

ASCOR



Grantham  
Research Institute  
on Climate Change  
and the Environment

# Assessing Sovereign Climate- related Opportunities and Risks (ASCOR)

## Explainer Series

April 2025



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# ASCOR



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## ASCOR Explainer Series

### Introduction



# What is ASCOR?

Assessing Sovereign Climate-related Opportunities and Risks



ASCOR is an **investor-led** project.



It **assesses countries** on their progress managing the **low-carbon transition** and the **impacts of climate change**.



The **methodology and results** are available online at [transitionpathwayinitiative.org/ascor](https://transitionpathwayinitiative.org/ascor).

# ASCOR

## ASCOR supporters

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IIGCC  
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Climate Change

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PRI | Principles for  
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## What value does ASCOR offer?

Tailored to investor needs, ASCOR aims to inform investors' decision-making on sovereign bonds.

- **Comprehensive**  
The framework has broad coverage of the most important ways in which countries are managing climate change.
- **Financially relevant**  
Although ASCOR is not a financial risk tool, it evaluates countries' policies to manage transition and physical risks.
- **Facilitates engagement**  
ASCOR informs investor dialogue with sovereigns and provides issuers with an independent assessment to showcase their progress.

# Design principles of ASCOR

ASCOR results are not aggregated into a country 'score' to prioritise a nuanced picture of sovereign performance.



Use of public data



Consistent Yes/No questions and quantitative metrics



Transparent methodology



Avoid unnecessarily adding to sovereigns' reporting burden



National-level



Focus on how countries manage climate risks and opportunities



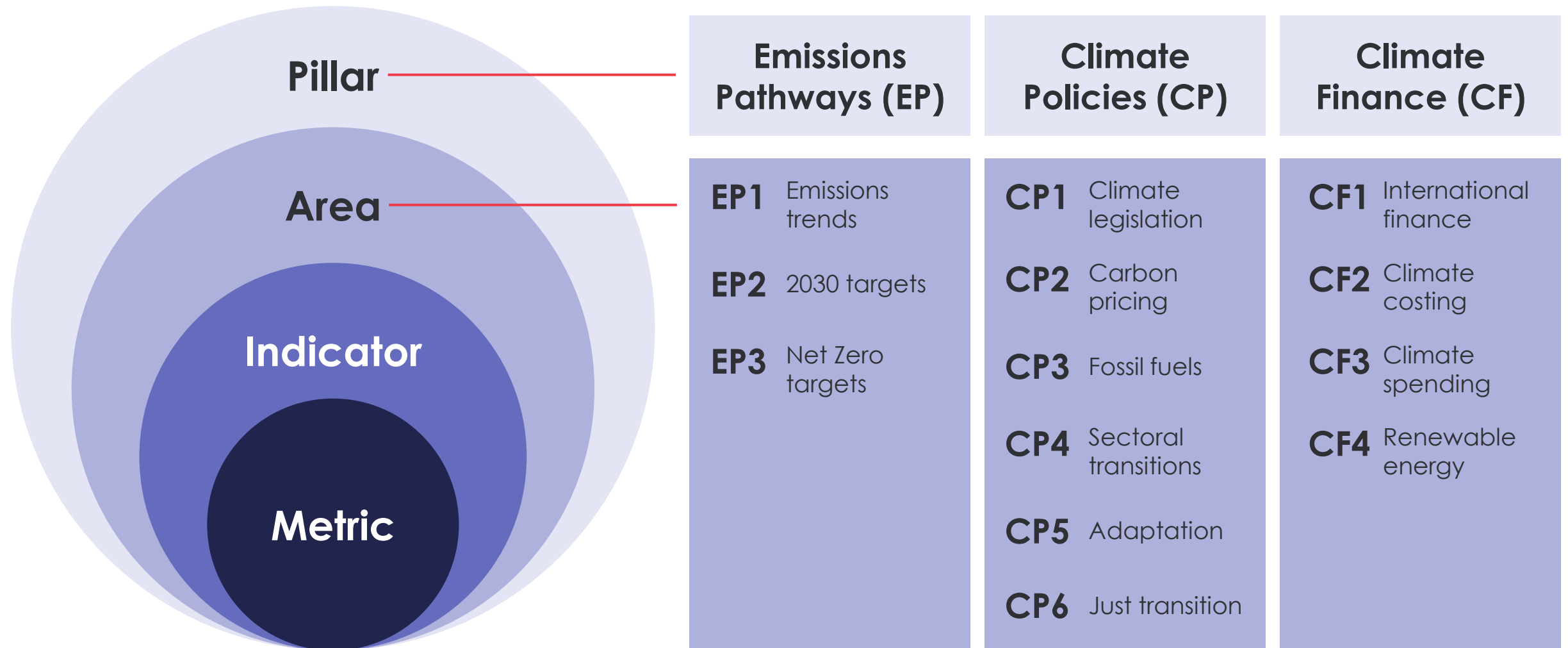
Common but differentiated responsibilities

**High-income countries** are assessed on all ASCOR indicators.

**Middle-income countries** are exempt from the *highest ambition* indicators.

**Low-income countries** are fully exempt from the mitigation areas.

# Structure of the ASCOR framework



# What to expect from the explainer series?



Each area in the ASCOR framework is briefly explained by an Analyst from the TPI Centre's sovereign research team in a short video.



The videos introduce the areas and specify their relevance to country climate performance.



The videos summarise how each area is assessed and what the key findings are.



This concise, area-specific content will enable a deeper understanding of assessment results.



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## ASCOR Explainer Series

Area EP1. Emissions trends



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to emissions trends
2. How does ASCOR assess emissions trends?
3. Results of 2024 assessments

# 1. Introduction to emissions trends

# Why does ASCOR assess emissions trends?



**Rapidly reducing emissions is key to achieving climate stability** and is a central goal of the Paris Agreement.



According to the United Nations Environment Programme ([UNEP](#)), **global GHG emissions must fall by 42% from 2019 levels by 2030** to meet the 1.5°C temperature goal.



Historical **emissions trends show the impact of countries' recent mitigation actions**, which can suggest the level of commitment to future action.



**Per-capita and GDP-adjusted emissions trends complement absolute emissions**, reflecting a country's socioeconomic conditions.



**Different emissions categories reveal complementary aspects of a country's emissions profile**, together providing a more complete picture.

# What are the categories of GHG emissions we assess?



**Production-based emissions, excluding land use, land use change and forestry (LULUCF):** Emissions generated within a country's territorial boundaries.



**Production-based LULUCF emissions:** Emissions generated or sequestered due to changes in carbon sinks related to land management.



**Consumption-based emissions excluding LULUCF:** Emissions associated with the production of goods consumed within a country, regardless of where the emissions occur.



**Absolute:** Total emissions from the relevant emissions boundary.



**Per capita intensity:** Absolute emissions divided by population.



**Per GDP intensity:** Absolute emissions divided by gross domestic product (GDP) adjusted for purchasing power parity (PPP).

## 2. How does ASCOR assess emissions trends?

# Indicators and metrics



**EP1a. Has the country improved its emissions profile over the past 5 years?**

EP1ai. What is the country's most recent emissions level?

EP1a.ii. What is the country's most recent emissions trend?



**EP1b. Is the most recent 5-year trend aligned with meeting the country's 1.5°C benchmark?**



**EP1c. Is the most recent 5-year trend aligned with meeting the country's 1.5°C fair share?**



# How does ASCOR assess emissions trends?



ASCOR assesses trends in each category of GHG emissions over the last year, three years and five years.



If two-thirds of the 5-year trends are decreasing, a country is assessed as having improved its emissions profile.



To evaluate whether these trends align with 1.5°C, emissions are extrapolated linearly to 2030 and compared with country-specific 1.5°C cost-effective and fair share benchmarks.



ASCOR uses emissions data from PRIMAP and the Global Carbon Atlas to enable comparisons across countries. National 1.5°C cost-effective benchmarks are drawn from Climate Analytics.

# 3. Results of 2024 assessments

# 2024 assessment results

EP 1.a Has the country improved its emissions profile over the past 5 years?



EP 1.b Is the most recent 5-year trend aligned with meeting the country's 1.5°C benchmark?



EP 1.c Is the most recent 5-year trend aligned with meeting the country's 1.5°C fair share?

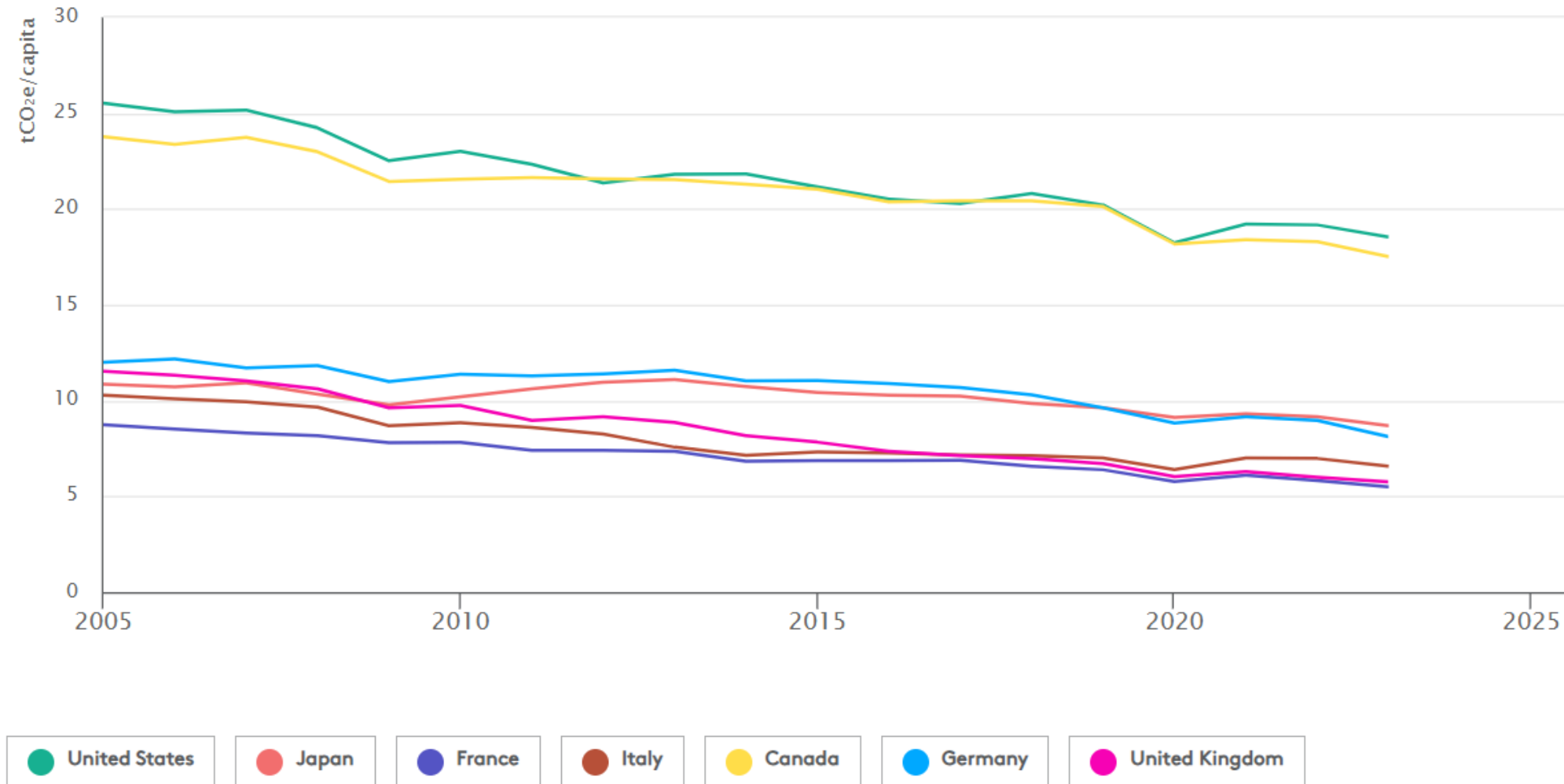


Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.


# ASCOR Emissions Trends

Per capita production emissions in G7 countries



# ASCOR Emissions Trends

Absolute production emissions in Estonia

 **a. Has the country improved its emissions profile over the past 5 years?**

i. What is the country's most recent emissions level?

Absolute

▼

12.16 MtCO<sub>2</sub>e

Production - excluding LULUCF

▲

Production - excluding LULUCF

Production - only LULUCF

Consumption - excluding LULUCF

ii. What is the country's most recent emissions trend?

5-year trend

▼

-9.48%

Source (2023).

Source (2023).

# ASCOR Emissions Trends

Per GDP intensity production emissions in Estonia



a. Has the country improved its emissions profile over the past 5 years?

i. What is the country's most recent emissions level?

[Source \(2023\).](#)

Intensity per GDP-PPP ▼

Production - excluding L ▼

**181.62 tCO<sub>2e</sub>/Million I US\$**

ii. What is the country's most recent emissions trend?


[Source \(2023\).](#)

3-year trend ▼

**-5.32%**

# ASCOR Emissions Trends

Per capita intensity production emissions in Estonia

 **a. Has the country improved its emissions profile over the past 5 years?**

i. What is the country's most recent emissions level?

Intensity per capita ▼

Production - excluding L ▼

**8.9 tCO<sub>2</sub>e/capita**

ii. What is the country's most recent emissions trend?

year-on-year trend ▼

**-14.48%**

[Source \(2023\).](#)

[Source \(2023\).](#)

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## ASCOR Explainer Series

Area EP2. 2030 targets





# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to 2030 targets
2. How does ASCOR assess 2030 targets?
3. Results and emerging good practices

# 1. Introduction to 2030 targets

# Why does ASCOR assess 2030 targets?



Emissions reduction targets are anchored in the **Paris Agreement** (Article 4) in the form of Nationally Determined Contributions (NDCs).



The alignment of 2030 targets with the temperature goals of the Paris Agreement is important to limit global warming to 1.5°C in a **credible and orderly way**.



2030 targets **set a strategic direction** for climate action and establish **medium-term ambition**.



Assessing **unconditional** targets and the reliance on **carbon credits** sheds light on intended direct and independent actions taken by national governments **to decarbonise domestic emissions**.



The **level of ambition** of national targets can be benchmarked against 1.5°C based on:

1. **cost-efficient modelling** or
2. **equity principles** resulting in **fair share allowances**

## 2. How does ASCOR assess 2030 targets?

# Indicators and metrics



**EP2a. Has the country set a 2030 emissions reduction target?**

EP2ai. What is the targeted reduction relative to 2019 emissions?



**EP2b. Does the country specify whether and how much carbon credits may contribute to its 2030 target?**

EP2bi. What percentage of the 2030 target will be met using carbon credits?



**EP2c. Is the country's 2030 target aligned with its 1.5°C benchmark?**

EP2ci. What is the degree of alignment with its 1.5°C benchmark?



**EP2d. Is the country's 2030 target aligned with its 1.5°C fair share?**

EP2di. What is the degree of alignment with its 1.5°C fair share?

# How does ASCOR assess 2030 targets?



ASCOR assesses the existence of **unconditional targets**, their reliance on **carbon credits**, and their **alignment with 1.5°C**. All indicators include quantitative metrics.



To align with **common but differentiated responsibilities**, we complement cost-efficient benchmarks with fair share allowances that account for historical responsibility, financial capability and population.

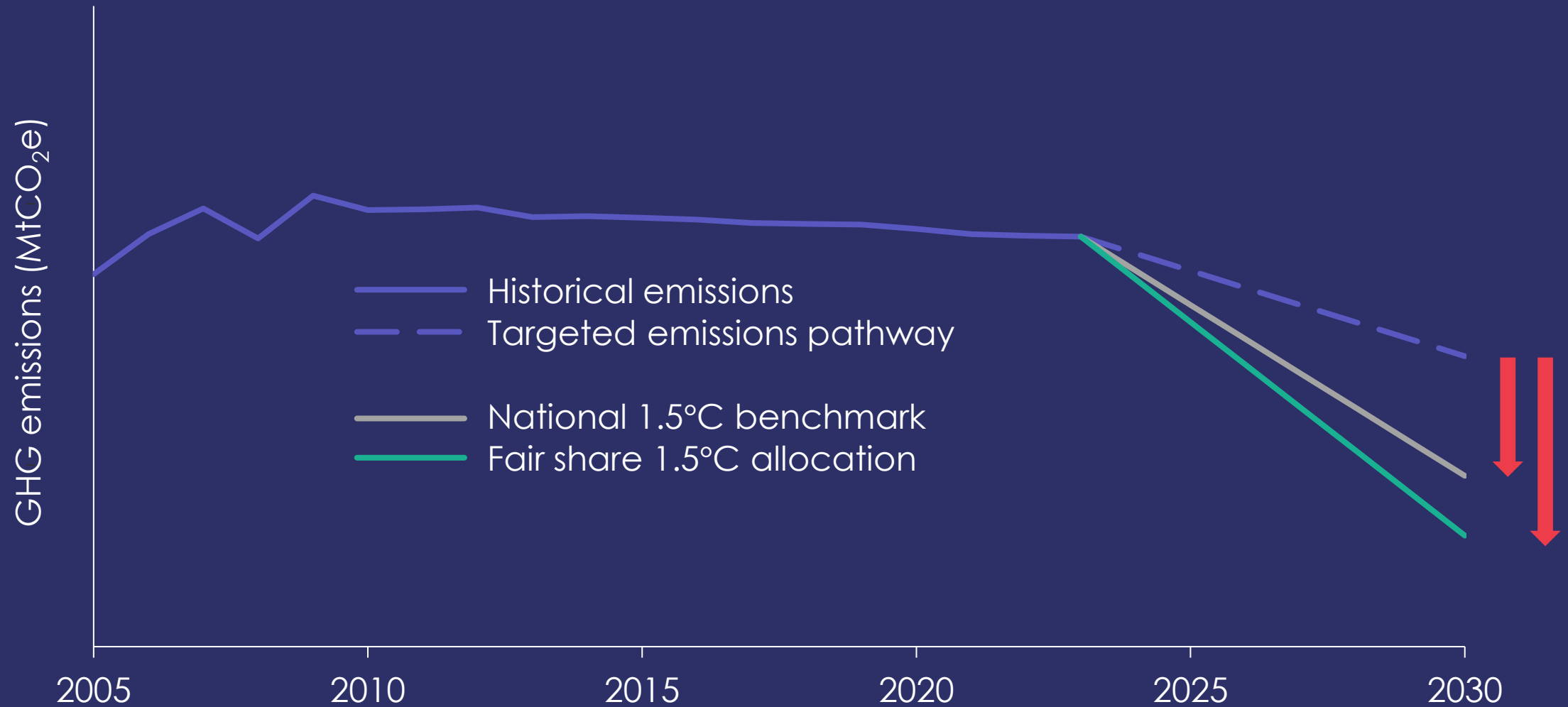


We assess national commitments which represent **ambition at the sovereign level**.



When assessing this area, we primarily rely on [NDCs](#) as well as legislative and executive documents. For the quantitative metrics, we use data from a range of sources (e.g. [World Bank](#), [United Nations \(UN\)](#), [Climate Analytics](#)).

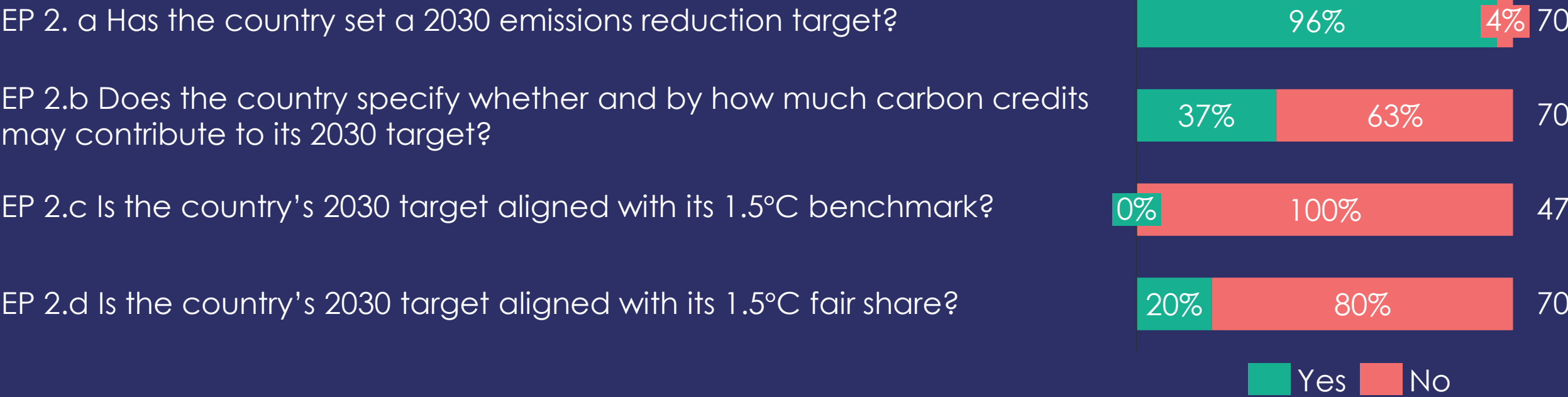
# Country 2030 pathway





# 3. Results and emerging best practice

# 2024 assessment results



Note: The number of countries assessed against each indicator is specified next to each bar.

# Emerging good practices



Two countries plan to decrease their emissions by over 50% in 2030 from 2019.

- [Denmark](#) aims to reduce emissions by 55% and [Barbados](#) by 73%.



Targets should cover **all sectors** of an economy and **all greenhouse gases** (GHGs). The country should **transparently** disclose the target's sectoral and GHG coverage.

- **More and more countries** use tables to transparently report on coverage and follow Article 4.8 of the Paris Agreement.



If a country plans to use carbon credits to achieve its target, it should transparently quantify this reliance.

- [Japan](#) states in its NDC that it plans to use carbon credits to meet at most 15% of its target.



Ambitious targets should come with **adequate policies** leading to **emissions reductions**.

- [Austria](#), [Denmark](#) and [Sweden](#) have decreased their absolute emissions over the last five years while being assessed relatively well across the Climate Policies pillar.

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## ASCOR Explainer Series

Area EP3. Net zero targets



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

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# Content

1. Introduction to net zero targets
2. How does ASCOR assess net zero targets?
3. Results of 2024 assessments

# 1. Introduction to net zero targets

# Why does ASCOR assess net zero targets?



To meet the **Paris Agreement** goal of limiting global warming to 1.5°C, CO<sub>2</sub> emissions must **reach net zero by 2050**.



The higher historical responsibility and financial capability of **developed countries requires them to take the lead** on meeting net zero by 2050 or earlier.



Net zero targets set a **strategic direction** for national climate action, demonstrate long-term ambition and complement short- or medium-term targets.



According to [Intergovernmental Panel on Climate Change \(IPCC\)](#), emissions of other greenhouse gases (GHGs), particularly methane, must also undergo **deep reductions** but not necessarily to zero.



## 2. How does ASCOR assess net zero targets?

# Indicators and metrics



**EP3a. Has the country set a net zero CO<sub>2</sub> target?**

EP3ai. In what year is the net zero CO<sub>2</sub> target set?



**EP3b. Is the country's net zero target aligned with a global 1.5°C scenario?**



**EP3c. Is the country's net zero target aligned with an accelerated deadline for high-income countries?**

# How does ASCOR assess net zero targets?



ASCOR assesses the **existence** of net zero targets and the **alignment** of target years against two benchmark 'deadlines' (2050 and 2045).



To align with **common but differentiated responsibilities**, low- and middle-income countries are exempt on the two indicators that assess alignment against these deadlines.



Our analysis assesses national commitments that involve **a high level of accountability** as legislative or executive document or an official submission to the United Nations Framework Convention on Climate Change (UNFCCC).

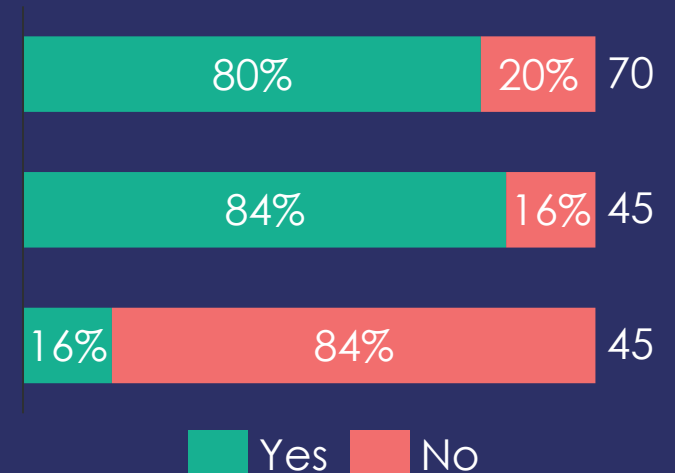
# 3. Results of 2024 assessments

# 2024 assessment results

EP 3.a Has the country set a net zero CO<sub>2</sub> target?

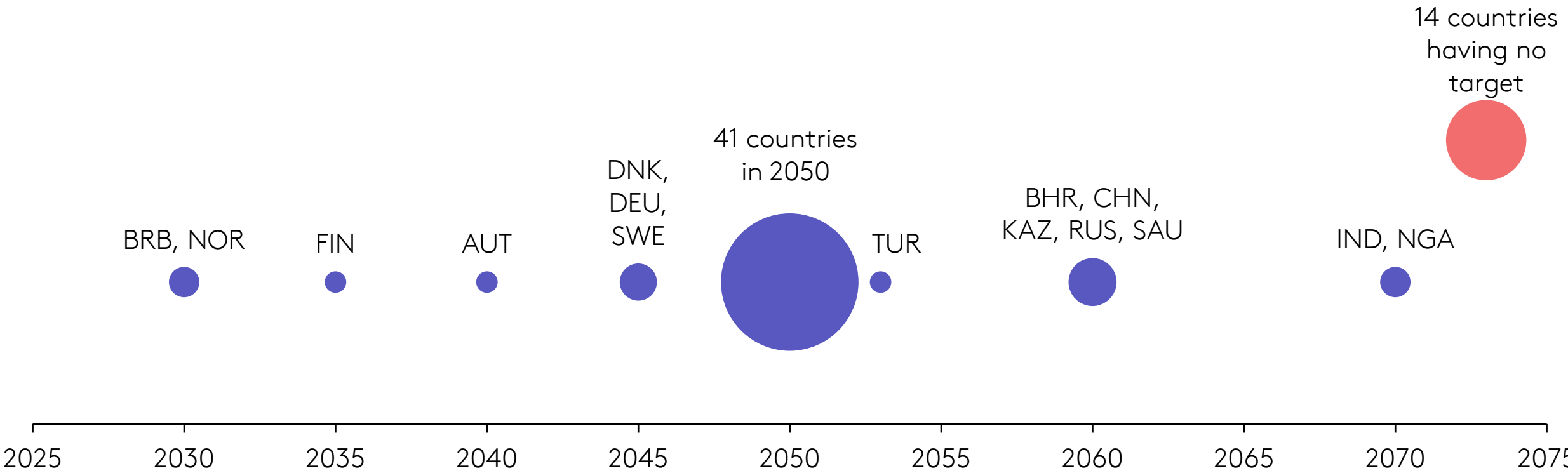
EP 3.b Is the country's net zero CO<sub>2</sub> target aligned with a global 1.5°C scenario?

EP 3.c Is the country's net zero CO<sub>2</sub> target aligned with an accelerated deadline for high-income countries?



Note: The number of countries assessed against each indicator is specified next to each bar.

# Net zero target years



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## ASCOR Explainer Series

Area CP1. Climate legislation



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.



# Content

1. Introduction to climate legislation
2. How does ASCOR assess climate legislation?
3. Results and emerging good practices

# 1. Introduction to climate legislation

# Why does ASCOR assess climate legislation?



Climate laws can help **deliver mitigation and adaptation** outcomes.



They establish a **legal, regulatory and institutional framework** for national climate policy.



Climate laws enable **policy continuity** as they are difficult to amend.



They set **accountability mechanisms** for climate-related obligations.

# What is a climate framework law?



Common characteristics can be used to define a [climate framework law](#):



It sets a **strategic direction** for national climate change policy.



It is passed by the **legislative branch** of government (with exceptions for some political systems).



It **sets an obligation**, for example meeting a national target or developing a climate strategy.

## 2. How does ASCOR assess climate legislation?

# Indicators



CP1a. Does the country have a framework climate law or equivalent?



CP1b. Does the country's framework climate law specify key accountability elements?

# How does ASCOR assess climate legislation?



ASCOR assesses whether a country has passed a law that qualifies as a **climate framework law or equivalent** (e.g. an amended environmental law).



We also assess if the climate framework law specifies the following **accountability elements**:



Who is accountable to whom? (e.g. accountability of executive to parliament)



How is compliance assessed? (e.g. monitoring and reporting)



What happens in case of non-compliance? (e.g. parliamentary intervention, judicial orders)

# 3. Results and emerging good practices



# 2024 assessment results

CP 1.a Does the country have a framework climate law or equivalent?



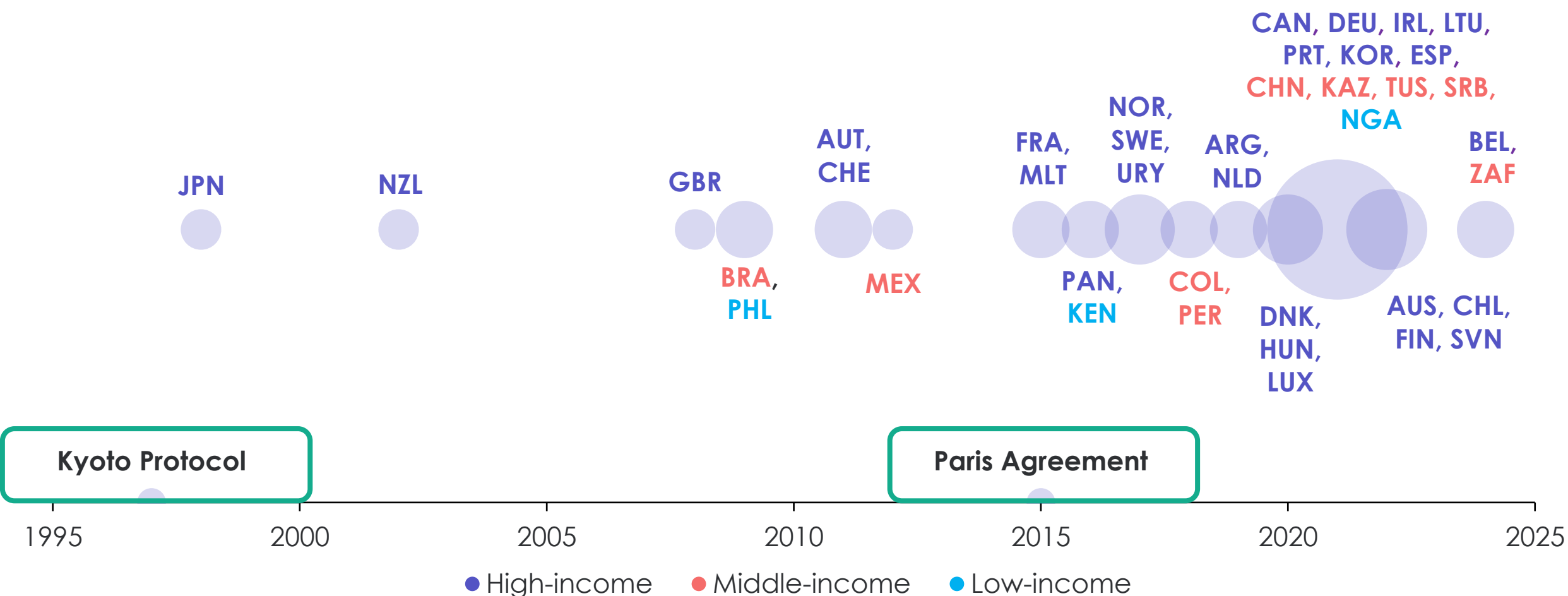
CP 1.b Does the country's framework climate law specify key accountability elements?



Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Climate framework laws adopted from 1998 to 2024



# Emerging good practices



National climate action needs a direction for **adaptation as well as mitigation**.

- [Japan](#) and [Germany](#) have dedicated laws for adaptation.



Establishing **accountability of the government** itself strengthens national commitments.

- [New Zealand](#), [Nigeria](#) and [South Africa](#), among others, specify action to be taken if the government fails to meet its national mitigation targets.

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## ASCOR Explainer Series

Area CP2. Carbon pricing



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

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# Content

1. Introduction to carbon pricing
2. How does ASCOR assess carbon pricing?
3. Assessment results of 2024

# 1. Introduction to carbon pricing

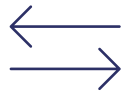
# What is carbon pricing?



Carbon pricing is an instrument that **internalises the costs of greenhouse gas (GHG) emissions** by applying a price on the CO<sub>2</sub> released by an entity.



In line with the “**polluter pays**” **principle**, entities that rely on fossil fuels and emit GHGs pay for the social and environmental costs of their emissions.



A price on carbon sends a **clear signal to economic actors** to avoid carbon-intensive activities and shift to cleaner ones.



A carbon price can be implemented through a direct tax on emissions (**carbon tax**) or by setting a cap and a market for emissions (**emissions trading system (ETS)**).



# Why does ASCOR assess carbon pricing?



Carbon pricing is one of the policy tools that governments may implement to **decarbonise their economies** and meet their Nationally Determined Contributions (NDC) targets.



According to the [Intergovernmental Panel on Climate Change \(IPCC\)](#), carbon pricing is key for **driving mitigation scenarios that align with 1.5°C pathways**.



Besides reducing GHG emissions in a **cost-effective and flexible way**, it can raise public revenue that may be used to finance the transition and encourage clean energy investments.

## 2. How does ASCOR assess carbon pricing?

# Indicators and metrics



**CP2a. Does the country have a carbon pricing system?**



**CP2b. Does the country's carbon pricing system cover at least 50% of national greenhouse gas emissions?**

CP2bi. What percentage of national greenhouse gas emissions is covered by an explicit carbon price?



**CP2c. Is the carbon price at least at the floor of a global carbon price corridor aligned with the Paris Agreement?**

CP2ci. What is the country's most recent explicit carbon price?

# How does ASCOR assess carbon pricing?



ASCOR assesses if countries implement carbon pricing (i.e. a carbon tax or ETS) at the subnational, national or supranational level.



We assess the percentage share of national GHG emissions covered by a carbon price and the alignment of the carbon price with a Paris-aligned threshold (US\$75 per tCO<sub>2</sub>e in 2023).



To align with the principle of common but differentiated responsibilities, low-income countries are exempt on this area and middle-income countries are exempt on one indicator.



When assessing this area, we rely on legislative and executive documents, the [World Bank Carbon Pricing Dashboard](#), the [Organisation for Economic Cooperation and Development](#) and the [International Carbon Action Partnership](#).

# 3. Assessment results of 2024

# 2024 assessment results

CP 2.a Does the country have a carbon pricing system?



CP 2.b Does the country's carbon pricing system cover at least 50% of national greenhouse gas emissions?



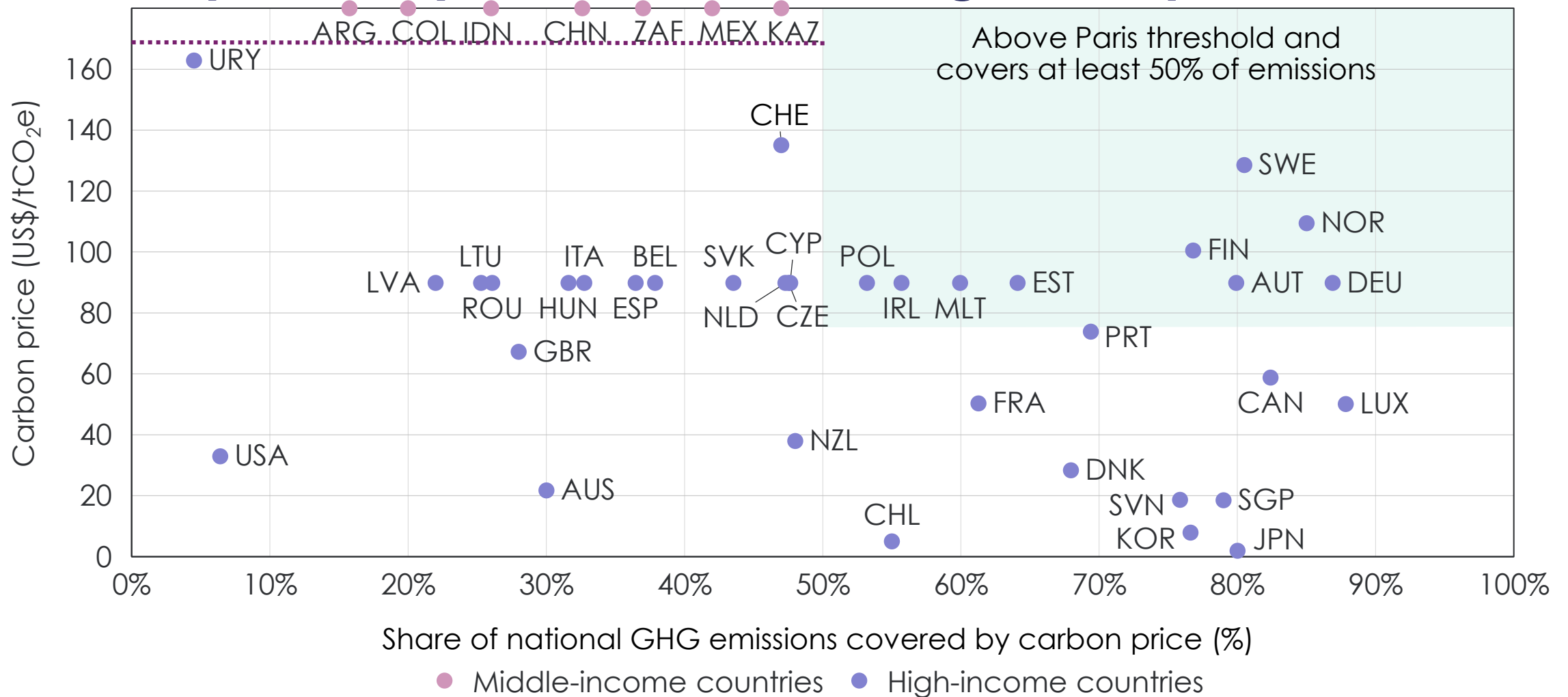
CP 2.c Is the carbon price at least at the floor of a global carbon price corridor aligned with the Paris Agreement?



Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Carbon prices by emission coverage and price level



**Source:** Authors' analysis based on data from [European Environment Agency](#), [International Carbon Action Partnership](#), [OECD](#), [PRIMAP](#), [World Bank Carbon Pricing Dashboard](#) and official country sources. The data reflects the most recent estimates available for each country. For further information on estimates and sources see [ASCOR methodology note](#).

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# ASCOR Explainer Series

Area CP3. Fossil fuels





# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

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# Content

1. Introduction to fossil fuel phaseouts
2. How does ASCOR assess fossil fuel phaseouts?
3. Results and emerging good practices

# 1. Introduction to fossil fuel phaseouts

# Why does ASCOR assess the phaseout of fossil fuel subsidies and production?



The [Paris Agreement](#) states that financial flows should be consistent with low-carbon development.



According to [Intergovernmental Panel on Climate Change \(IPCC\)](#), removing fossil fuel subsidies would reduce global GHG emissions **by 10% by 2030**.



Fossil fuel subsidies are **environmentally harmful and economically inefficient** as they distort optimal prices.



The **IEA's** [Net Zero Scenario](#) implies no new coal mines and no new upstream oil and gas projects.



**Investing in fossil fuels jeopardises a pathway to 1.5°C.** Robust commitments to reduce reliance on fossil fuels send a clear signal encouraging the transition to low-carbon energy sources.

# What are fossil fuel subsidies?



No commonly agreed definition or calculation methodology



## The World Trade Organisation (WTO)

*subsidy*: either a financial contribution by a government OR any form of income/price support that confers a benefit



## Organisation for Economic Cooperation and Development (OECD)

*support*: “budgetary transfers and tax expenditures that provide a benefit or preference for fossil fuel production or consumption”



## The International Energy Agency (IEA)

*energy subsidies*: “any government action that [...] lowers the cost of energy production, raises the price received by energy producers or lowers the price paid by energy consumers”



## The International Money Foundation (IMF)

*fossil fuel subsidies*: calculated based on price gaps like the IEA's energy subsidies, but IMF makes a distinction between explicit and implicit subsidies

## 2. How does ASCOR assess fossil fuel phaseouts?

# Indicators and metrics



**CP3a. Has the country committed to a deadline by which to phase out fossil fuel subsidies?**

CP3ai. By what year has the country committed to phase out fossil fuel subsidies?



**CP3b. Does the country publish an inventory of explicit fossil fuel subsidies?**

CP3bi. How much is spent annually on explicit fossil fuel subsidies as a percentage of GDP?



**CP3c. Has the country committed not to approve new coal mines?**

CP3ci. What is the level of coal rents in the country as a percentage of GDP?



**CP3d. Has the country committed not to approve new long-lead-time upstream oil and gas projects?**

CP3di. What is the level of oil rents in the country as a percentage of GDP?

CP3dii. What is the level of natural gas rents in the country as a percentage of GDP?

# How does ASCOR assess fossil fuel phaseouts?



ASCOR assesses commitments to phase out fossil fuel subsidies and the transparency on existing fossil fuel subsidies. Additionally, we assess bans on new coal, oil and gas production.



To align with the principle of common but differentiated responsibilities, low-income countries are exempt on this area and middle-income countries are exempt on certain indicators.



Our analysis goes beyond international phaseout statements (e.g. [G7](#), [G20](#)) and instead assesses national commitments that involve a higher level of accountability.



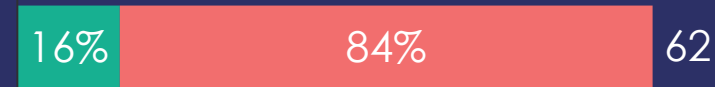
When assessing this area, we rely on legislative and executive documents, UNFCCC submissions (e.g. [Nationally Determined Contributions](#)) and [National Energy and Climate Plans](#). We use [International Monetary Fund \(IMF\)](#) and World Bank (e.g. [coal rents](#)) data for the quantitative metrics.



# 3. Results and emerging good practices

# 2024 assessment results

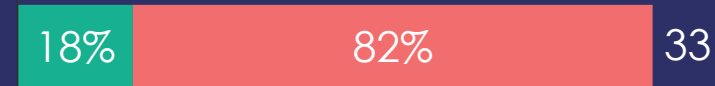
CP 3.a Has the country committed to a deadline by which to phase out fossil fuel subsidies?



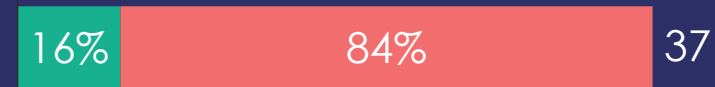
CP 3.b Does the country publish an inventory of explicit fossil fuel subsidies?



CP 3.c Has the country committed not to approve new coal mines?



CP 3.d Has the country committed not to approve new long-lead-time upstream oil and gas projects?



Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Emerging good practices



Stating phaseout commitments in **legislative or executive** documents strengthens accountability.

- **Portugal** set a deadline to phase out fossil fuel subsidies by 2030 in its [Basic Climate Law](#).



Commitments to phase out fossil fuel subsidies need to **close the loophole** of “inefficient fossil fuels subsidies” with transparent definitions.

- **Canada** established [guidelines](#) to identify “inefficient” fossil fuel subsidies.



Published **inventories** of fossil fuel subsidies allow investors to track progress of phaseout commitments.

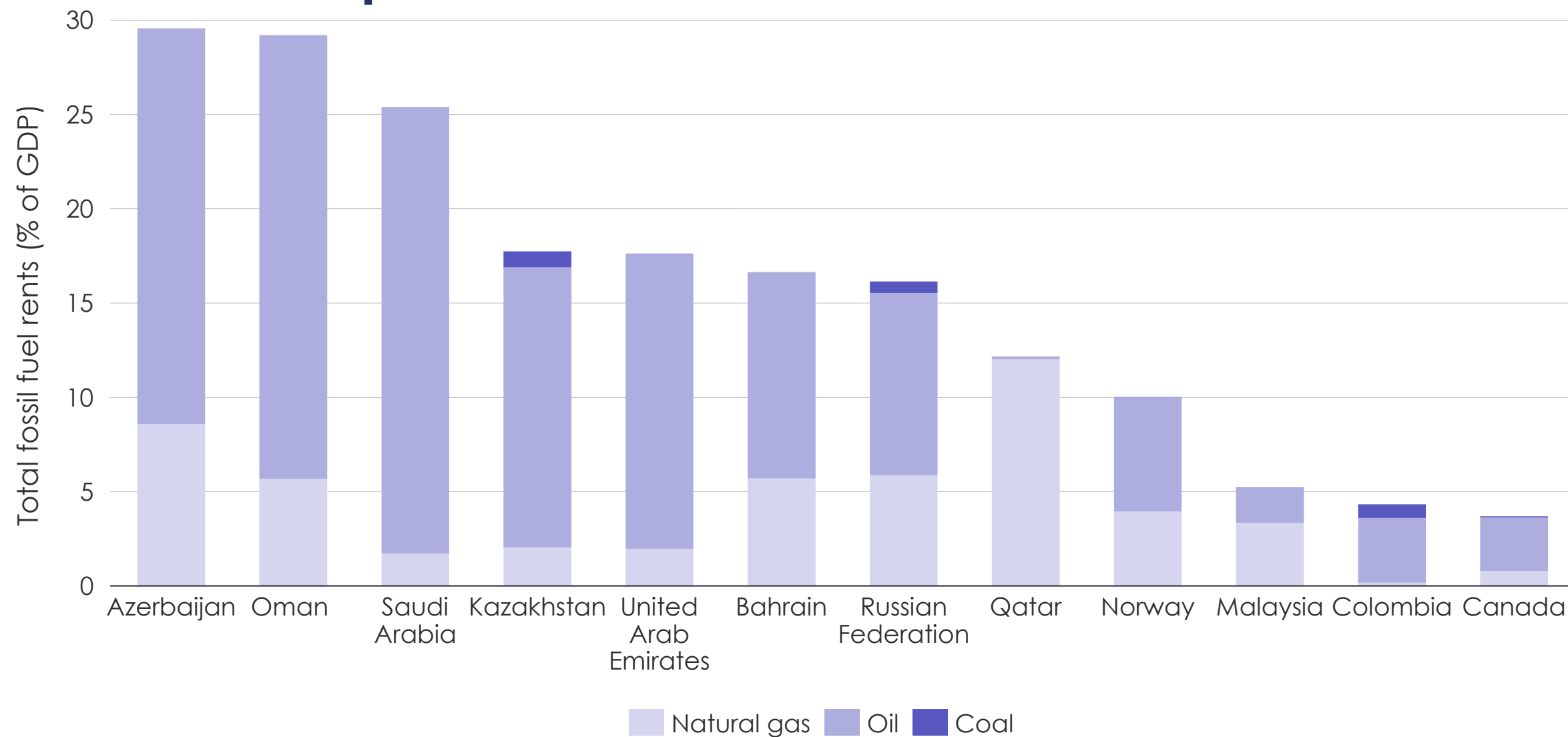
- [Italy](#) and [Germany](#) are among the countries that publish annual subsidy inventories.



**Banning fossil fuel exploration and extraction** aligns the energy sector with the low-carbon transition.

- [France](#), [Spain](#) and [Sweden](#) introduced such bans for coal, oil and gas.

# Fossil fuel-dependent economies



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## ASCOR Explainer Series

Area CP4. Sectoral transitions



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to sectoral transitions
2. How does ASCOR assess sectoral transitions?
3. Results of 2024 assessments

# 1. Introduction to sectoral transitions



# Key context of sectoral transitions



Setting **sectoral targets** in Nationally Determined Contributions (NDCs) informs investors about the credibility of economy-wide targets and provides sector-specific guidance to corporate actors.



**Energy efficiency targets and laws** are essential for achieving net zero. Energy efficiency provides some of the quickest and most cost-effective CO<sub>2</sub> mitigation options while lowering energy bills and strengthening energy security.



**Mandatory climate-related disclosure** at the corporate level can help increase transparency, accountability and sustainable practices.



According to the **International Energy Agency** ([IEA](#)), to be considered aligned with 1.5°C, the **electricity sector** must reach net zero in 2035 in “advanced economies”, 2040 in China, and 2045 in the rest of the world.



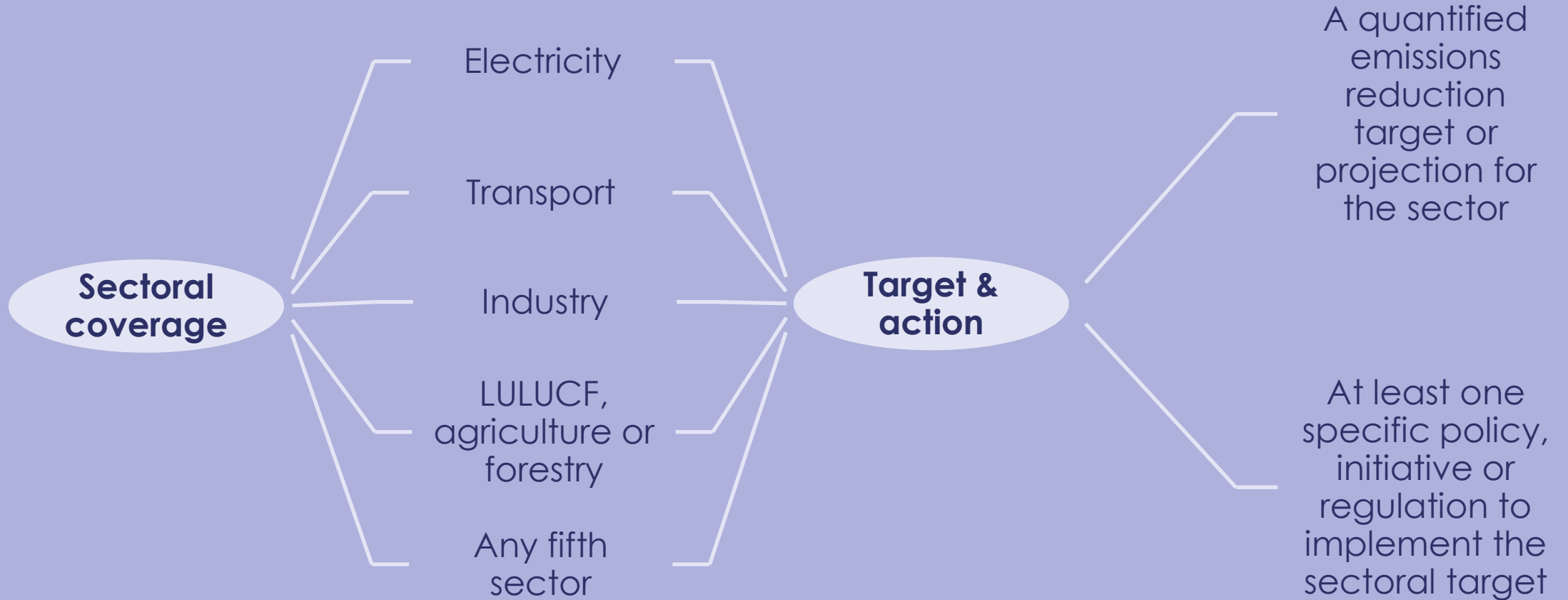
Emissions from **land use, land use change and forestry** (LULUCF) must also be reduced. The [Kunming-Montreal Global Biodiversity Framework](#) sets a **30% target for protected areas** by 2030.

## 2. How does ASCOR assess sectoral transitions?

# Indicators and metrics (1)



## CP4a. Does the country have a multi-sector climate strategy?



# Indicators and metrics (2)



**CP4b. Does the country have a law and target on energy efficiency?**

CP4bi. What is the country's energy intensity of primary energy?



**CP4c. Has the country established mandatory climate-related disclosure?**



**CP4d. Has the country set a net zero electricity target aligned with 1.5 °C?**

CP4di. What percentage of the country's electricity generation is from low carbon sources?



**CP4e. Has the country increased its protected areas as a % of total land area over the last 5 years?**

CP4ei. What is the amount of protected are in the country as a percentage of total land area?

# How does ASCOR assess sectoral transition?



ASCOR assesses a range of sectoral strategies, regulations and actions that indicate the scope of implementation of the transition.



To align with the principle of common but differentiated responsibilities, low-income countries are exempt on all indicators and middle-income on certain indicators.



When assessing this area, we rely on legislative and executive documents, UNFCCC submissions and [National Energy and Climate Plans](#). We use the [World Bank](#), the [IEA](#), and the [Integrated Biodiversity Assessment Tool](#) for the quantitative metrics.

# 3. Results of 2024 assessments

# 2024 assessment results

CP 4.a Does the country have a multi-sector climate strategy?



CP 4.b Does the country have a law and target on energy efficiency?



CP 4.c Has the country established mandatory climate-related disclosure?



CP 4.d Has the country set a net zero electricity target aligned with 1.5°C?



CP 4.e Has the country increased its protected areas as a percentage of total land area over the last 5 years?



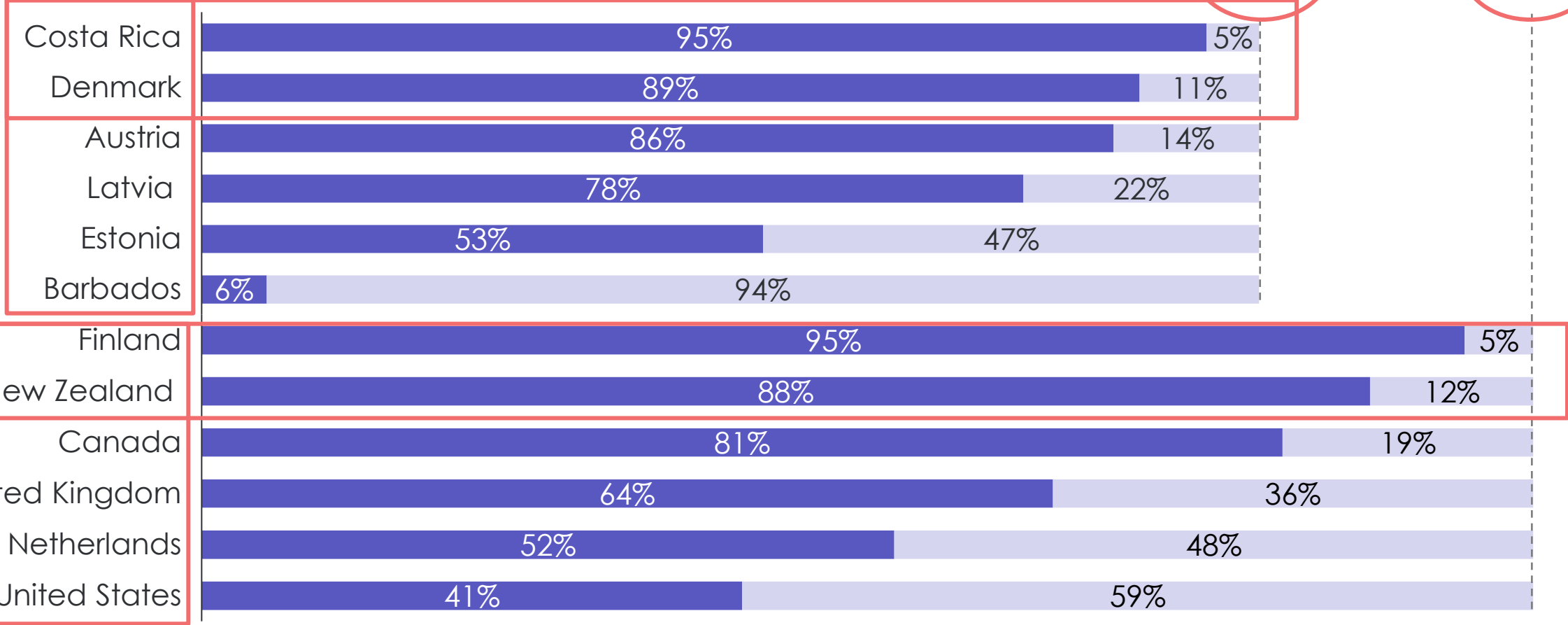
Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Progress towards net zero electricity targets

2030  
Targets

2035  
Targets



■ Current share of low-carbon sources ■ Increase needed

**Source:** Authors' analysis based on IEA for data on electricity generation from low-carbon sources. Data for Barbados is sourced from BNEP and data for Estonia from the Elering.



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# ASCOR Explainer Series

Area CP5. Adaptation



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends	<b>CP1.</b> Climate legislation	<b>CF1.</b> International climate finance
<b>EP2.</b> 2030 targets	<b>CP2.</b> Carbon pricing	<b>CF2.</b> Climate costing
<b>EP3.</b> Net zero targets	<b>CP3.</b> Fossil fuels	<b>CF3.</b> Climate spending
	<b>CP4.</b> Sectoral transitions	<b>CF4.</b> Renewable opportunities
	<b>CP5.</b> Adaptation	
	<b>CP6.</b> Just transition	

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to adaptation policy
2. How does ASCOR assess adaptation policy?
3. Results and emerging good practice

# 1. Introduction to adaptation policy

# Why does ASCOR assess adaptation policy?



All countries, especially those most vulnerable to climate change, need to **implement adaptation measures** to plan for and respond to extreme weather events.



National adaptation policies **demonstrate a country's readiness** for extreme weather events.



Climate risk assessments evaluate national climate impacts and can help **identify adaptation priorities** that build a more accurate risk profile of sovereign issuers.

## 2. How does ASCOR assess adaptation policy?

# Indicators



CP 5.a Has the country published a National Adaptation Plan?



CP 5.b Does the country regularly publish national climate risk assessments?



CP 5.c Has the country published a Monitoring & Evaluation report on implementing adaptation?



CP 5.d Does the country have a multi-hazard early warning system?



CP 5.e Is the country part of a sovereign catastrophe risk pool?

# How does ASCOR assess adaptation?



We assess if the country has published a National Adaptation Plan ([NAP](#)) or similar operational planning document focused on adaptation.



We analyse countries' climate risk management and policy monitoring to demonstrate national preparedness to deal with climate impacts.



We do not assess exogenous physical risk exposure metrics because this may bias the tool against lower-income countries which tend to face higher physical risks.

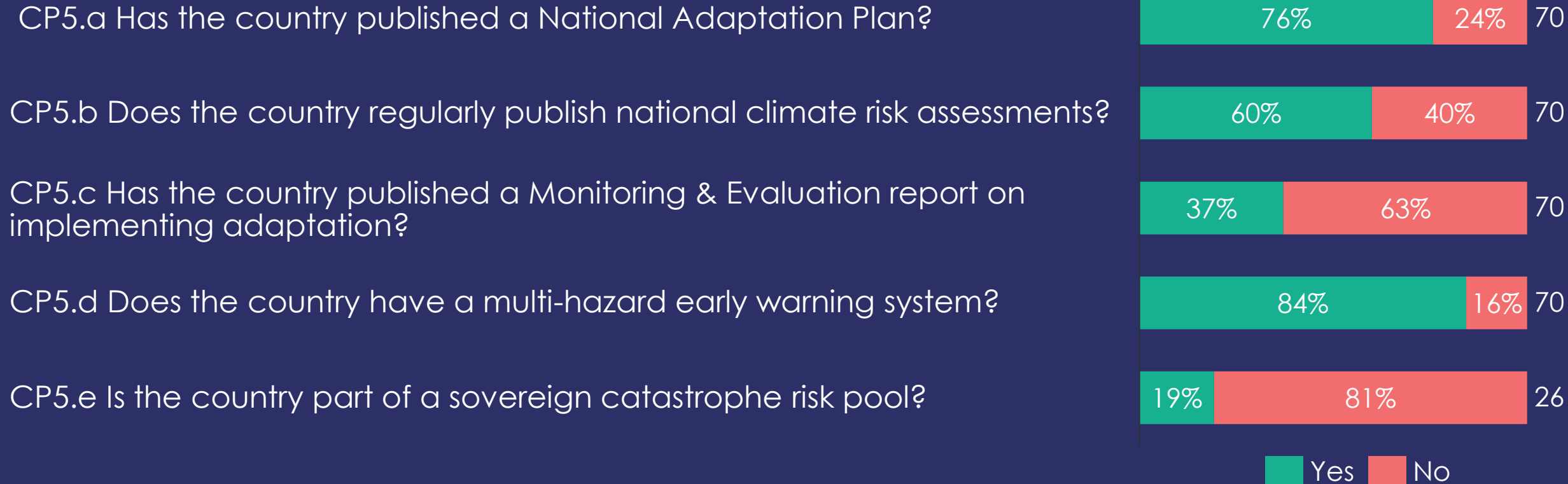


Implementing disaster risk reduction measures can help manage acute climate risks.



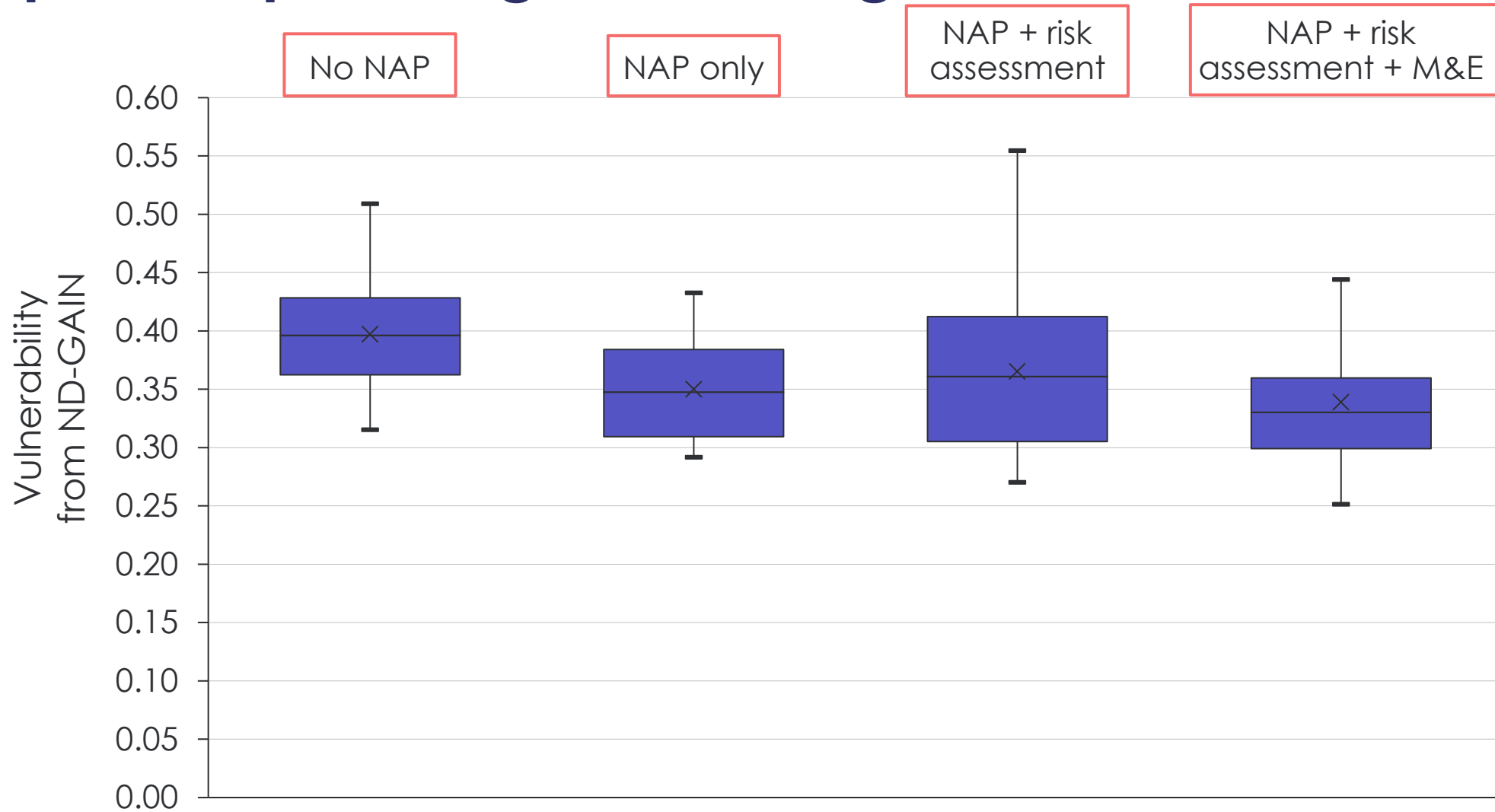
# 3. Results and emerging good practices

## 2024 assessment results



Note: The number of countries assessed against each indicator is specified next to each bar.

# Adaptation planning clusters against the ND-GAIN Index



Source: ASCOR's analysis based on data from the [ND-GAIN Index](#).

# Emerging good practice



Good planning is **legislated** and involves frequent updates given evolving climate risks.

- **Japan's** [Climate Change Adaptation Act](#) requires updated **climate risk** analysis every 5 years.



**Digital platforms** can help communicate climate risks to citizens, businesses & investors.

- [Chile](#), [Brazil](#) and [Poland](#) have online tools mapping risks, impacts or vulnerability.



Monitoring adaptation progress can be improved with **quantitative indicators**.

- **Uruguay** has a [data portal](#) showing progress on specific key performance indicators (KPIs) on adaptation.
  - E.g. by 2025, at least eight flood-prone cities will have a flood early warning system.

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## ASCOR Explainer Series

Area CP 6. Just transition



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to just transition policy
2. How does ASCOR assess just transition policy?
3. Results and emerging good practices

# 1. Introduction to just transition policy



# What is the just transition?



The **just transition** first emerged as a **labour-focused** concept to manage the benefits and impacts of environmental action on workers. It has since expanded to address various **social dimensions of inequality, vulnerability, justice and opportunity**.



Encouraging **green skills and jobs** with decent work conditions will help to meet the labour market demands of the transition.



Countries can manage the social risks and opportunities of the low-carbon transition by developing **institutional capacity for an inclusive decision-making** that addresses the specific needs of workers and communities affected by decarbonisation.



Addressing **historical injustices** (such as responsibility for greenhouse gas emissions), **human rights violations** and **loss and damage from climate change** impacts are key elements of the just transition.

# Why does ASCOR assess just transition policy?



We assess how countries are **managing the social impacts of the transition** as this can help build public support and prevent costly delays in the low-carbon transition.



The [Paris Agreement](#) calls for a **just transition of the workforce** and the creation of decent work.



Investor priorities include upholding labour and human rights in line with broader sustainability commitments and **building the social and human capital needed for the transition**.



Just transition policies **align with fairness**, one of ASCOR's main design principles.

## 2. How does ASCOR assess just transition policy?

# Indicators and metrics



**CP6a. Has the country ratified fundamental human, labour and Indigenous rights conventions?**

CP6ai. At what percentile is the country's Voice and Accountability estimate?



**CP6b. Does the country have an inclusive and institutionalised approach on just transition?**



**CP6c. Does the country have a green jobs strategy?**



**CP6d. Does the country integrate just transition into its carbon pricing?**

# How does ASCOR assess just transition?



Our analysis assesses national action to integrate just transition principles into climate policymaking.



ASCOR assesses the scope of participation and inclusion of affected stakeholders in climate policies through engagement strategies and consultation processes.



To align with the principle of common but differentiated responsibilities, low-income countries are exempt from integrating just transition into their carbon pricing (as they are exempt from the carbon pricing area).



When assessing this area, we rely on legislative and executive documents, UNFCCC submissions, [UN data](#), and [ILO data](#). We use [World Bank data](#) for the quantitative metric.

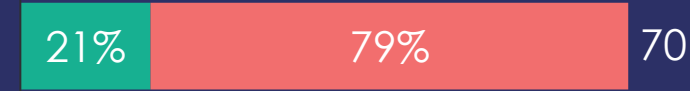
# 3. Results and emerging good practices

# 2024 assessment results

CP 6.a Has the country ratified fundamental human, labour and Indigenous rights conventions?



CP 6.b Does the country have an inclusive and institutionalised approach on just transition?



CP 6.c Does the country have a green jobs strategy?



CP 6.d Does the country integrate just transition into its carbon pricing?



Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Emerging good practices



An inclusive just transition approach can be institutionalised in a dedicated just transition **commission**.

- **Spain's** ITJ Advisory Board coordinates and monitors the implementation of the country's [Just Transition Strategy](#) through stakeholder participation at all phases.



Green job strategies allow countries to seize opportunities and address transition risks for the **workforce**.

- **Austria's** [Just Transition Action Plan](#) on Training and Reskilling sets short-, medium- and long-term actions.



Potential regressive impacts of carbon pricing can be addressed through **targeted support** mechanisms.

- The **EU Emissions Trading Scheme** allocates some revenues to the [Social Climate Fund](#) to support vulnerable households who may face higher energy costs.



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# ASCOR Explainer Series

Area CF1. International climate finance



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to international climate finance
2. How does ASCOR assess international climate finance?
3. Results and emerging good practices

# 1. Introduction to international climate finance

# Why does ASCOR assess international climate finance?



In 2009, **developed countries (donors)** pledged **\$100 billion annually by 2020** in international climate finance (ICF) **for developing nations (recipients)**.



**ICF is a cornerstone of the UN Framework Convention on Climate Change (UNFCCC)** and puts into practice the principle of common but differentiated responsibilities.



Developed countries have an obligation to “**provide financial resources to assist developing country Parties with respect to both mitigation and adaptation**” under the Paris Agreement.



ICF can serve as a vital catalyst for the **\$2.4 trillion in climate finance that developing countries** are estimated to need annually by 2030.



Assessing whether developing countries contribute a proportional share to the \$100 billion commitment can help investors **hold high-income countries accountable**.

# What is international climate finance?



## Climate finance

Refers to all finance towards actions to cut emissions, boost carbon sinks, and build resilience.



## International climate finance

Refers to the flows of finance between donor and recipient countries under the UNFCCC.

## Types of international climate finance



- **Bilateral finance:** Direct financial support from one country to another Public
- **Multilateral finance:** Funds pooled and distributed through international organizations
- **Private mobilised finance:** Investments from private entities, facilitated by public capital Private

## Ways to provide public international climate finance



- **Grants:** Non-repayable funds for climate projects
- **Concessional finance:** Loans offered on below-market terms for climate projects
- **Market-rate loans:** Standard financial loans contributing to climate goals

## 2. How does ASCOR assess international climate finance?

# Indicators and metrics



**CF1a. Does the country contribute at least a proportional share of the \$100 billion commitment to climate finance?**

CF1ai. What is the country's 3-year average climate finance contribution as a % of GDP?



**CF1b. Does the country's targeted climate finance contribution represent at least a proportional share of the \$100 billion commitment?**

CF1bi. What is the country's targeted level of international climate finance contributions as a % of GDP?



# How does ASCOR assess international climate finance?



This area assesses if donor countries' past contributions and future commitments meet their proportional share of the US\$100 billion goal.



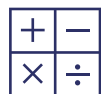
We estimate the proportional share to be 0.2% of gross domestic product (GDP) based on the ratio of US\$100 billion and the sum of the GDP of donor countries ([World Resources Institute](#)).



To assess ICF contributions, we review countries' biennial reports submitted to the UNFCCC.



To assess future ICF commitments, we rely on publicly-stated targets.



We divide past contributions and future targets by GDP to calculate the country's current and future contribution as a share of GDP.

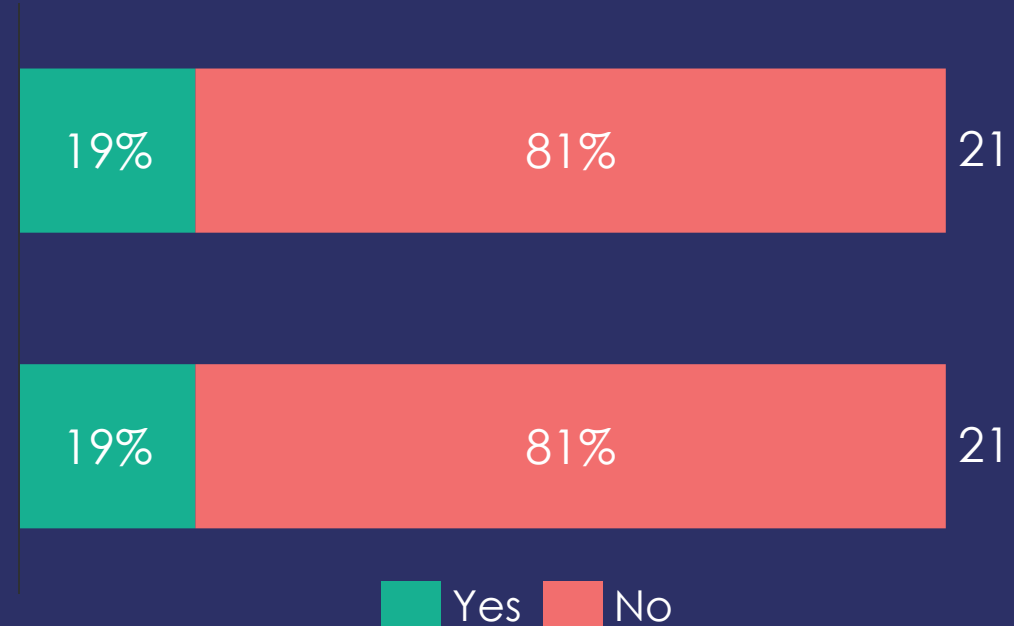
# 3. Results and emerging good practices

# 2024 assessment results

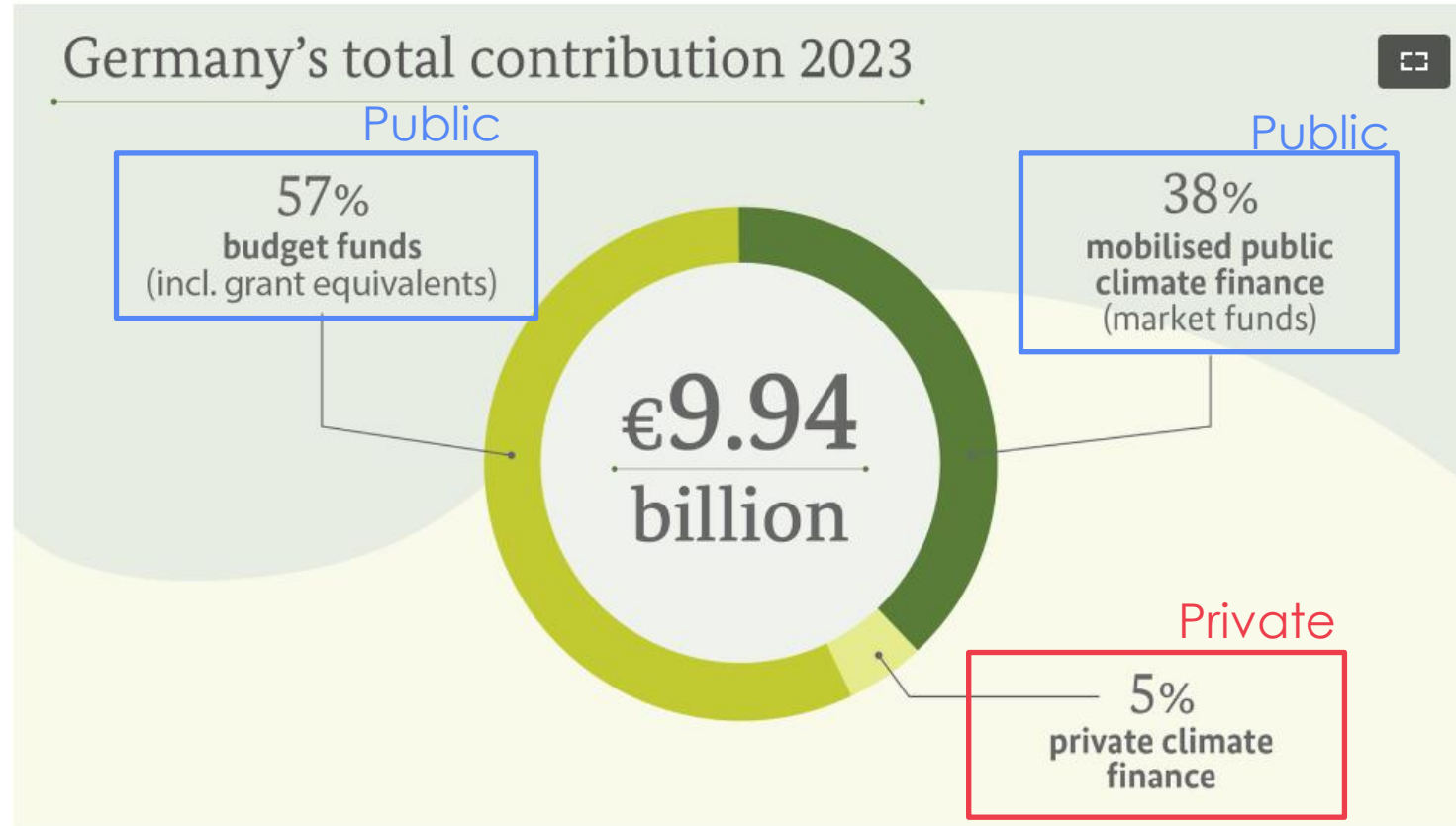
CF 1.a Does the country contribute at least a proportional share of the \$100 billion commitment to climate finance?

CF 1.b Does the country's targeted climate finance contribution represent at least a proportional share of the \$100 billion commitment?

Note: The number of countries assessed against each indicator is specified next to each bar.



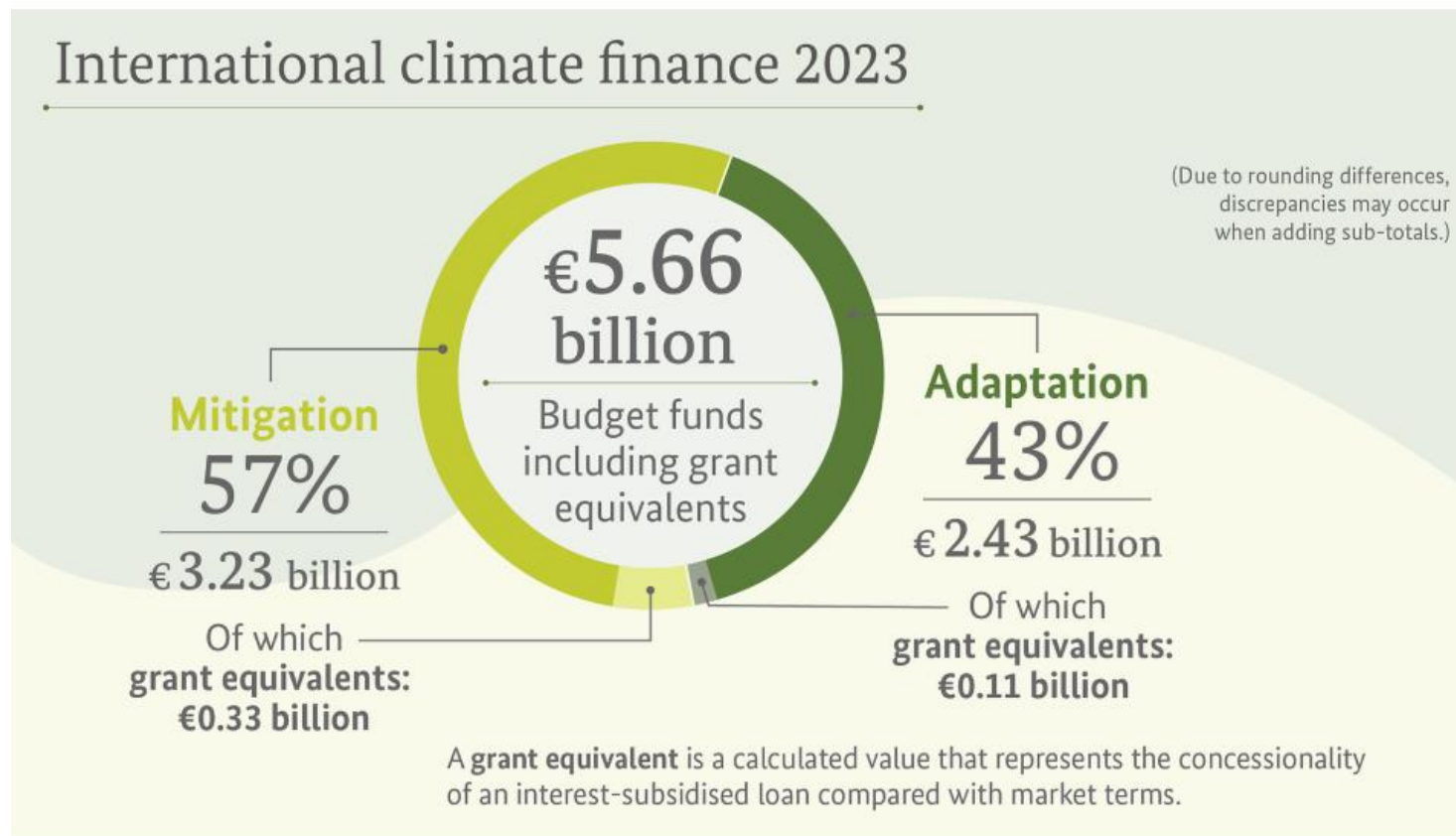
# Emerging good practices – Germany



*Germany's total contribution in 2023: Climate finance total from public funds and from funds mobilised through 6 of 6 public and private finance, e.g. in the form of revolving credit lines for local (development) banks, investment in structured funds and public-private partnerships. This represents Germany's total contribution to international climate finance and thus to the goal set by industrialised countries of providing 100 billion US dollars a year for climate protection and adaptation measures in developing countries. – © BMZ*

**Source:** [German Federal Ministry for Economic Cooperation and Development](#)

# Emerging good practices – Germany



**International climate finance:** In 2023, the German government provided a total of 5.66 billion euros in budget funds, including grant equivalents, for international climate financing. Of this, 57 per cent went to climate protection projects (3.23 billion euros) and 43 per cent to climate change adaptation measures (2.43 billion euros).  
– © BMZ

**Source:** [German Federal Ministry for Economic Cooperation and Development](#)

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## ASCOR Explainer Series

Area CF2. Transparency in  
climate costing



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to transparency in climate costing
2. How does ASCOR assess transparency in climate costing?
3. Results and emerging good practices



# 1. Introduction to transparency in climate costing

# Why does ASCOR assess transparency in climate costing?



Under Article 13 of the [Paris Agreement](#), developing countries should provide information on financial and support needed.



Disclosing cost estimates can help **mobilise finance** from developed countries and other sources such as multilateral development banks (MDBs) and the private sector.



Providing information on the costs of climate action can help assess the **country's financial preparedness** to implement its mitigation and adaptation policies.



Stating costs in executive documents or in [reports](#) submitted to the UN Framework Convention on Climate Change (UNFCCC) **strengthens accountability** around received international climate finance.

## 2. How does ASCOR assess transparency in climate costing?

# Indicators



**CF2a. Has the country disclosed a transparent breakdown of the costs of implementing its Nationally Determined Contribution (NDC)?**



**CF2b. Has the country disclosed a transparent breakdown of the costs of implementing its National Adaptation Plan (NAP)?**

# How does ASCOR assess transparency in climate costing?



We assess country submissions to the UNFCCC, including [NDCs](#), [NAPs](#), Long Term Strategies ([LTSs](#)), and national policy documents that detail the costs of mitigation and adaptation measures.



The Paris Agreement encourages developing economies to publish the costs of mitigation and adaptation action. We assess [non-Annex I](#) countries and Annex I are exempt on this area. Assessment coverage may be expanded to all countries in future years due to growing investor interest in this information.



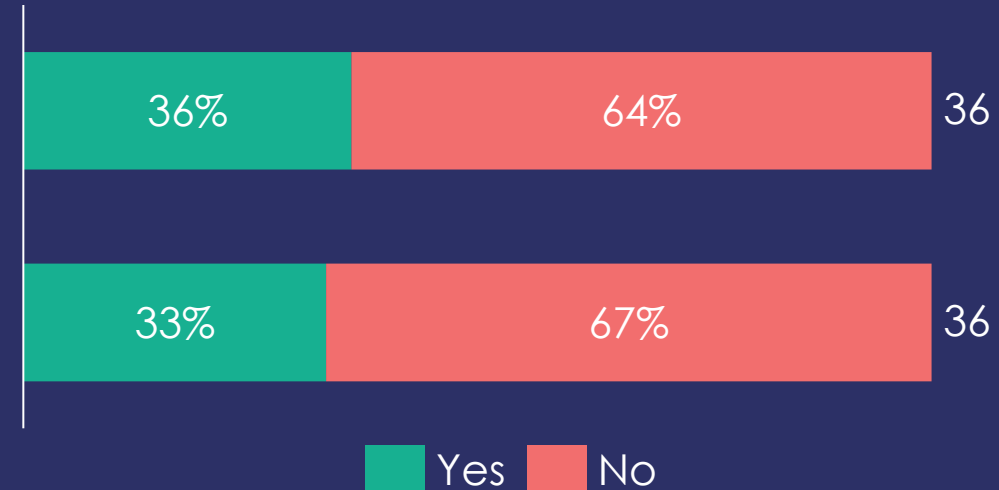
We evaluate the granularity of costing disclosure. Acceptable disclosure must break down relevant costs to some degree, for example at a sectoral or thematic level.

# 3. Results and emerging good practices

# 2024 assessment results

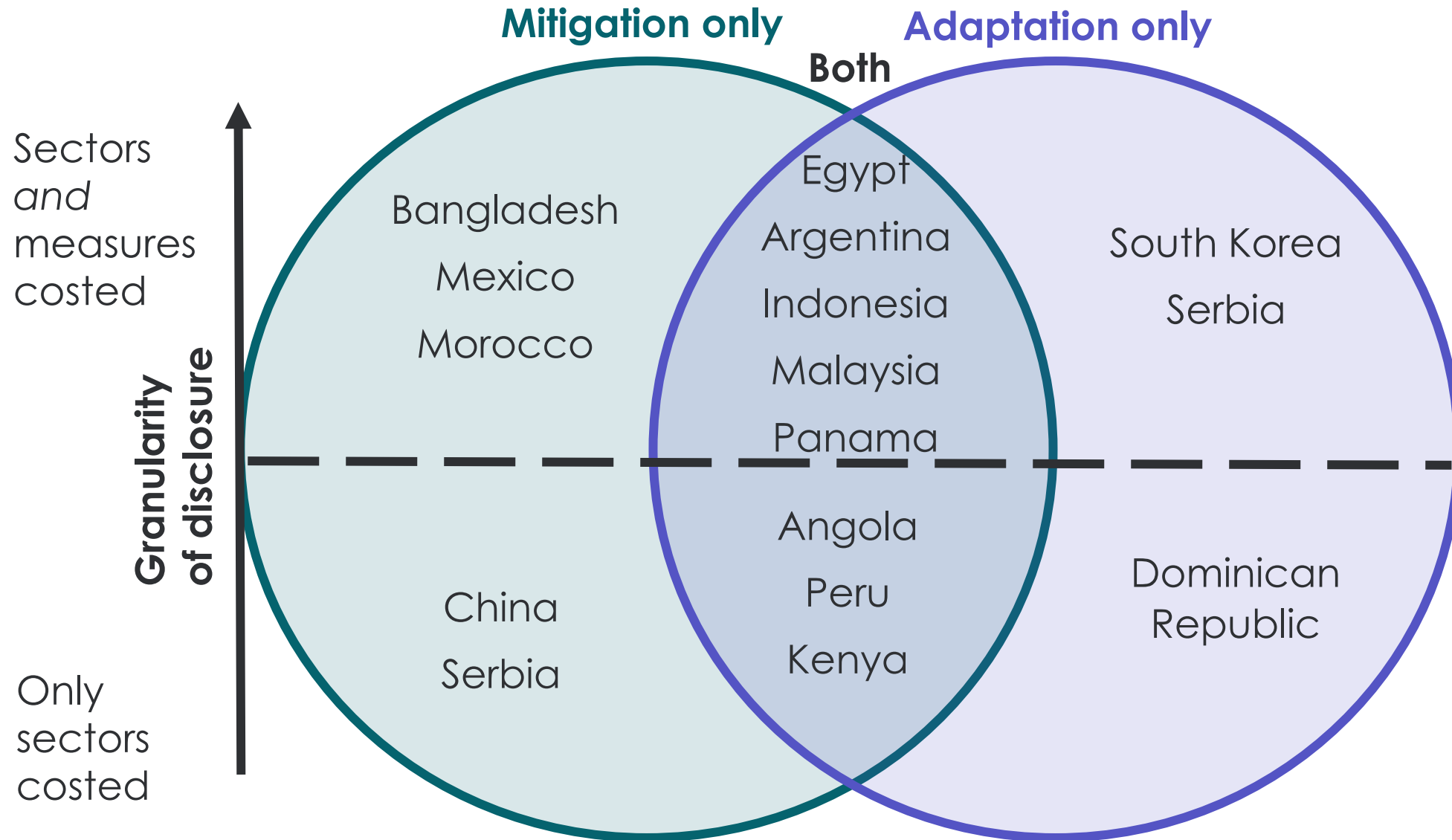
CF 2.a Has the country disclosed a transparent breakdown of the costs of implementing its Nationally Determined Contribution?

CF 2.b Has the country disclosed a transparent breakdown of the costs of implementing its National Adaptation Plan?



Note: The number of countries assessed against each indicator is specified next to each bar.

# Granularity of costing disclosure for mitigation and adaptation





# Emerging good practices



Disclosing costs at the project or sector level allows investors to explore how they might align transition investments with national climate priorities.

- **Egypt's NDC** provides information on specific wind power plants, bioethanol production and programmes to enhance agricultural production in the Valley and Delta regions.
- **Argentina's NDC** and **NAP** each break down associated costs. Mitigation costs are categorized by sector (e.g. energy, agriculture, industry), while adaptation costs are divided by pillars (e.g. conservation, food systems, and mobility), followed by costs for specific measures.

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## ASCOR Explainer Series

Area CF3. Transparency in  
climate spending



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.

# Content

1. Introduction to transparency in climate spending
2. How does ASCOR assess transparency in climate spending?
3. Results and emerging good practices

# 1. Introduction to transparency in climate spending

# Why does ASCOR assess transparency in climate spending?



A transparent budget that shows **national climate policy priorities** and **allocated public funds** to these priorities, enhances the accountability and credibility of climate commitments.



**Tracking, quantifying and disclosing climate-related measures**, on both the revenue and the expenditure side, enables taxpayers and investors to verify whether governments are allocating funds to the climate transition.



Climate Budget Tagging (CBT) has been adopted in many countries to **assess the impact** of climate expenditures.

# What is climate budget tagging (CBT)?



[World Bank](#) defines CBT as a “process of **identification, measurement, and monitoring** of climate-relevant public expenditures”.



There is **no commonly agreed methodology**, with countries designing their own CBT methodology based on their domestic needs and budgeting processes.



Existing CBT practices **tend to differ** in terms of:

- **Definitions** of climate-relevant expenditures (e.g. mitigation vs adaptation)
- **Coverage** (e.g. national or subnational level; sectors analysed; expenditure types)
- **Quantification** (e.g. weights to estimate the climate-relevance of the expenditures)

## 2. How does ASCOR assess transparency in climate spending?



# Indicators



**CF3a. Has the country disclosed its climate-related expenditure?**



**CF3b. Has the country applied climate budget tagging?**

# How does ASCOR assess transparency in climate spending?



We search for country budget documents, portals or sustainability bond reports.



We only accept disclosure with climate-specific expenditures. Broader categories like environmental protection expenditures that lack climate benefits are not included.



To qualify as having CBT, the country must disclose a specific methodology and publish the results of applying that methodology to their budget.



We do not assess the amount of climate spending, as the methodologies and expenditures covered differ between countries.

# 3. Results and emerging good practices

# 2024 assessment results

CF3.a Has the country disclosed its climate-related expenditure?



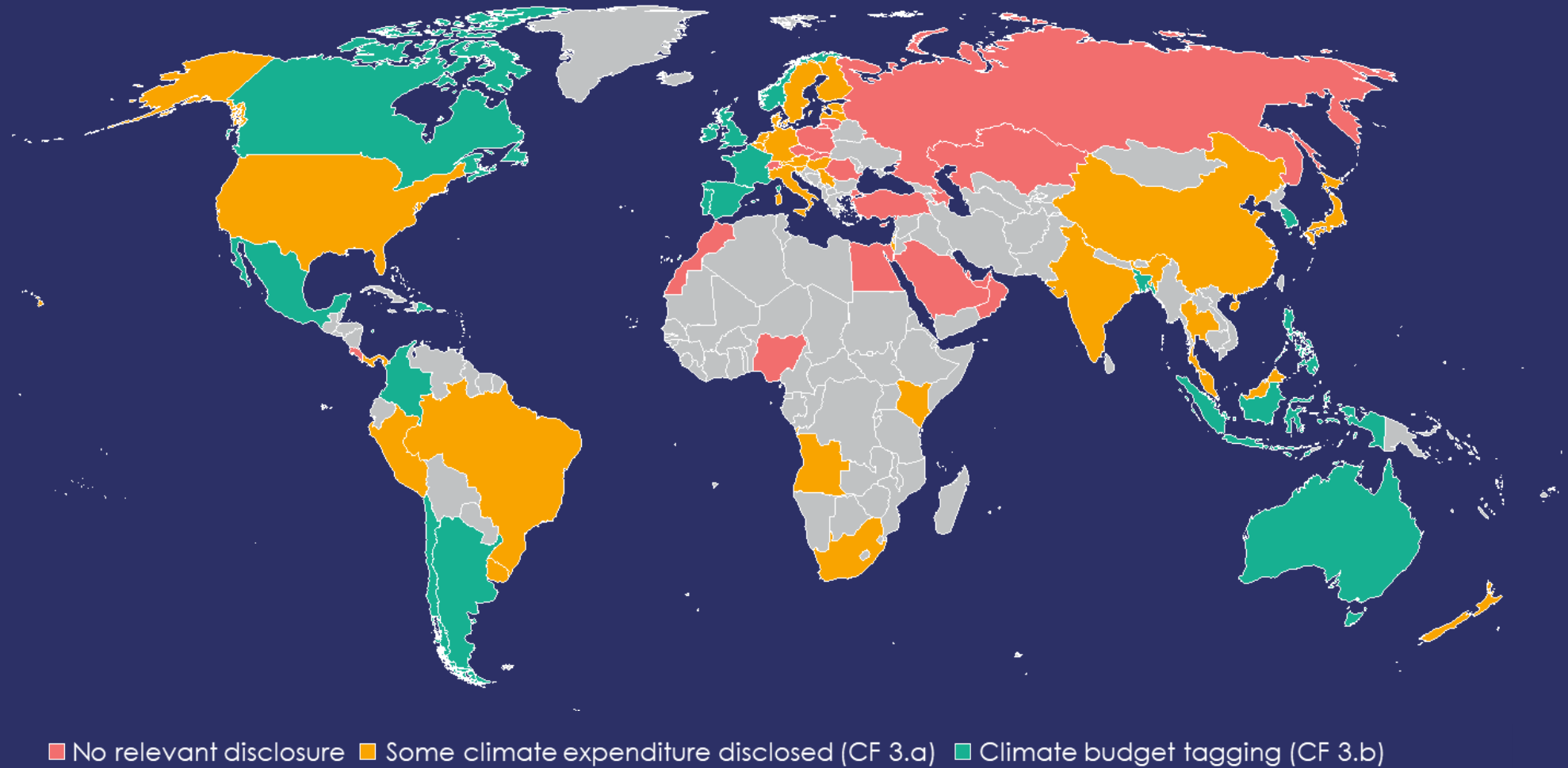
CF3.b Does the country apply climate budget tagging?



Yes No

Note: The number of countries assessed against each indicator is specified next to each bar.

# Transparency in climate spending by country



# Emerging good practices



Open budget portals are a type of platform that enhances transparency and accountability.

- **Peru's** ['Transparencia Economica'](#) portal gives information on climate mitigation and adaptation spending from 2014 to 2022.
- **Finland's** [budget portal](#) provides detailed information under the 'sustainable development tab' for carbon neutrality and green transition budgetary appropriations.



More countries are announcing that they will begin adopting CBT approaches.

- **Portugal** applied a [methodology](#) prioritising 4 sectors and will extend it next year.
- Several countries including [Costa Rica](#), [Serbia](#) and [Slovenia](#) have already published a CBT methodology but have yet to disclose their climate-tagged expenditures.

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## ASCOR Explainer Series

Area CF4. Renewable energy opportunities



# ASCOR framework

Emissions Pathways (EP)	Climate Policies (CP)	Climate Finance (CF)
<b>EP1.</b> Emissions trends <b>EP2.</b> 2030 targets <b>EP3.</b> Net zero targets	<b>CP1.</b> Climate legislation <b>CP2.</b> Carbon pricing <b>CP3.</b> Fossil fuels <b>CP4.</b> Sectoral transitions <b>CP5.</b> Adaptation <b>CP6.</b> Just transition	<b>CF1.</b> International climate finance <b>CF2.</b> Climate costing <b>CF3.</b> Climate spending <b>CF4.</b> Renewable opportunities

Note: [ASCOR framework: methodology note - Version 1.1](#) was used to assess 70 countries in 2024.



# Content

1. Introduction to renewable energy opportunities
2. How does ASCOR assess renewable energy opportunities?
3. Results of 2024 assessments

# 1. Introduction to renewable energy opportunities

# Why does ASCOR assess renewable energy opportunities?



**Electricity demand is expected to increase** through to 2050 ([IPCC](#)).



To meet demand and align with climate goals, **low-carbon energy must be rapidly deployed**.



The **cost of renewable electricity has decreased** rapidly over the last two decades.



Renewable energy is both a **lever for mitigation and an investment opportunity**.



The renewable energy pipeline **is a proxy for potential transition investment opportunities**.

# What are the main types of renewable energy sources?



## **Solar**

Energy harnessed from the sun's radiation using photovoltaic cells or solar thermal collectors to convert sunlight into electricity or heat.



## **Wind**

Energy generated from the kinetic energy of wind, captured by wind turbines that convert wind movement into mechanical power and then electricity.



## **Geothermal**

Energy derived from the natural heat stored beneath the Earth's surface, used for electricity generation or direct heating applications.



## **Hydro**

Energy produced from the movement of water in rivers or dams, where flowing or falling water is used to drive turbines and generate electricity.

## 2. How does ASCOR assess renewable energy opportunities?

# Metrics



CF4i. What is the country's prospective solar energy capacity?



CF4ii. What is the country's prospective wind energy capacity?



CF4iii. What is the country's prospective geothermal energy capacity?



CF4iv. What is the country's prospective hydroelectric energy capacity?

# How does ASCOR assess renewable energy opportunities?



We rely on [Global Energy Monitor \(GEM\)](#) data on 'prospective' renewable energy capacity, which includes projects that have been **announced or are under construction**.



This '**renewable energy pipeline**' is normalised by GDP sourced from the [World Bank](#) to provide a more comparable measure of national low-carbon investment opportunities.



Rather than focusing on the geophysical (and fully hypothetical) potential of renewable energy, we assess the **actual progress in scaling up renewable energy capacity**.



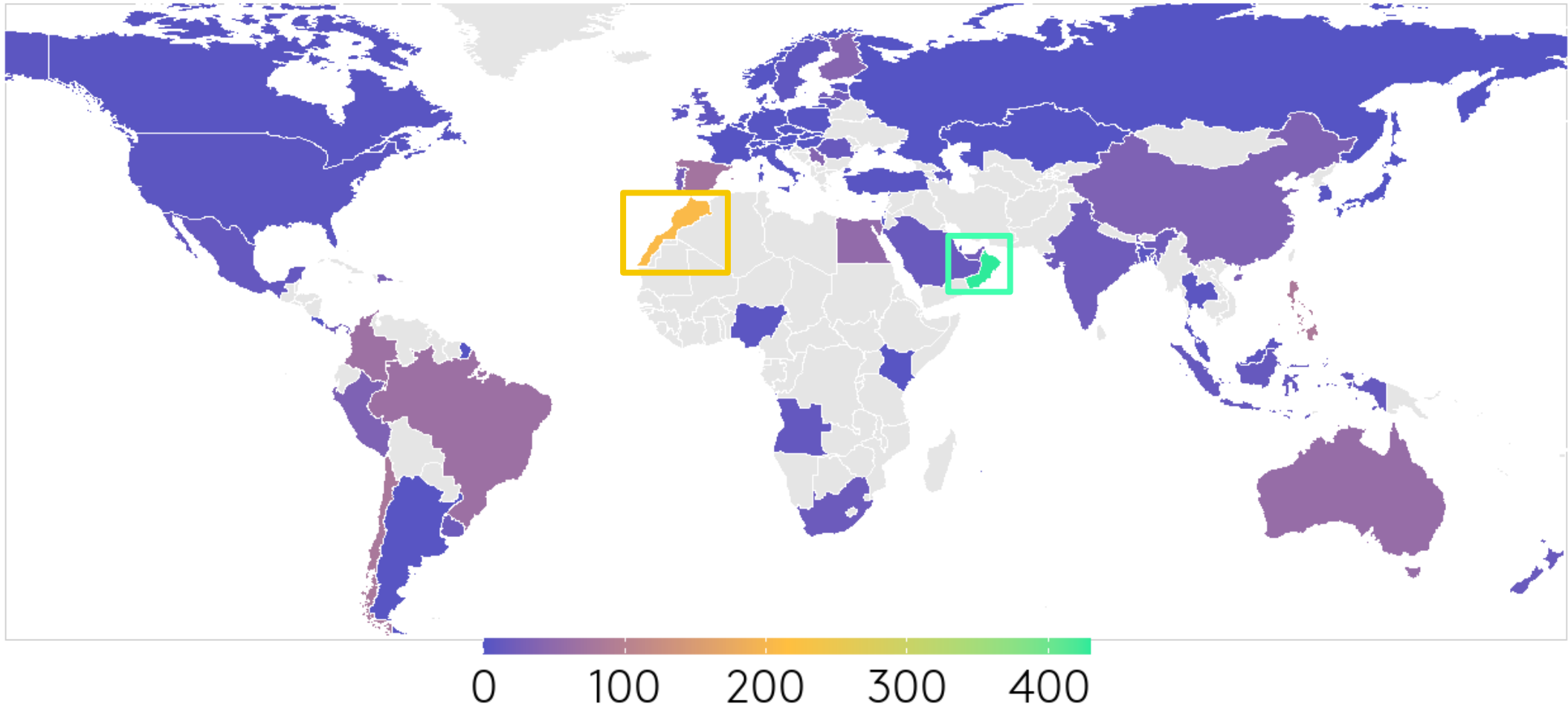
Country-specific factors are important when interpreting these metrics. Some countries lack the land area required and others already have nearly 100% renewable energy generation.

# 3. Results of 2024 assessments



# Solar energy pipeline normalised by GDP

(MW per US\$ billion of GDP)

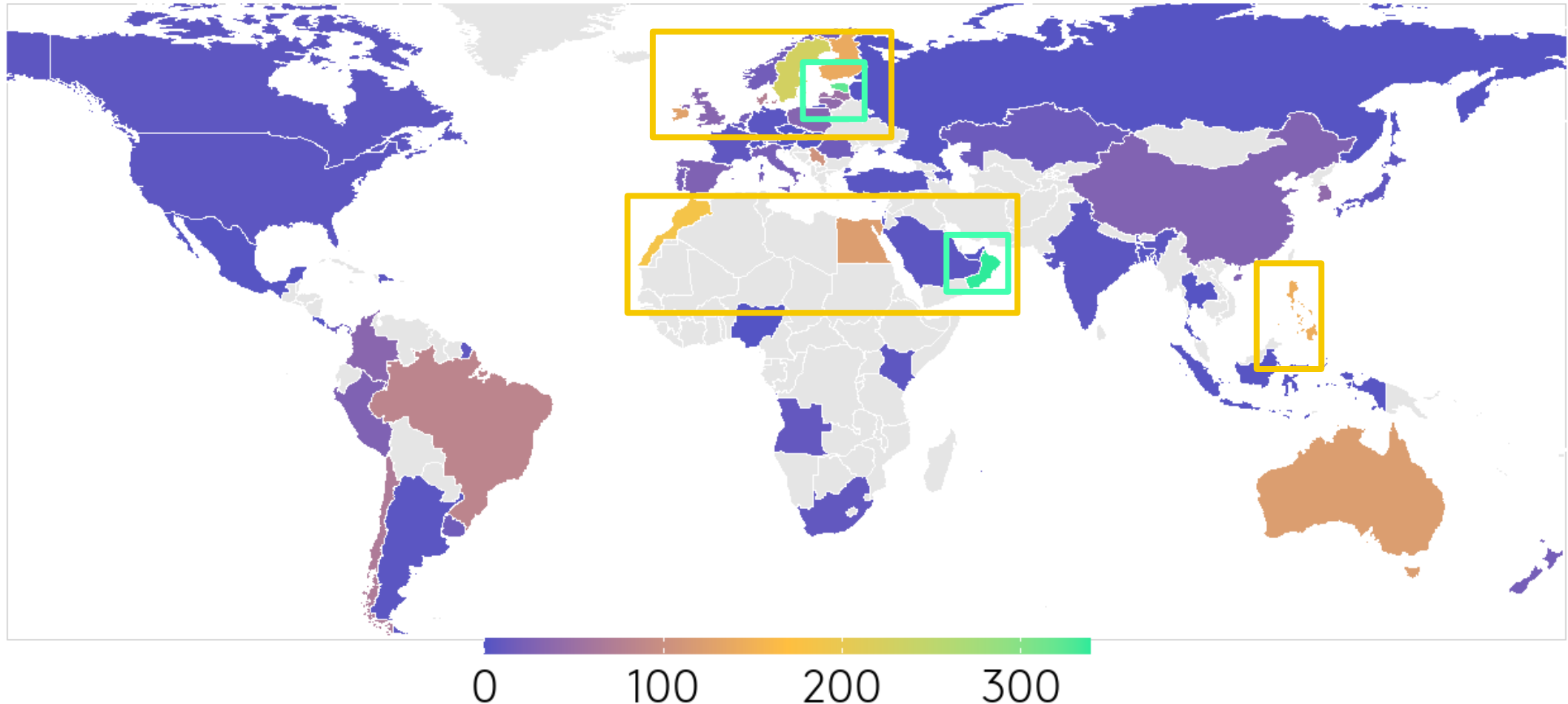


**Note:** The data for Uruguay's solar and wind prospective energy capacity was adjusted before normalisation to reflect announced projects not yet included in the Global Energy Monitor database.

**Source:** Authors' analysis adapted from Global Energy Monitor data.

# Wind energy pipeline normalised by GDP

(MW per US\$ billion of GDP)

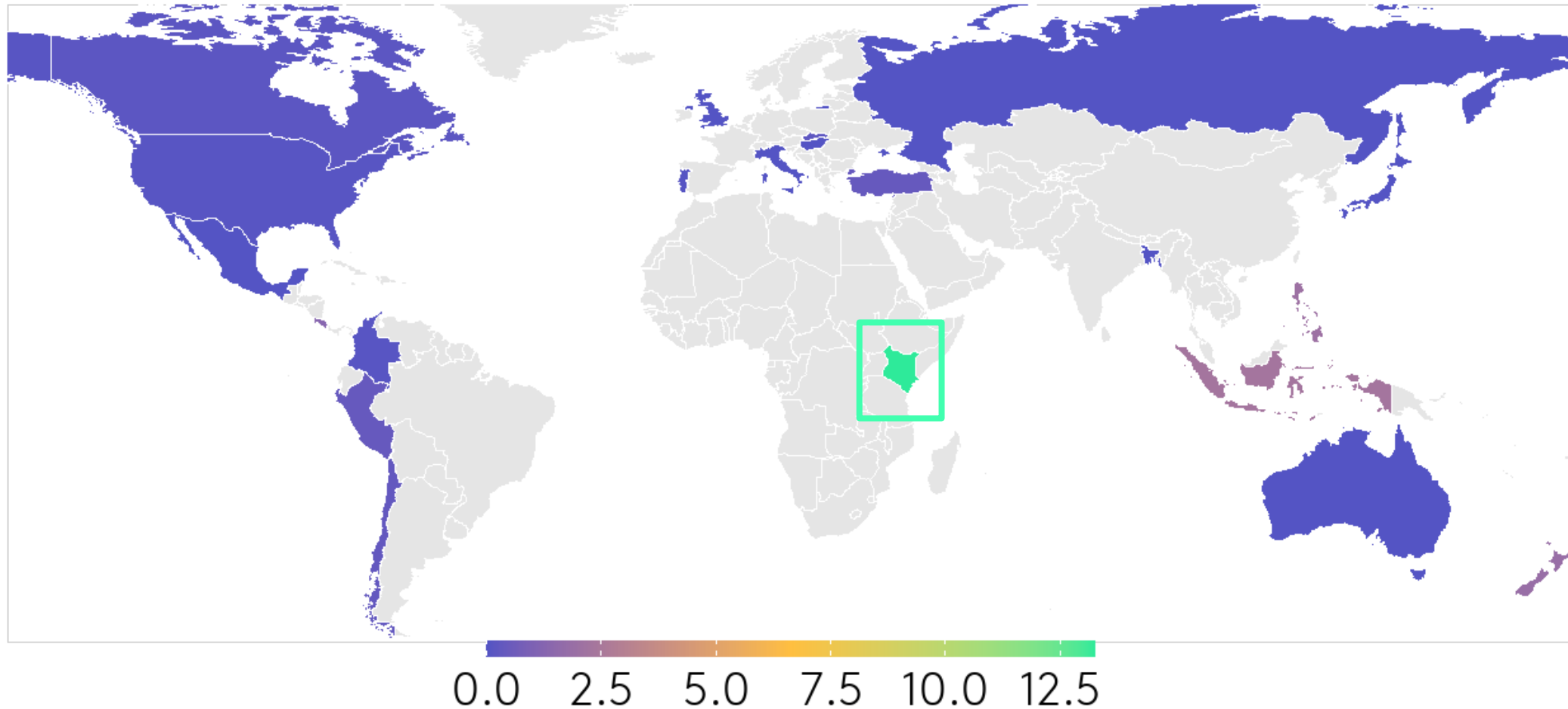


**Note:** The data for Uruguay's solar and wind prospective energy capacity was adjusted before normalisation to reflect announced projects not yet included in the Global Energy Monitor database.

**Source:** Authors' analysis adapted from Global Energy Monitor data.

# Geothermal energy pipeline normalised by GDP

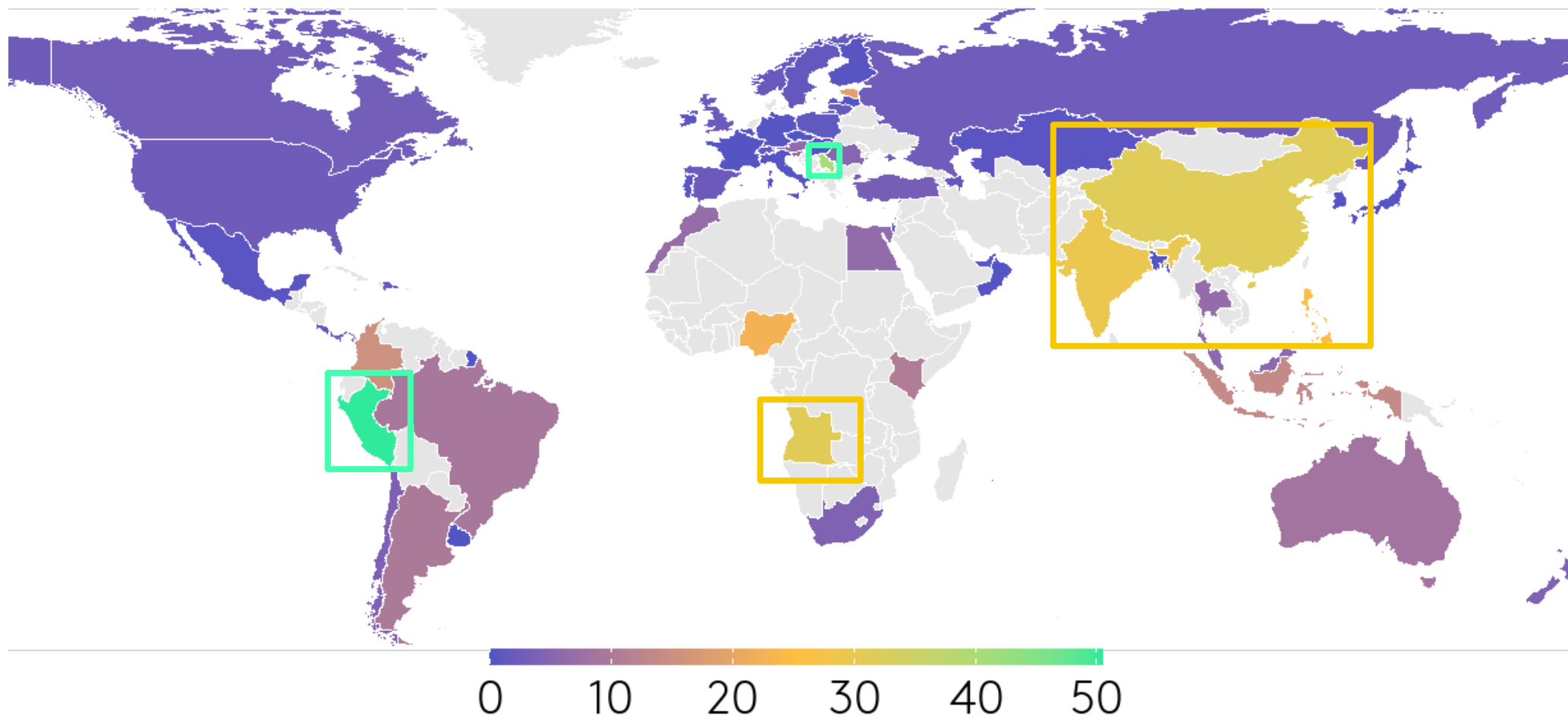
(MW per US\$ billion of GDP)



**Source:** Authors' analysis adapted from Global Energy Monitor data.

# Hydro energy pipeline normalised by GDP

(MW per US\$ billion of GDP)



**Source:** Authors' analysis adapted from Global Energy Monitor data.

## About the ASCOR explainer series

The ASCOR explainer series was produced by the sovereign research team at the TPI Centre: Antonina Scheer, Camila Cristancho-Duarte, Setenay Hizliok, Johannes Honneth, Sylvan Lutz and Giorgia Monsignori.

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