



Creating a Successful Outcome in Copenhagen

Bert Metz, European Climate Foundation

CPI launch event, Berlin, November 11, 2009

About Project Catalyst

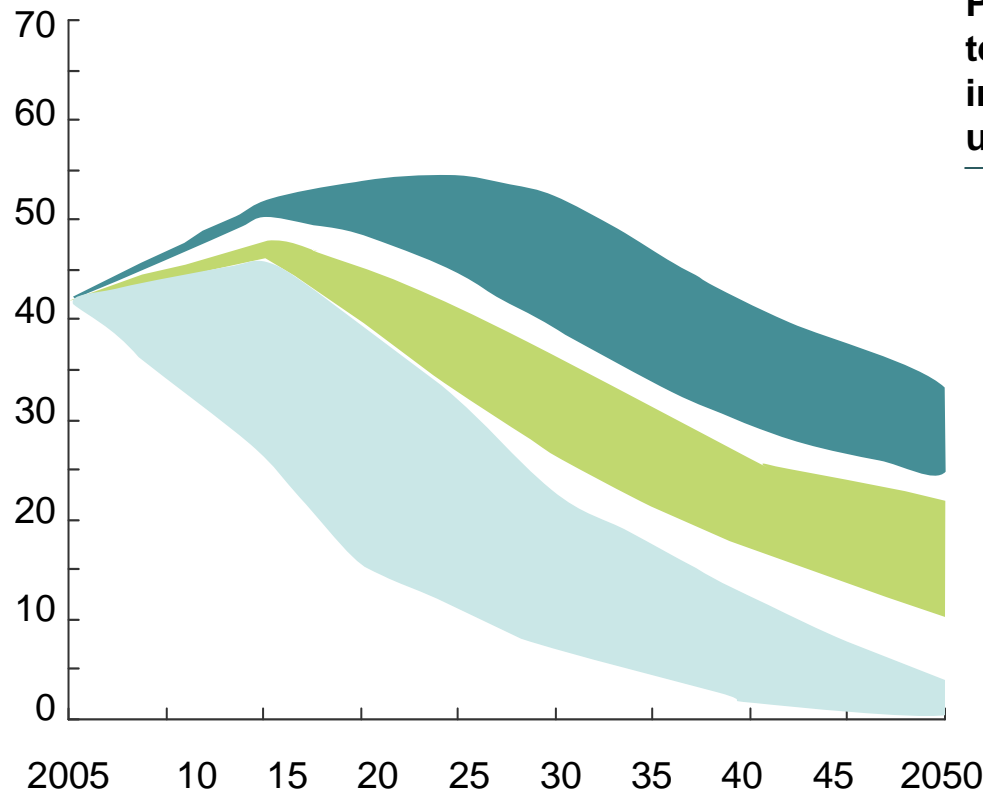
- **Initiative** of the ClimateWorks Foundation, a global, non-profit philanthropic foundation headquartered in San Francisco, California, with a network of affiliated foundations in China, India, the US, and the European Union
- **Launched** in May 2008 to provide analytical and policy support for the United Nations Framework Convention on Climate Change (UNFCCC) negotiations on a post-Kyoto international climate agreement
- **Provide** a forum where key participants in the global discussions can informally interact, conduct analyses, jointly problem solve and contribute ideas and proposals to the formal UNFCCC process
- **Organised** in working groups: mitigation, adaptation, technology, forestry, climate-compatible growth plans, and finance with a total of about 150 climate negotiators, senior government officials, representatives of multilateral institutions, business executives, and leading experts from over 30 countries. Analytical support from the international consulting firm, McKinsey & Company
- www.project-catalyst.info for latest papers, news and background

Scientific evidence suggests that a 450 ppm CO₂e pathway gives a 40–60% probability to limit global warming to 2°C

Global GHG emissions and pathways for GHG stability

Gt CO₂e per year

- Peak at 550 ppm, long-term stabilization 550 ppm
- Peak at 510 ppm, long-term stabilization 450 ppm
- Peak at 480 ppm, long-term stabilization 400 ppm



Probability of temperature increase under 2°C

Expected temperature increase

15-30%

3.0°C

40-60%

2.0°C

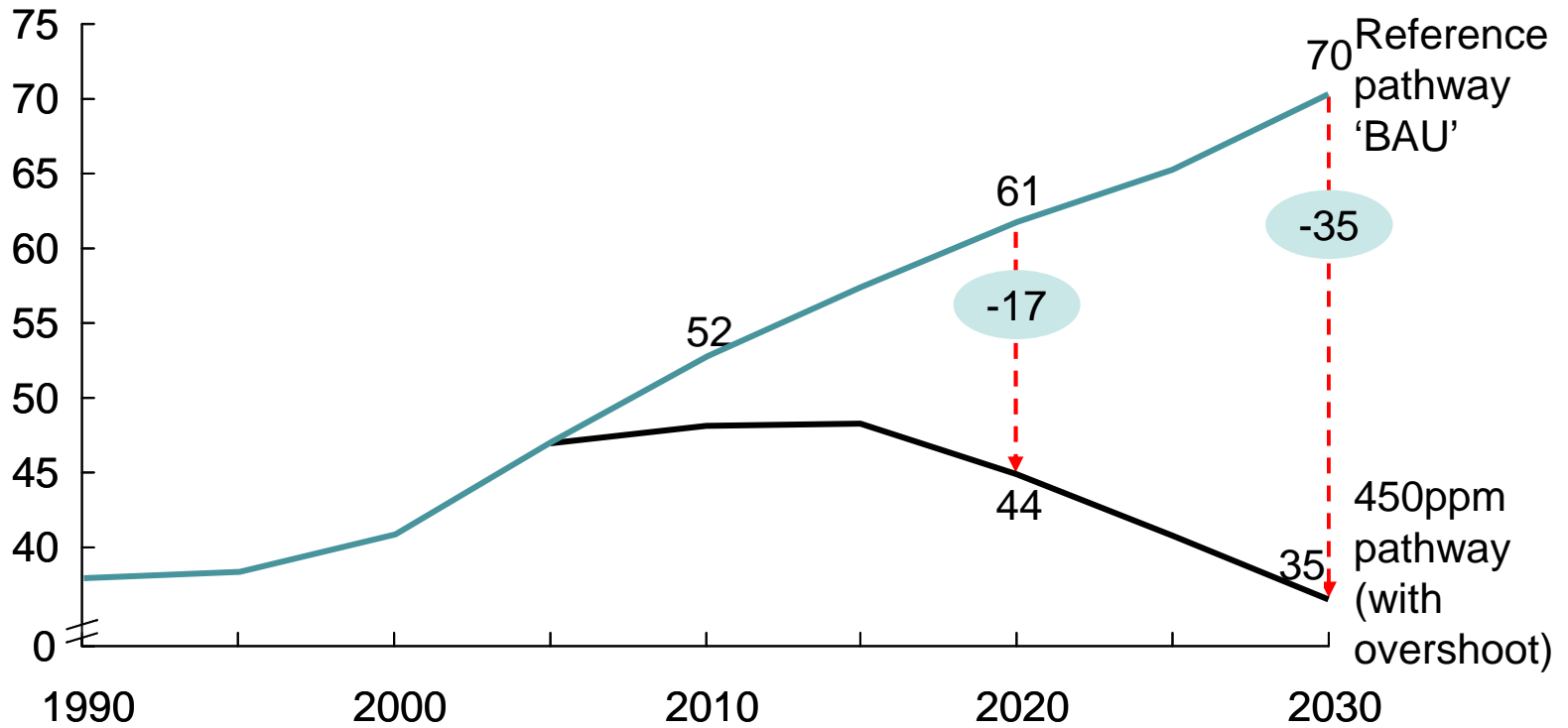
70-85%

1.8°C

- 450 ppm is minimum – it has a 40–60% probability of warming exceeding 2°C
- Even 2°C will require significant investment in adaptation

17 Gt of reductions below “Business as Usual” in 2020 are required for a 450ppm, 2° pathway

Gt CO₂e per year



Change relative to 1990

+17%

-7%

Change relative to BAU

-28%

-50%

Source: McKinsey Global GHG Abatement Cost Curve v2.0; Houghton; IEA; US EPA; den Elzen, van Vuuren; Project Catalyst analysis

Low carbon and climate resilient growth and development

- Development is essential for eradicating poverty and climate change can undermine development, if uncontrolled
- The challenge: achieving development objectives, while controlling climate change
- For developed countries: transition to a low carbon economy
- Low carbon and climate resilient growth and development as the answer
- “Low carbon development plans (LCGPs)” agreed at MEF/ Italy for all MEF countries
- Crucial role of LCGPs for developing country as a strategic framework for mitigation efforts and for assessing value of individual NAMAs and NAPAs

There are three main elements to a low carbon growth plan

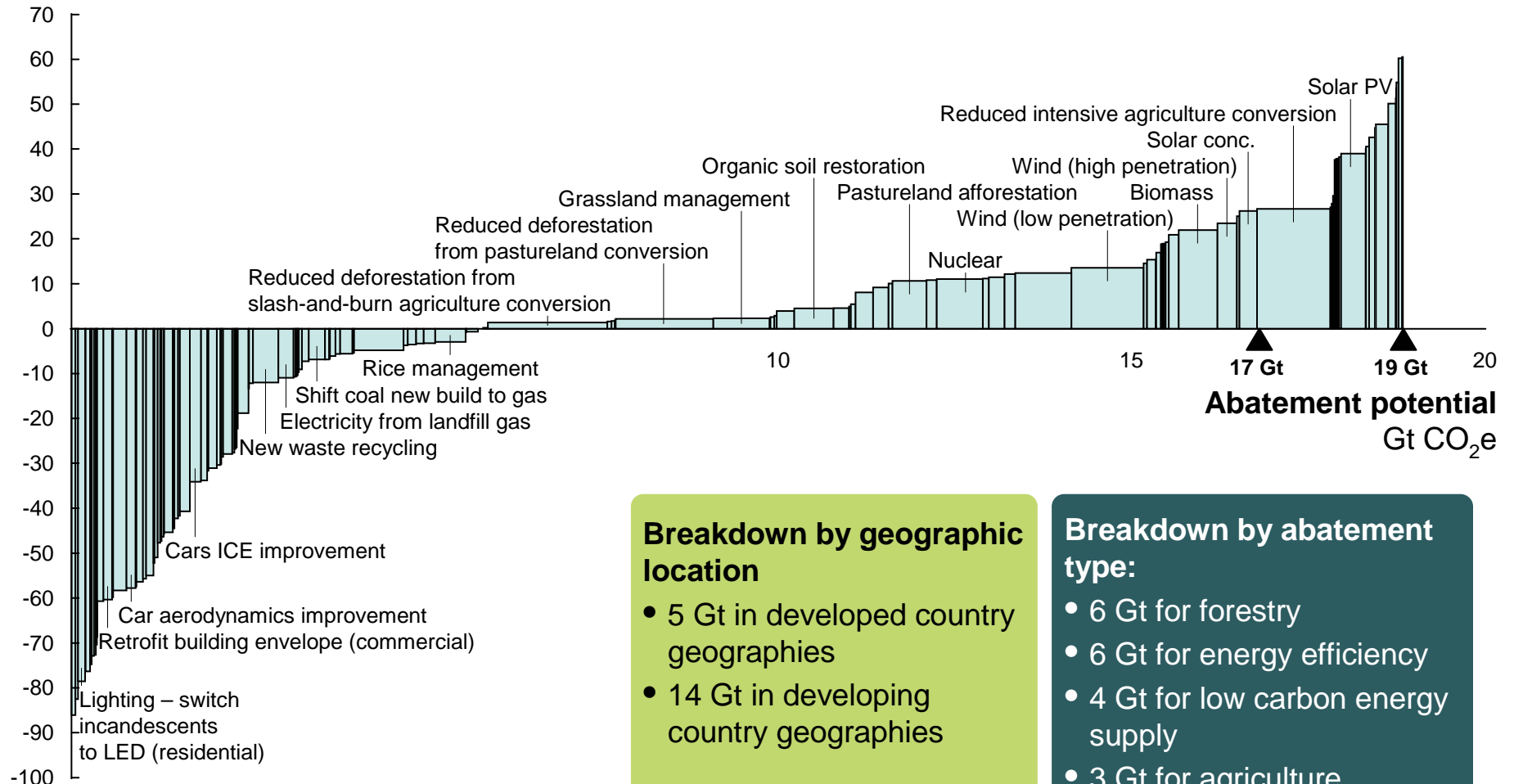
- 1 Strategic plan towards a **low carbon** and climate-resilient economy and **sustainable development**
- 2 Based on the **socioeconomic and development priorities** of the country
- 3 Includes a **strategic vision** (long-term component) and **specific actions** (short- and medium-term component)

Topics covered by an LCGP

- National circumstances and current development plans
- Assessment of vulnerability to climate change
- GHG inventory
- Long-term vision for an economy with low GHG emissions and low vulnerability to climate change
- Specific investments to reduce vulnerability and to adapt existing infrastructure to the changing climate
- GHG mitigation plan containing
 - Projection of GHG emissions under BAU scenario for key economic sectors
 - Scenario the country can achieve without assistance
 - Scenario for which it would require international support
- NAMAs and NAPAs, including their incremental cost, and technology, financing and capacity building support needed

Achieving 17 Gt in reductions will require capturing 90 percent of the world's economic reduction opportunities with costs below euro 60/t

McKinsey global GHG abatement cost curve, 2020 (up to costs of €60/t, excluding transaction costs, 4% discount rate)



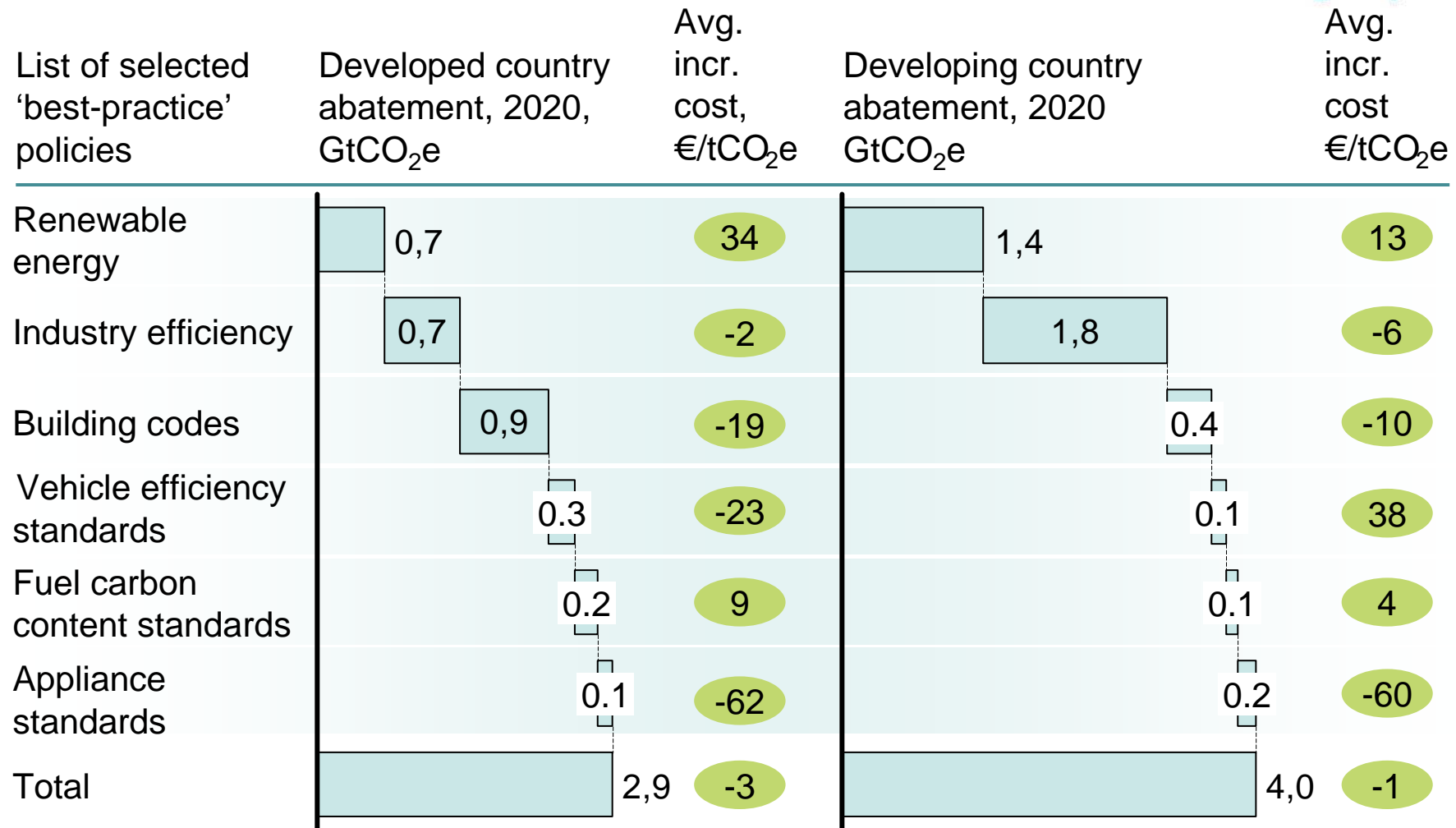
Breakdown by geographic location

- 5 Gt in developed country geographies
- 14 Gt in developing country geographies

Breakdown by abatement type:

- 6 Gt for forestry
- 6 Gt for energy efficiency
- 4 Gt for low carbon energy supply
- 3 Gt for agriculture

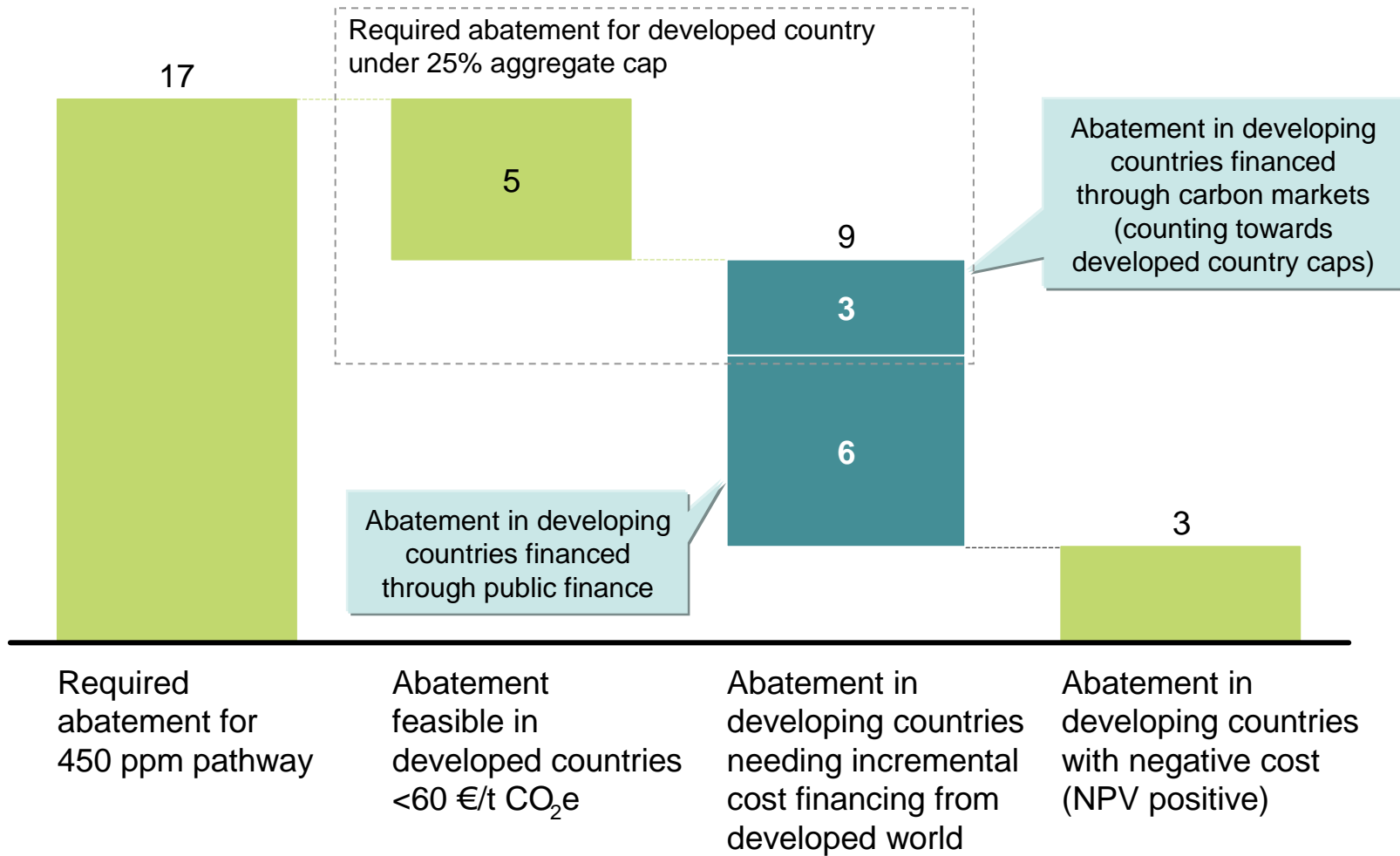
Policies are the way to translate opportunities into real action: policies in six selected areas could deliver 40% of required abatement



IPCC: for 2 degrees scenario emissions 25-40% below 1990 for developed countries collectively

The split of the required abatement in 2020 Gt CO₂e, 2020

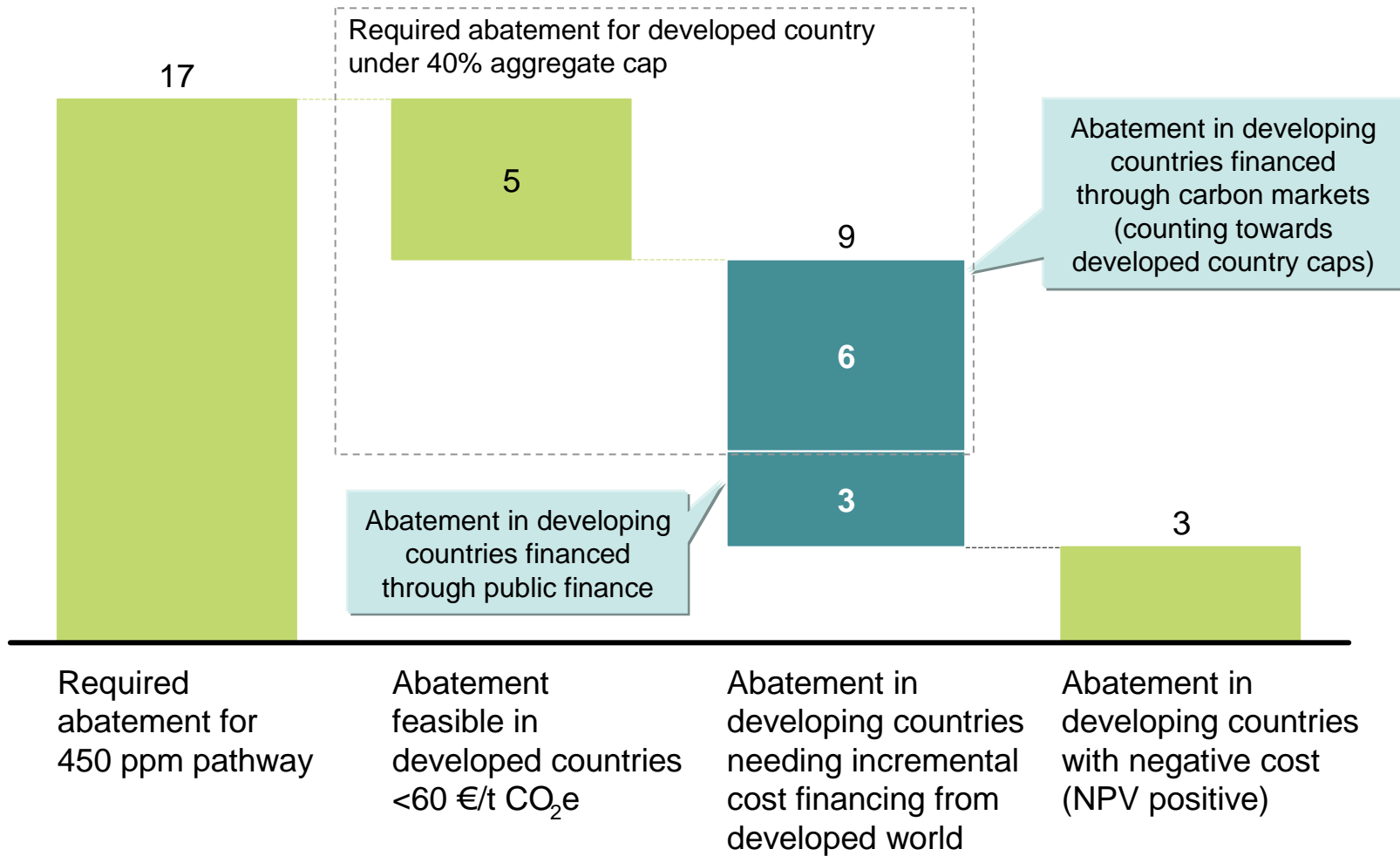
Abatement needing additional financing (to meet incremental costs) from developed world



IPCC: for 2 degrees scenario emissions 25-40% below 1990 for developed countries collectively

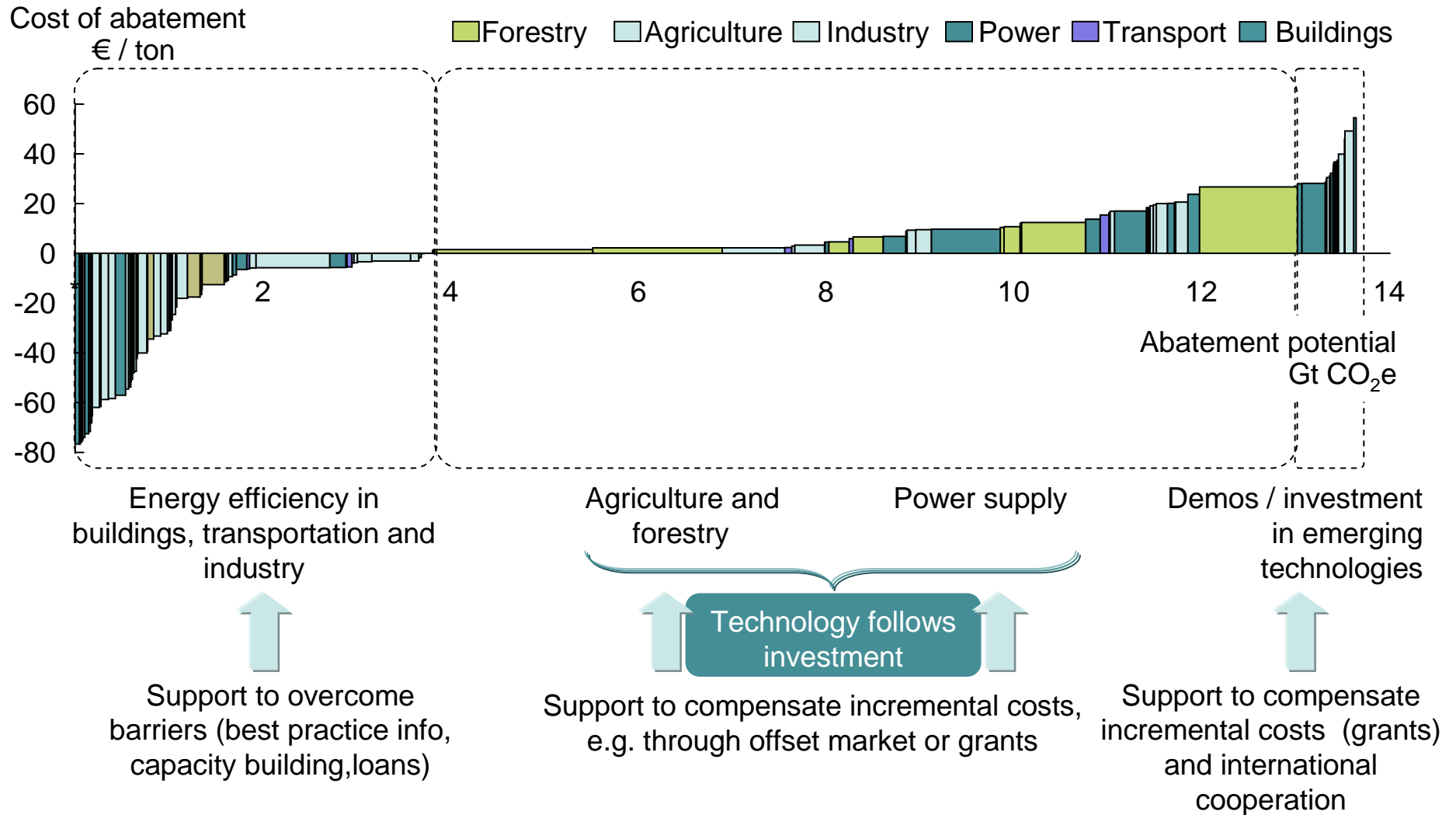
The split of the required abatement in 2020 Gt CO₂e, 2020

Abatement needing additional financing (to meet incremental costs) from developed world



Developing countries require different types of support for mitigation activities

Developing country abatement cost curve, 2020 (up to costs of €60/t)



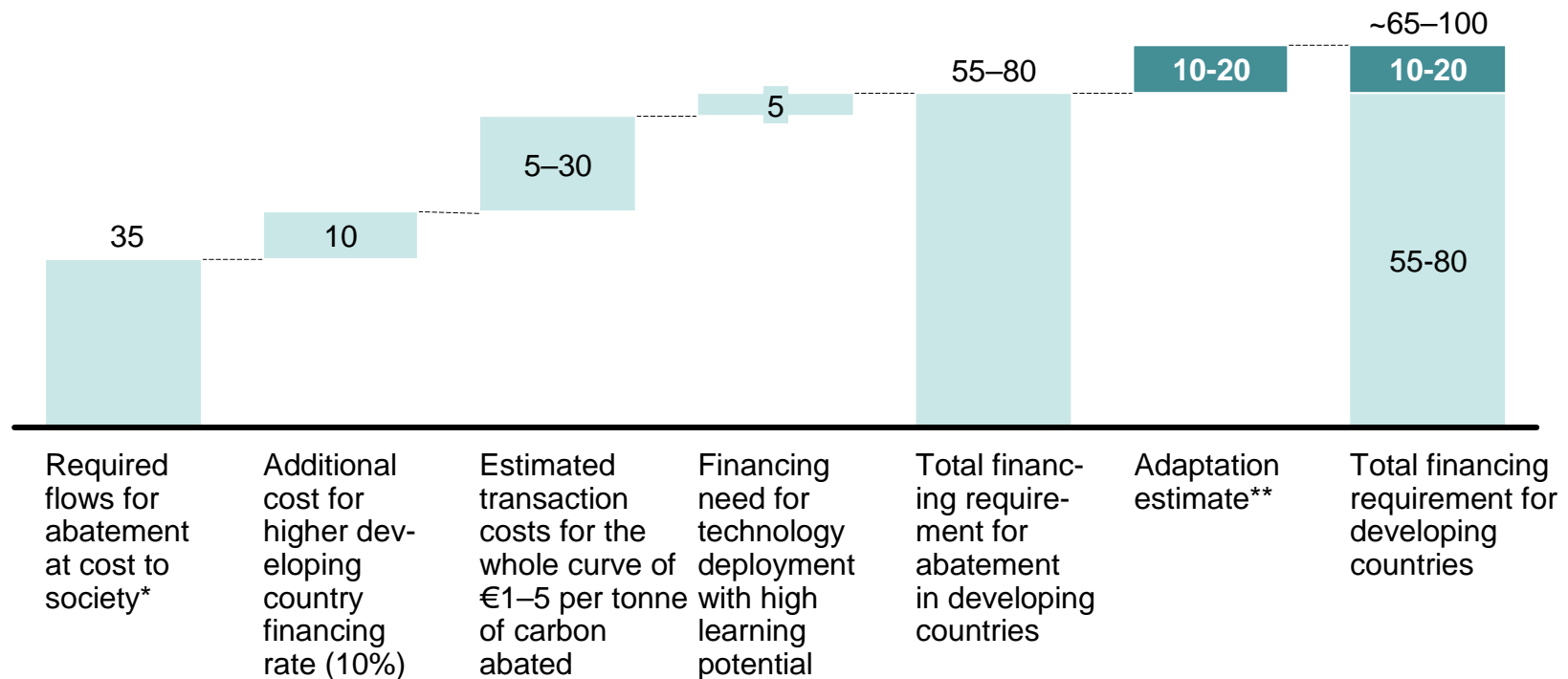
Examples of NAMAs

	Country	Description	Policy
National Solar Plan	India	<ul style="list-style-type: none"> • 20 GW of installed solar power capacity by 2020, 100 GW by 2030, 200 GW by 2050 • Expected emissions reductions of 42 million tons of CO₂e 	<ul style="list-style-type: none"> • Feed in tariff • Renewable energy obligation
Fuel economy standards	China	<ul style="list-style-type: none"> • Established mandatory fuel efficiency standards for passenger cars in 2004 • Phase 1 in 2005 for passenger vehicles; increased fuel economy from 25.4 mpg to 29.2 mpg between 2002-06 • Phase 2 in 2008 for light-duty vehicles 	<ul style="list-style-type: none"> • Regulation • Subsidies/ taxation
Avoiding deforestation	Brazil	<ul style="list-style-type: none"> • Reduction of deforestation rates by 70% by 2017 through forests register, strengthening of enforcement and dedicated funds • Expected savings of 4.8 billion tons of CO₂e 	<ul style="list-style-type: none"> • Various
Energy efficiency	Mexico	<ul style="list-style-type: none"> • Finance Program for Electric Energy Savings for substitution of inefficient refrigerators and air conditioners with modern equipment • Replaced ~ 800,000 units between 2002-06 	<ul style="list-style-type: none"> • Appliance standards • Subsidies

Annual funding flows of €65-100 billion are required in developing countries, following the principles of the UN Framework Convention

Costs of 12 Gt of abatement in developing countries
Adaptation cost

Developing country financial requirements € billion on average p.a. 2010–20 (excluding self-financing)

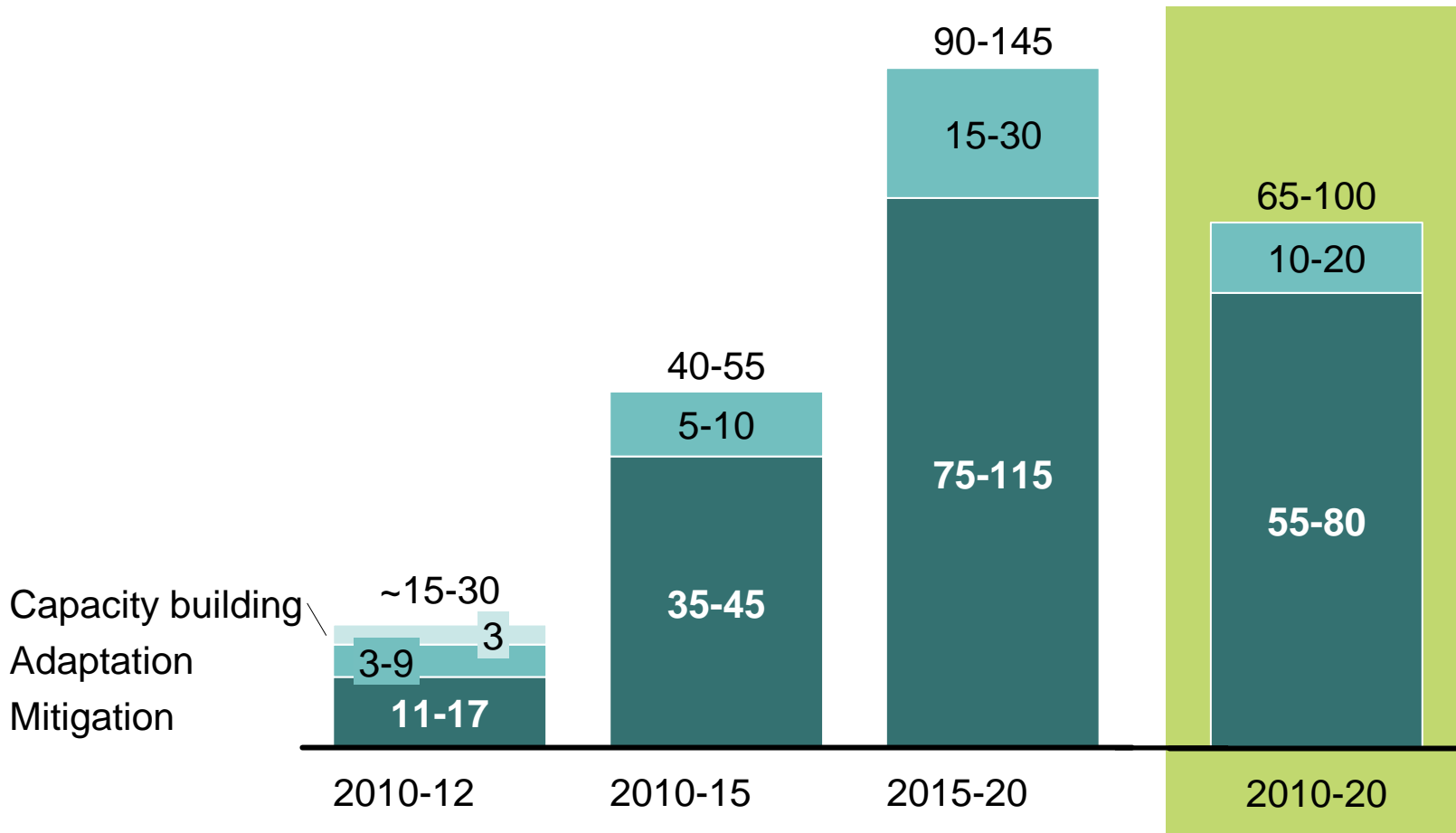


* Assumes all abatement delivered at average cost; 4% discount rate

** Based on increased financing for global public goods (incl. research), expected funding required for priority investments for vulnerable countries (based on NAPA cost estimates), and provision of improved disaster support instruments (based on MCII work)

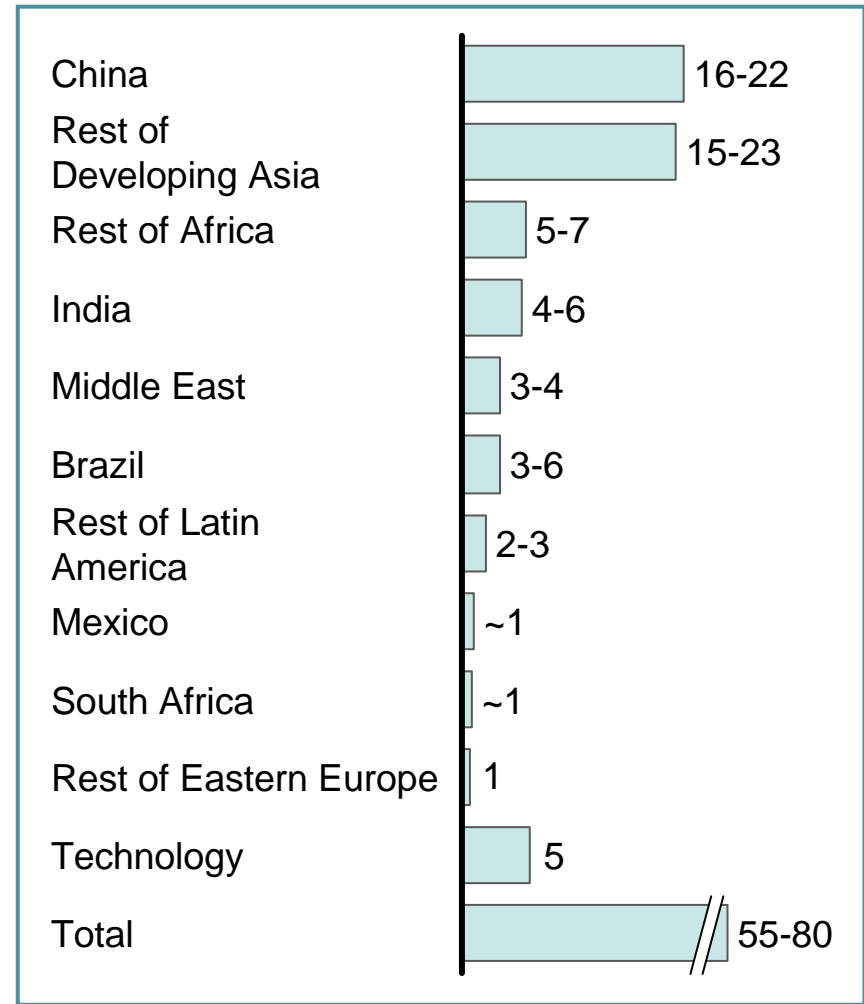
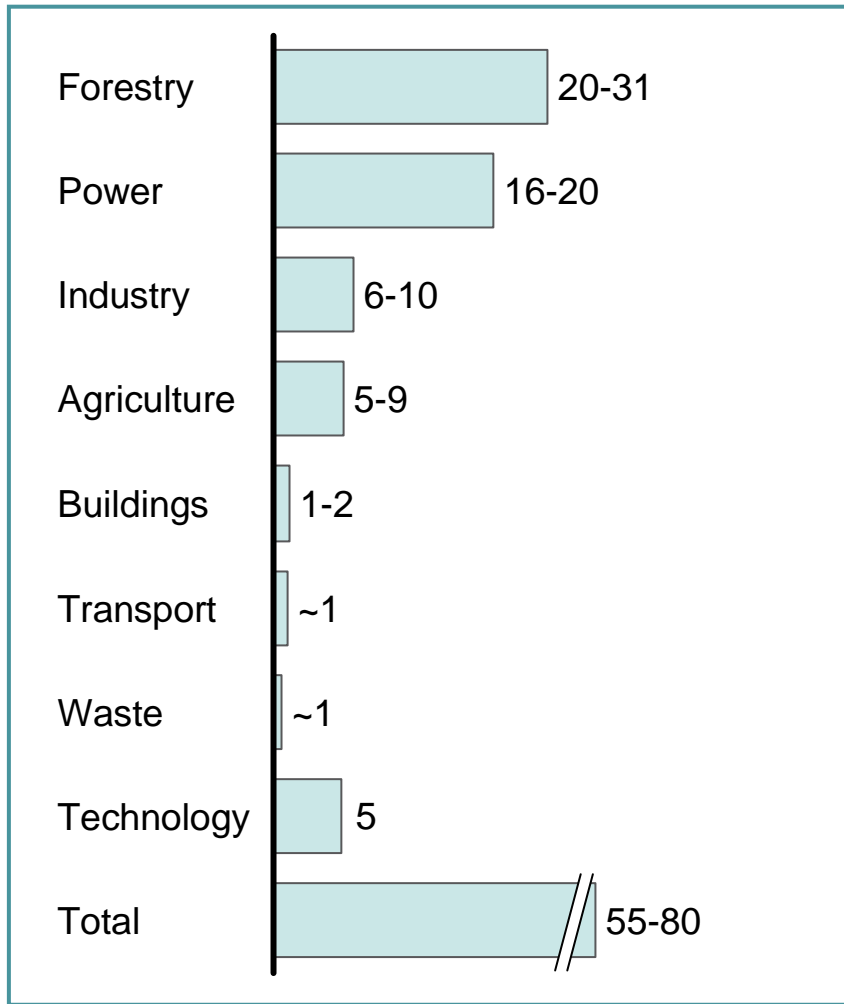
Project Catalyst estimates the financing needs will ramp up from €15-30 bn per year to €90-145 bn during the 2010-2020 period

Developing country financing needs
 € billion (annual averages)



Financing flows by sector and region

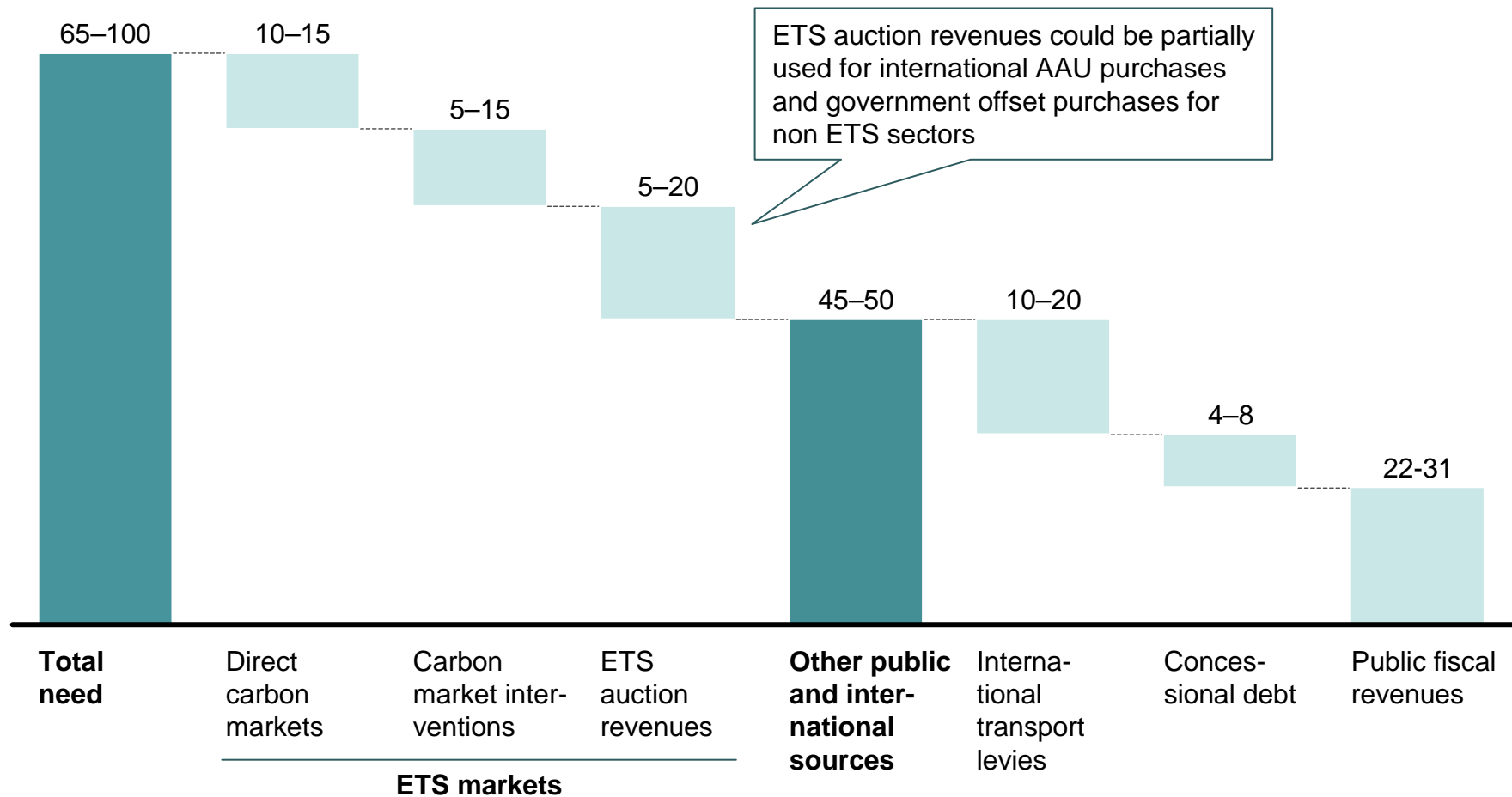
Financing flows, 10% discount rates, including transaction costs of €1-5 per tonne
 € billion, average p.a. 2010-20



The developing country financing need can be met by a combination of direct and indirect carbon market financing and public finance

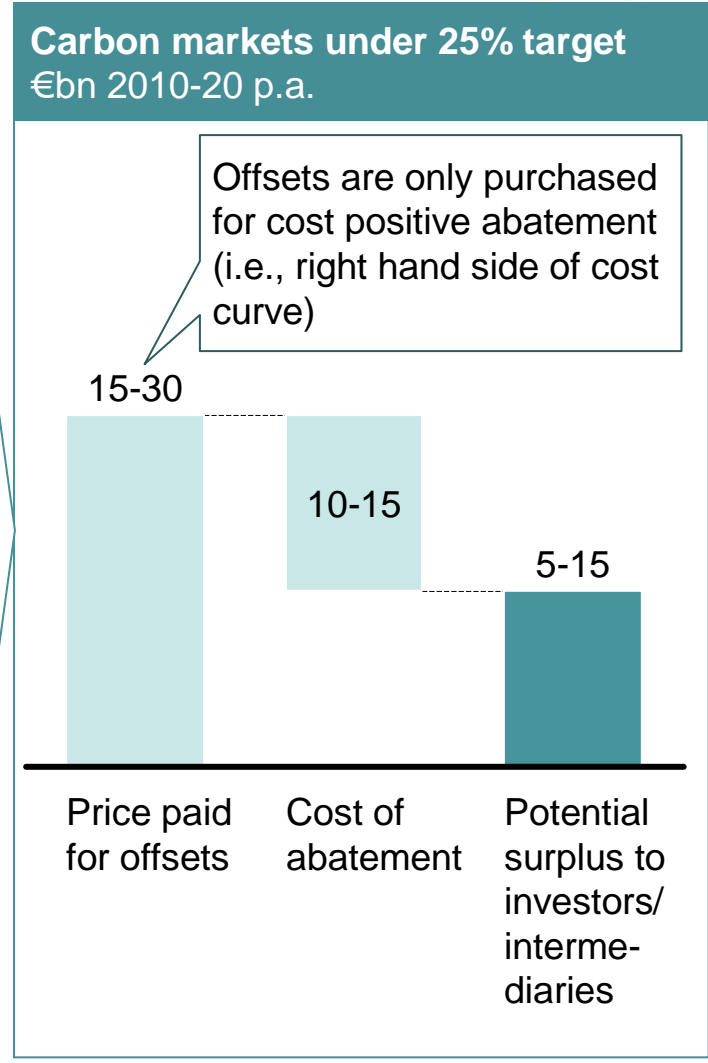
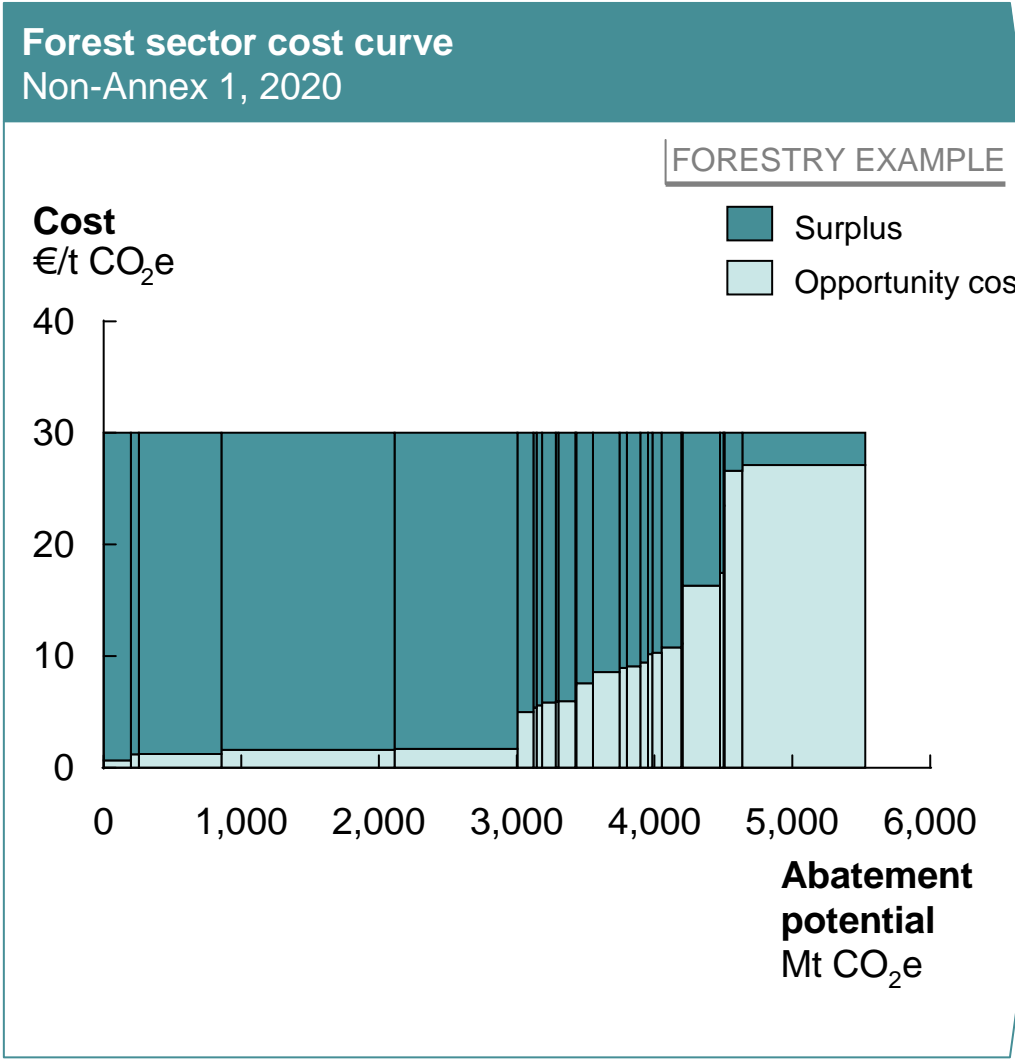
Financing needs and sources assuming 25% caps in developed countries
 € billion, annual average 2010–20 rounded to nearest € 5 billion

project catalyst
UNDER 25% CAP



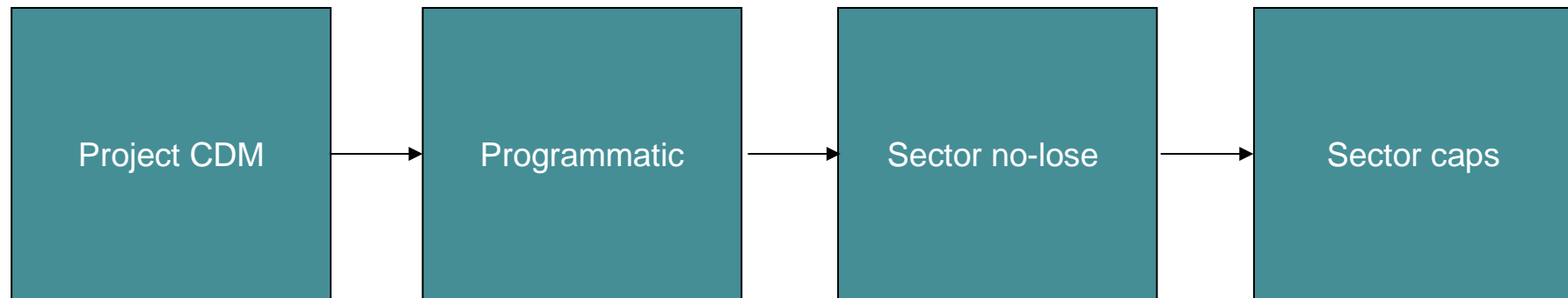
Carbon markets might create significant surplus for investors/intermediaries

ILLUSTRATIVE



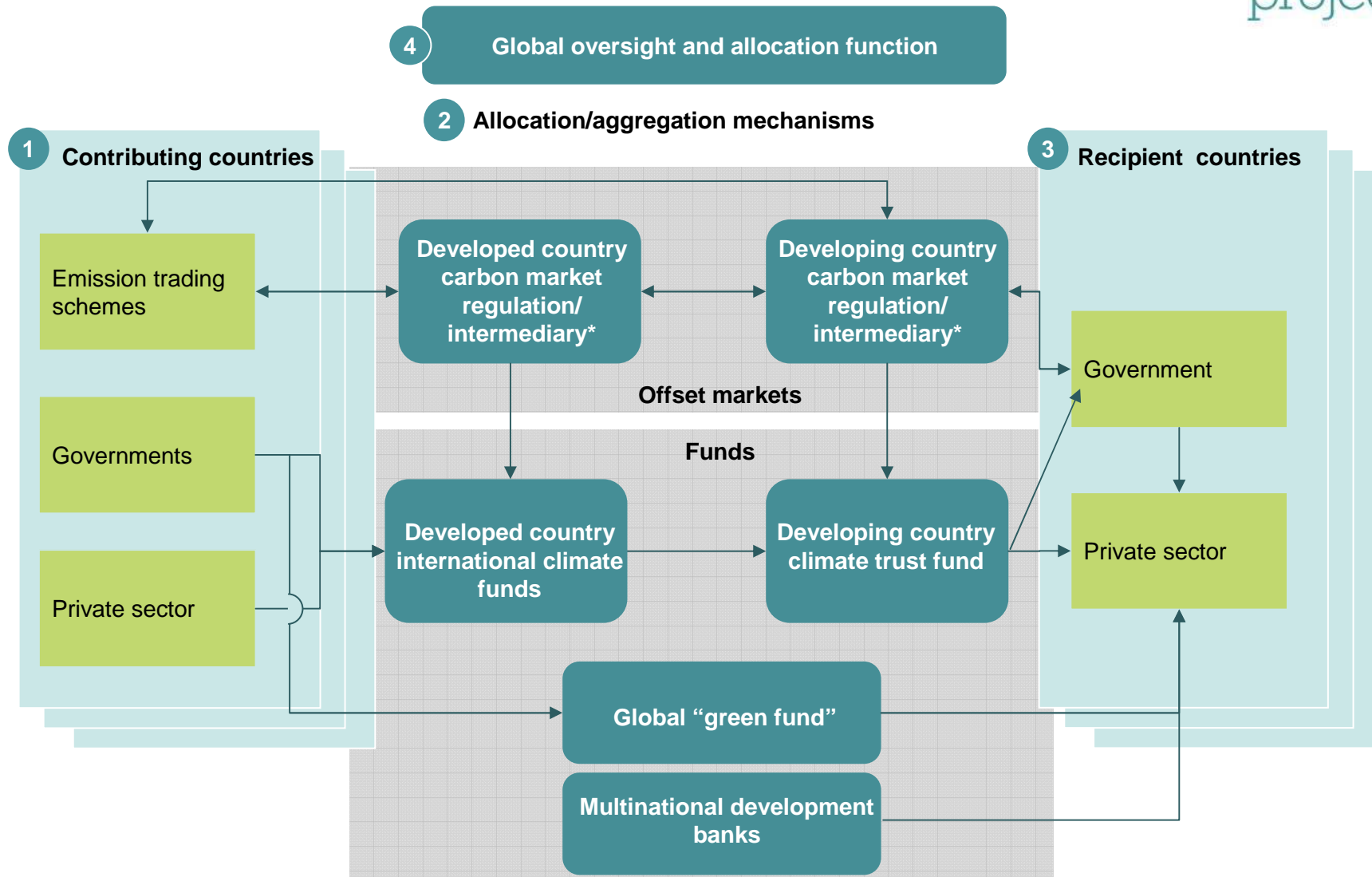
System evolution: Countries are expected to move from project to programmatic and sector schemes and later towards caps

1. Countries are expected to move from project to programmatic and sector schemes and later towards caps



2. Incentives should be in place to move to more advanced stage: only pay incremental costs for sector programmes and full market price for capped sector schemes

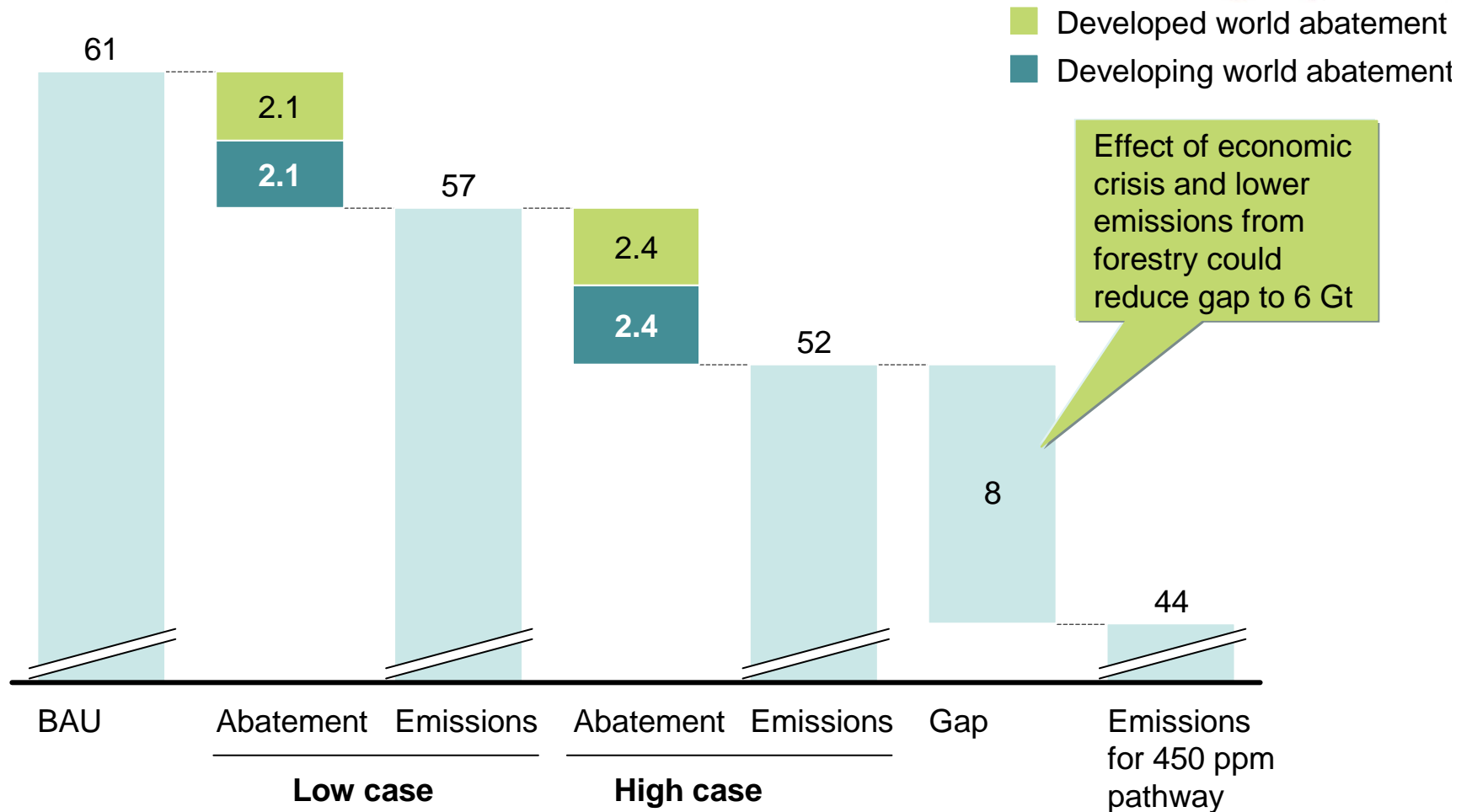
Overview of climate financing system



* Function could be performed by developed and developing country trust funds

Current proposals leave a gap of 8-13 Gt in 2020 to an emissions pathway towards 450 ppm stabilisation

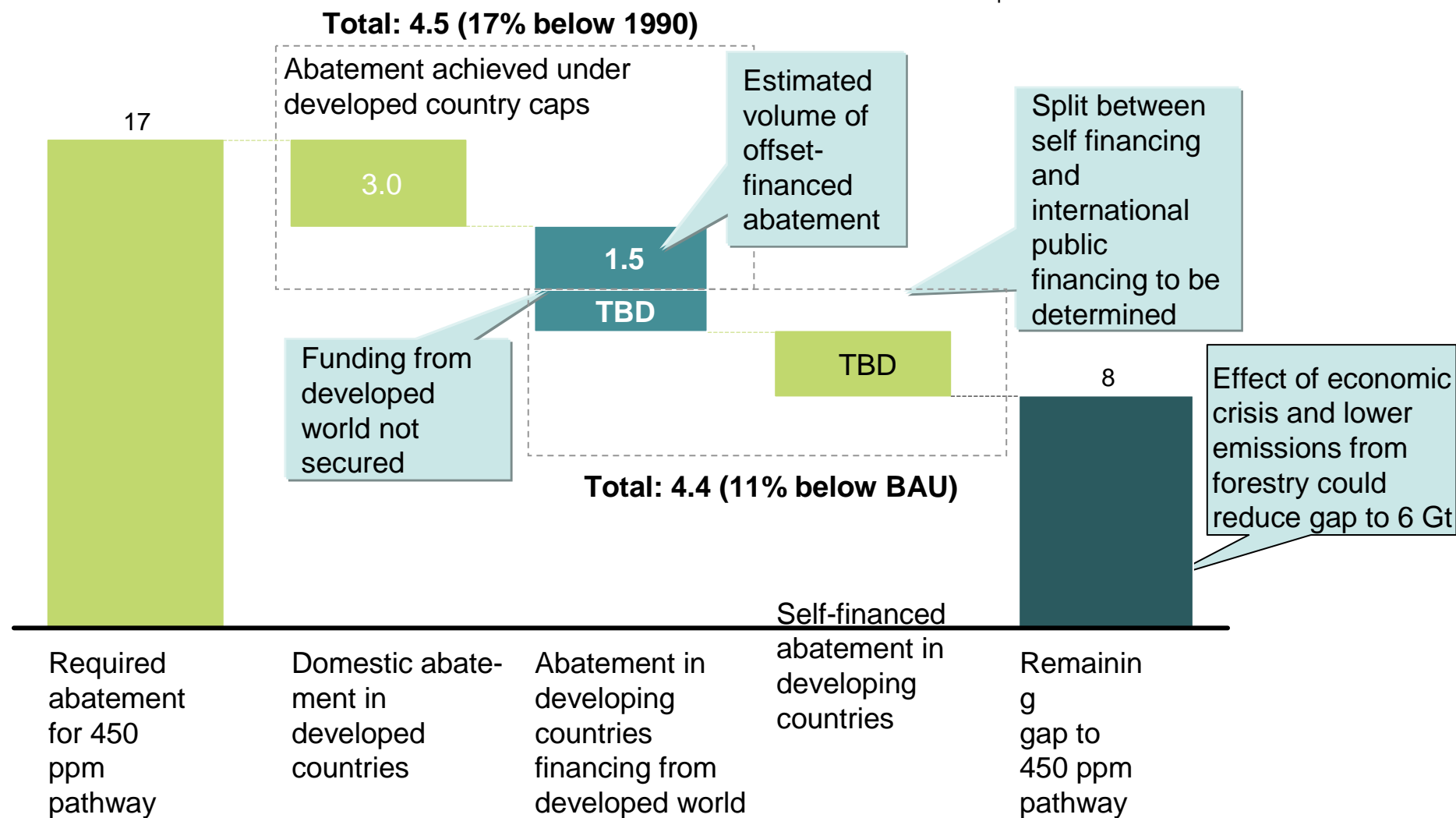
Gt CO₂e per year



Big shortfall in reductions and financing

The split of the required abatement in 2020
Gt CO₂e, 2020

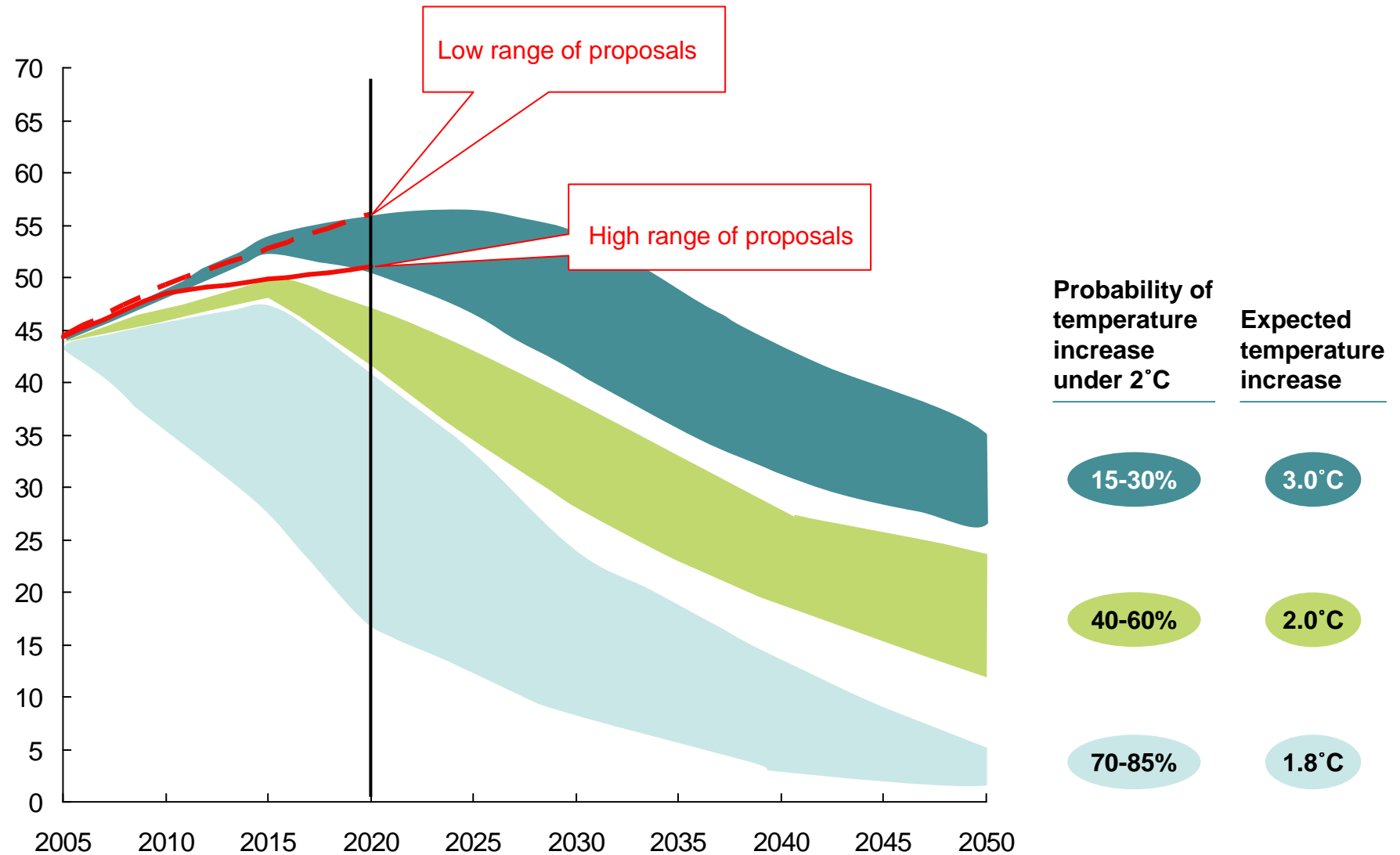
■ Abatement needing additional financing (to meet incremental costs) from developed world



Current proposals will at best lead to a 550 ppm pathway

- Peak at 550 ppm, long-term stabilization 550 ppm
- Peak at 510 ppm, long-term stabilization 450 ppm
- Peak at 480 ppm, long-term stabilization 400 ppm

Global GHG emissions and pathways for GHG stability, Gt CO₂e, 2020



Source: IPCC WG3 AR4; den Elzen, van Vuuren; Meinshausen; McKinsey Global GHG Abatement Cost Curve v2.0; Project Catalyst analysis

- Developed country reduction proposals only 5-17% below 1990 collectively (IPCC 450 ppm numbers: 25-40%)
- Developing country reduction proposals only 6-11 % below BAU (IPCC 450 ppm numbers: 15-30%)
- Together this is *at best* a 550 ppm CO₂e or 3 degree scenario
- Negotiation process cannot deliver full agreement in Copenhagen:
 - Too many areas of disagreement
 - US not ready
 - Increasing lack of trust between North and South
 - Developing countries want to retain KP, developed KP countries not

A two step process to get to an agreement

- STEP 1 Copenhagen December: COP decision capturing political agreement on key issues:
 1. Global objectives (2 degrees/ 450ppm)
 2. Low carbon growth plans
 3. Developed country 80% reduction by 2050
 4. Developed countries :commitment to low end of reductions in schedule (high end 6 months later)
 5. Developing countries : commitment to implement low end of actions (high end later)
 6. Establishment of registry
 7. Technology development cooperative arrangements
 8. Agreement to maximise actions on avoiding deforestation and planting forests
 9. Interim agreement on finance: fast start fund for adaptation and mitigation, architecture, carbon market regulation, indicative long-term financing
 10. Measurement, reporting and verification (MRV) principles

- STEP 2 COP-15 bis: COP decision on full treaty, including
 1. High end of reductions and NAMAs
 2. Long-term financing arrangements
 3. Final MRV arrangements
 4. Final legal form of ratifiable agreement

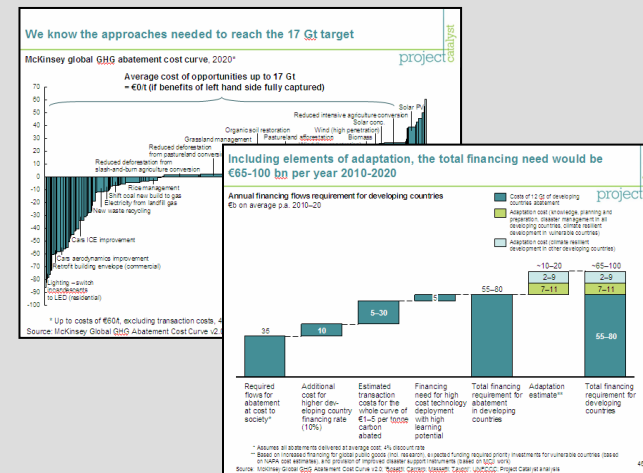
PLUS: review/recommitment by 2015

Project Catalyst has produced a range of analyses and materials

Working papers



Presentation materials and analyses



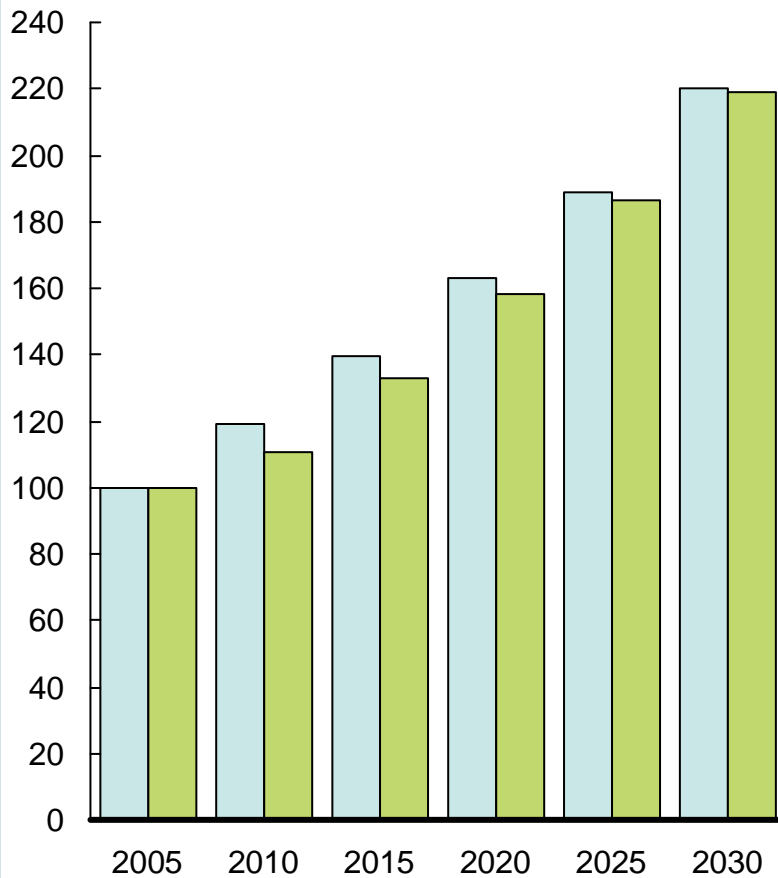
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The effect of the economic crisis on BAU emissions is limited

2007 forecast
2009 forecast

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Global GDP growth forecasts, pre- and post-crisis 2005 = 100



Global BAU emissions based on GDP growth forecasts Gt CO₂e

