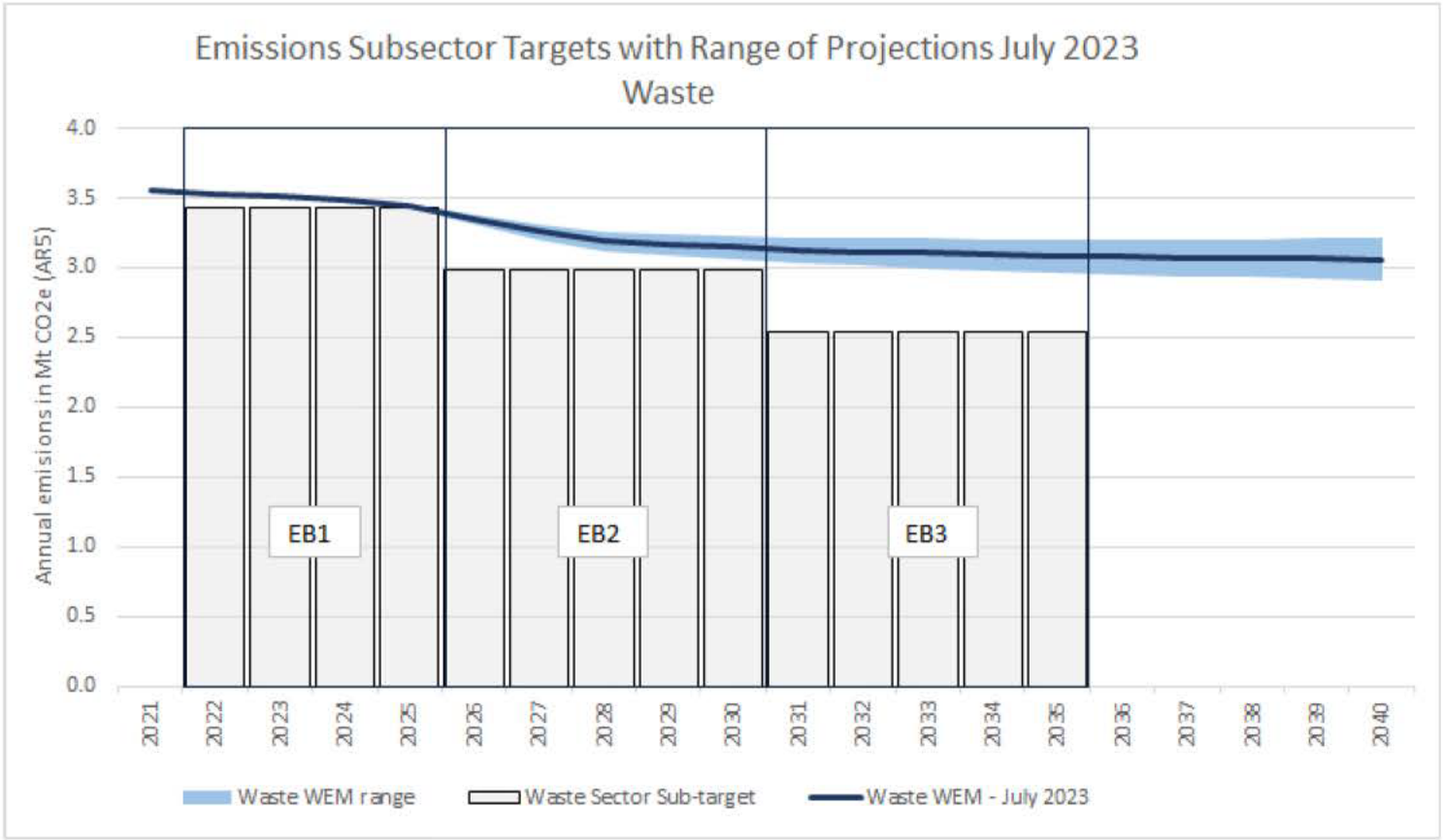
Transport



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
Transport	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	65.9	76.0	56.8	not set
Projections 2023 - existing measures	56.3	69.3	65.2	57.1
Projections range	56.2 to 56.3	68.4 to 69.9	63.0 to 67.0	53.3 to 60.8
Difference to Target -ve is below; red and highlight is above	-9.6	-6.7	**8.4**	
Difference to Target range	-9.7 to -9.6	-7.6 to -6.1	6.2 to 10.2	

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.

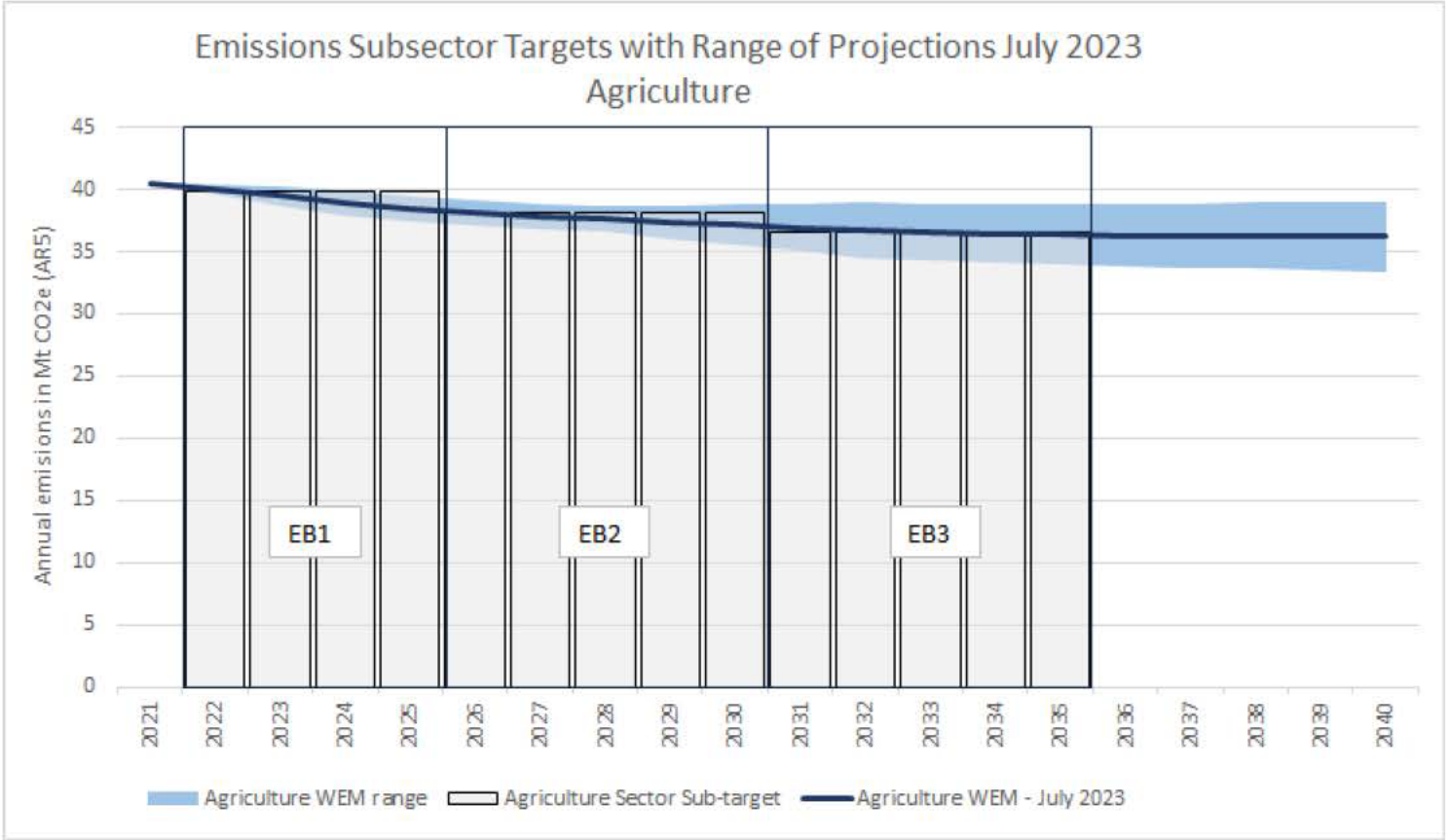
Waste



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
Waste	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	13.7	14.9	12.7	not set
Projections 2023 - existing measures	14.0	16.1	15.5	15.3
Projections range	13.9 to 14.0	15.8 to 16.4	15.0 to 16.1	14.7 to 16.0
Difference to Target -ve is below; red and highlight is above	0.3	1.2	2.8	
Difference to Target range	0.2 to 0.3	0.9 to 1.6	2.3 to 3.3	

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.

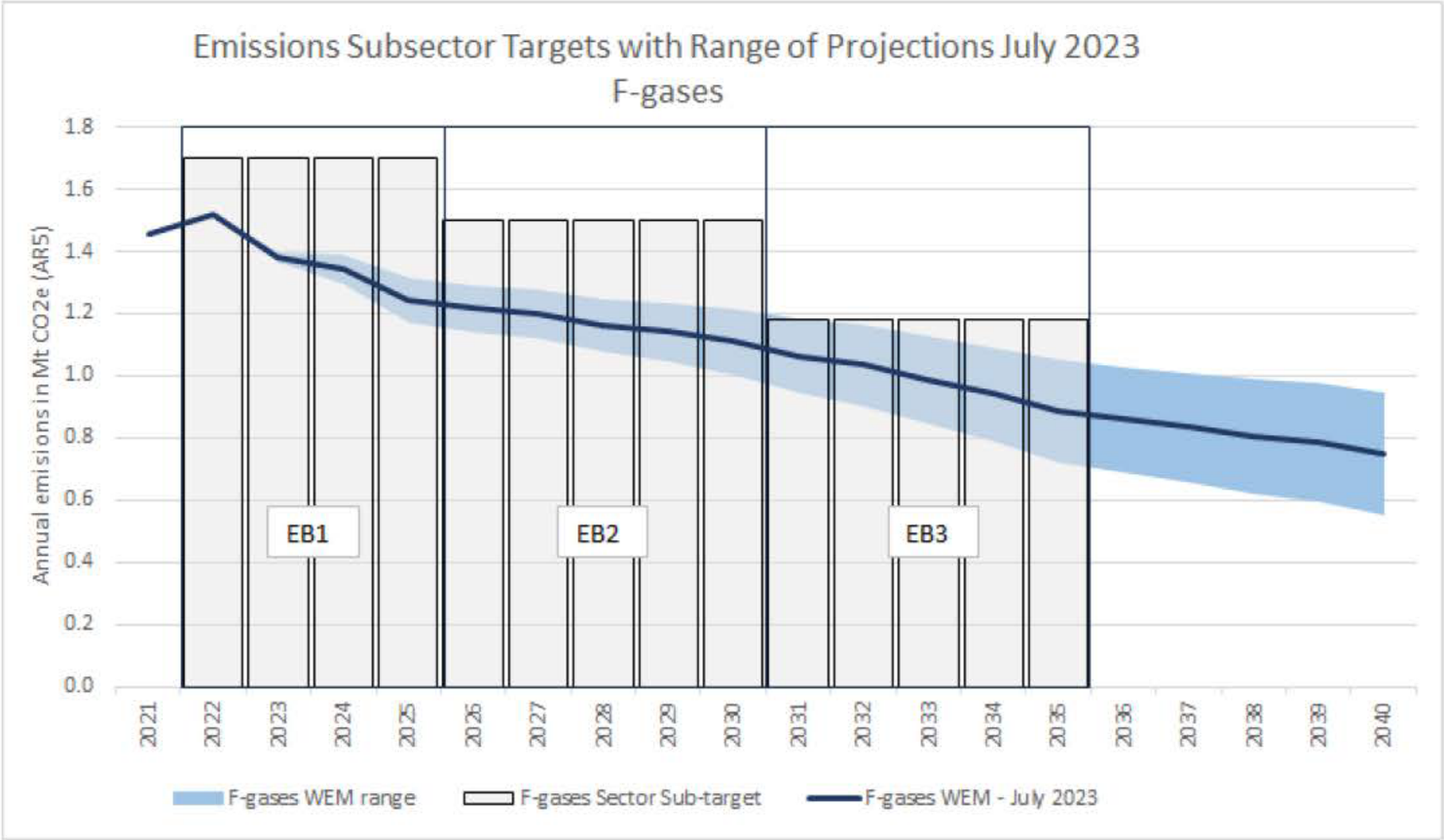
Agriculture (initial)



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
Agriculture	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	159.4	191.0	183.0	not set
Projections 2023 - existing measures	156.8	188.1	183.0	181.3
Projections range	153.5 to 160.1	182.1 to 194.2	171.8 to 194.1	168.0 to 194.6
Difference to Target -ve is below; red and highlight is above	-2.6	-2.9	0.0	
Difference to Target range	-5.9 to 0.7	-8.9 to 3.2	-11.2 to 11.1	

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.

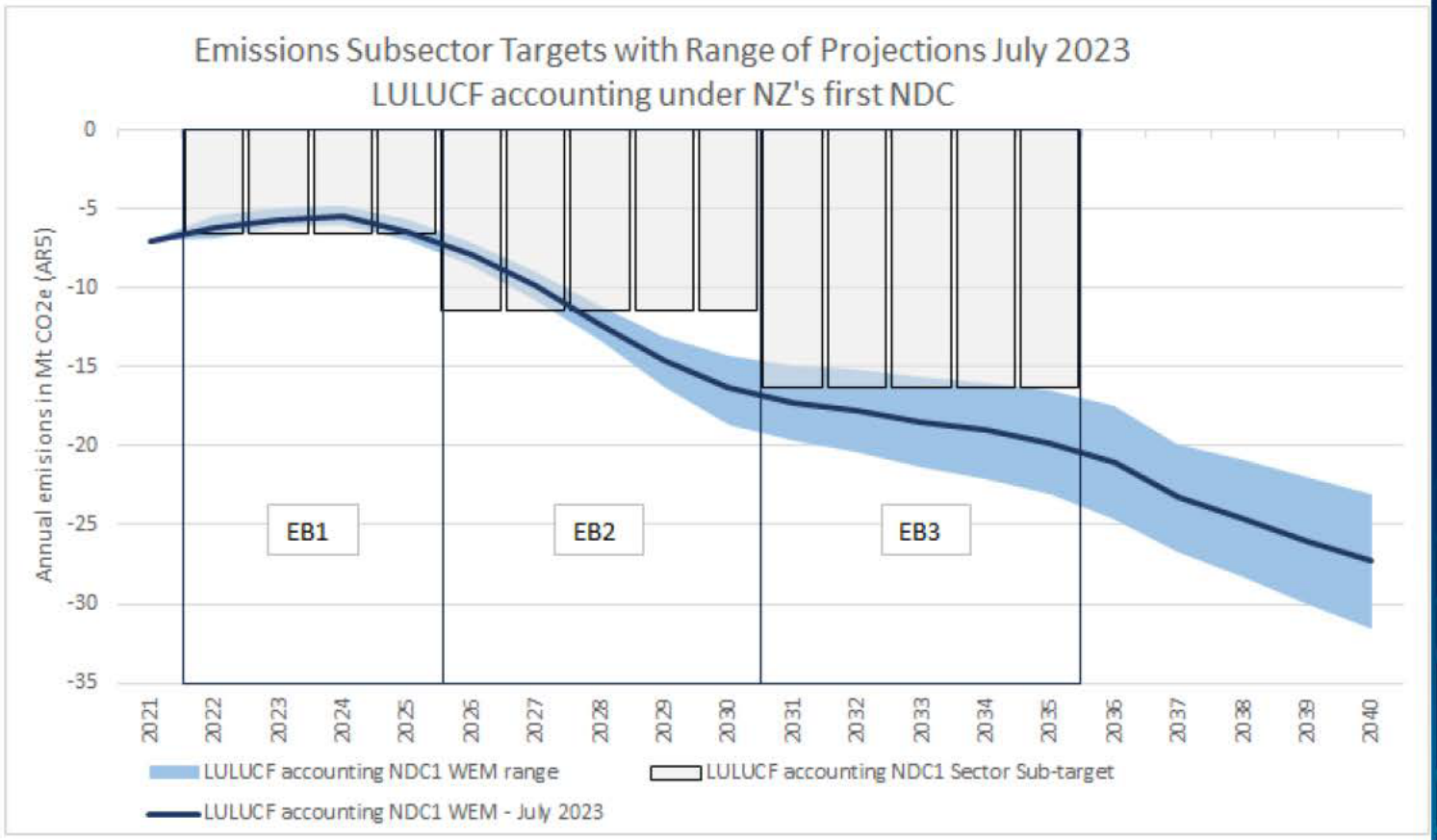
F-gases



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
F-gases	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	6.8	7.5	5.9	not set
Projections 2023 - existing measures	5.5	5.8	4.9	4.0
Projections range	5.4 to 5.6	5.4 to 6.3	4.2 to 5.6	3.1 to 5.0
Difference to Target -ve is below; red and highlight is above	-1.3	-1.7	-1.0	
Difference to Target range	-1.4 to -1.2	-2.1 to -1.2	-1.7 to -0.3	

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.

LULUCF



Emissions in Mt CO2e (AR5)	Emissions Budget and Period			
LULUCF accounting used for NDC1	EB1 2022-2025	EB2 2026-2030	EB3 2031-2035	EB4* 2036-2040
Sector Sub-target	-26.4	-57.2	-81.6	not set
Projections 2023 - existing measures	-23.8	-60.9	-92.3	-122.2
Projections range	-26.0 to -20.8	-67.5 to -54.6	-106.4 to -78.2	-141.3 to -103.3
Difference to Target -ve is below; red and highlight is above	2.6	-3.7	-10.7	
Difference to Target range	0.4 to 5.6	-10.3 to 2.6	-24.8 to 3.4	

Note: For the first four-five years soil emissions associated with planting exceed the carbon sequestered by seedling growth, which means that the sequestration associated with afforestation is primarily realised in EB2+. [This also means that the EB1 sector sub target is not a good indicator for the progress of LULUCF removals]

Note: Figures have been rounded, and discrepancies may occur between sums of component items and totals. All calculations are done using unrounded figures.