

International practice in tracking climate finance and support

- How donors see and report support provided
- Challenges in current diverse approaches
- Institutional structures

30 April 2024



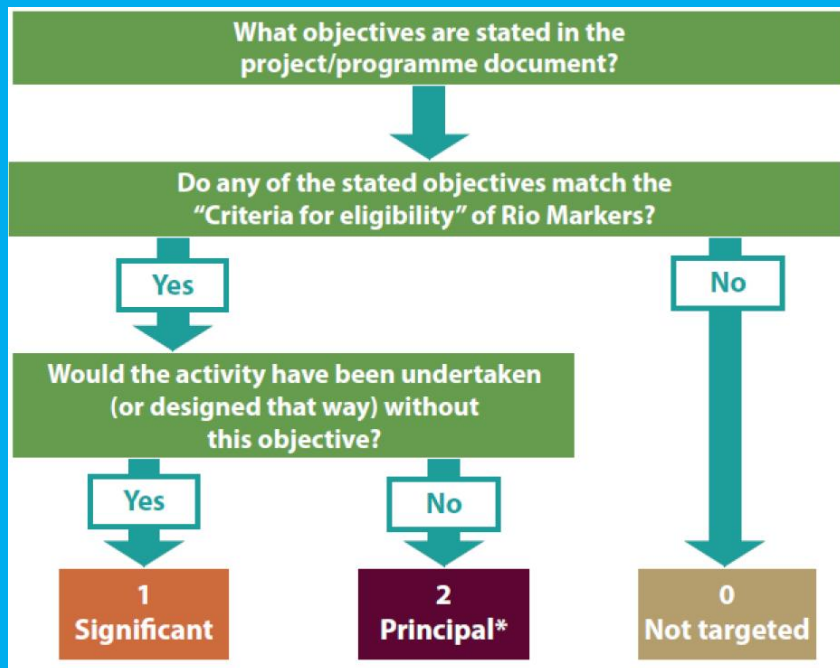
copenhagen
climate centre

supported by  UNOPS



Federico A. Canu
Project Officer
UNEP Copenhagen Climate Centre
federico.canu@un.org

How donors see support - provided - Rio Markers



Source: OECD, *OECD DAC Rio Markers for Climate Handbook*

The screenshot shows the OECD website's 'Climate Change: OECD DAC External Development Finance Statistics' page. It features a navigation bar with 'OECD.org', 'Data', 'Publications', 'More sites', 'News', and 'Job vacancies'. The main content area includes a search bar, a 'Climate Change: OECD DAC External Development Finance Statistics' title, and a list of links to explore statistics, such as 'Definition and guidance for the Climate Rio Markers' and 'Climate-related development finance at the activity level'.

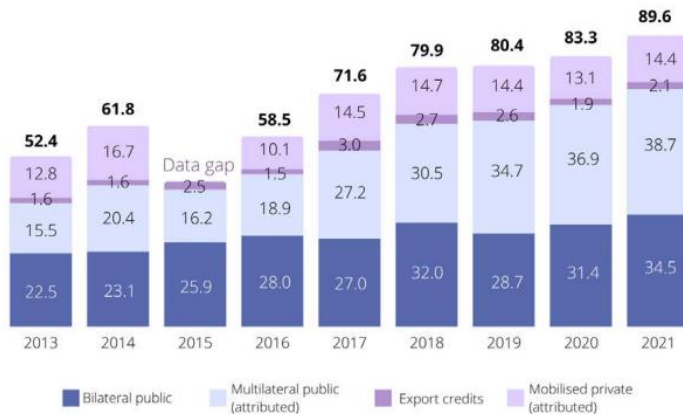
OECD DAC External Development Finance Statistics:

How donors see it - provided and mobilized



Improving risk-return profiles of projects

Figure 1.1. Climate finance provided and mobilised by developed countries for developing countries, 2016-21 (USD billion)



Source: Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

OECD (2023), Scaling Up the Mobilisation of Private Finance for Climate Action in Developing Countries: Challenges and Opportunities for International Providers, Green Finance and Investment, OECD Publishing, Paris, <https://doi.org/10.1787/17a88681-en>.

Table A B.1. Overview of the categories of finance considered and data sources

Category	Coverage	Instruments	Data source
Bilateral public	Climate finance outflows from donor countries' bilateral development finance agencies and institutions	Grants, loans, equity investments (USA only: developmental guarantees)	Biennial reports to the UNFCCC and complementary data submissions
Multilateral public (attributed to developed countries)	Climate finance outflows from multilateral development banks and climate funds attributable to developed countries	Grants, loans, equity investments	OECD Development Assistance Committee statistics (total multilateral outflows); institutions' annual reports (for calculating attribution shares)
Export credits	Climate-related export credits provided by developed countries' official export credit agencies, mostly for renewable energy	Export credit loans, guarantees, and insurance	OECD Export Credit Group statistics and complementary data submissions
Mobilised private (attributed to developed countries)	Private finance mobilised by bilateral and multilateral public climate finance	Private finance mobilised by grants, loans, equity and developmental guarantees	OECD Development Assistance Committee statistics and complementary data submissions

OECD (2020), Climate Finance Provided and Mobilised by Developed Countries in 2013-18, OECD Publishing, Paris, <https://doi.org/10.1787/f0773d55-en>

Different approaches to the same method - Developed countries (Rio Markers)

Table 1. Diversity of approaches in accounting and reporting to the UNFCCC for bilateral public climate finance (2013–2014).

	Coverage			Point of measurement		Component approach	Quantification		Format of data	
	ODA	OoF	Inclusion of "coal finance"	Commitments	Disbursements		Coefficient on Rio marker "Principal"	Coefficient on Rio marker "Significant"	Project level	Aggregates or semi-aggregates
Australia	✓	✓	✓		✓	✓	100%	30% ^a		✓
Austria	✓	✓		✓			100%	50%		✓
Belgium	✓	✓			✓		Range of coefficients		✓	
Canada	✓				✓		100%	– ^b		✓
Denmark	✓			✓	✓		100%	100%	✓	
EU Institutions	✓	✓		✓			100%	50%		✓
Finland	✓				✓		Range of coefficients			✓
France	✓	✓		✓		✓	100%	40%	✓	
Germany	✓	✓		✓	✓		100%	50%	✓	✓
Greece	✓				✓		100%	100%	✓	
Iceland	✓			✓			100%	100%		✓
Ireland	✓				✓		100%	50%		✓
Italy	✓	✓		✓	✓ ^d		100%	40%		✓
Japan	✓	✓	✓	✓ ^c	✓ ^d		100%	100%		✓
Luxembourg	✓	✓			✓		100%	100%		✓
Netherlands	✓				✓		100%	40%		✓
New Zealand	✓				✓		100%	30% ^e		✓
Norway	✓				✓		100%	100%		✓
Portugal	✓	✓		✓			100%	0%		✓
Spain	✓	✓			✓		100%	20–40% ^f	✓	✓
Sweden	✓			✓	✓		100%	40%	✓	
Switzerland	✓				✓		51–100% 1–50%			✓
United Kingdom	✓				✓	✓	Uses another methodology for its reporting to the UNFCCC		✓	✓
United States	✓	✓		✓			Use another methodology for its reporting to the UNFCCC			✓

Source: Modified from OECD-CPI (2015, p. 43; pp. 45–46) (based on responses to OECD survey on expected reporting by Annex II Parties in their Second Biennial Reports), with additions from our screening of Annex II Parties' Second Biennial Reports that were to be submitted to the UNFCCC Secretariat by 1 January 2016.

^aWhere climate change is a significant objective, project-by-project assessment is undertaken to determine the climate change component, and that component is counted as climate support. Where it is not possible to disaggregate the climate change component, Australia uses a 30% coefficient of the "significant" portfolio.

^b"Significant" activities are screened and the most climate-relevant are counted.

^cFor loans and grants.

^dFor technical assistance.

^eDefault, unless an activity-specific coefficient is available.

^fActivities targeting climate mitigation or adaptation as a significant objective (only) are accounted as 20% and operations targeting both mitigation and adaptation as a significant objective are accounted as 40%.

Source: Romain Weikmans & J. Timmons Roberts (2017)

Different approaches and different methods - Developing countries

Table 2. Reporting approaches used by some non-Annex I parties for financial support received.

	Reported in tabular format			Allocation channels					Sectors			Financial instruments					Other								
	Per project or activity	Per donor	Per thematic area ^a	Only headline figures	Top donors	Bilateral	Multilateral	Multilateral financial institutions	Multilateral climate change funds	Specialized United Nations bodies	Private GEF	Private foundations	Private sector	Thematic ^a	Economic ^b	Grant	Concessional loan	National Loan budget	Result-based payment	Leasing	ODA/non-ODA	Status of finance ^c	Domestic finance flows	Co-financing	
Argentina	✓				✓					✓														✓	
Armenia	✓					✓		✓	✓																
Brazil		✓				✓	✓			✓															
Chile	✓					✓	✓	✓					✓	✓								✓			
Colombia		✓				✓	✓			✓															
Ghana	✓					✓	✓			✓	✓	✓		✓	✓		✓	✓	✓				✓	✓	✓
Indonesia		✓				✓	✓			✓								✓				✓	✓		
Lebanon		✓			✓	✓	✓	✓																	
Malaysia	✓					✓	✓	✓		✓															
Mauritania	✓					✓	✓			✓															
Mexico				✓									✓	✓	✓		✓	✓		✓					
Montenegro		✓			✓					✓	✓						✓	✓							
Morocco	✓					✓	✓	✓		✓			✓			✓									✓
Paraguay		✓				✓	✓	✓		✓															
Peru	✓					✓	✓	✓					✓			✓									✓
Moldova (R. of)	✓					✓	✓	✓		✓			✓	✓	✓		✓				✓				✓
South Africa	✓					✓	✓	✓					✓			✓					✓		✓	✓	
Thailand	✓					✓				✓	✓		✓												
Tunisia	✓					✓				✓	✓		✓												
Viet Nam			✓										✓												✓

Source: Data extracted from UNFCCC SCF (2016, pp. 32–33; pp. 103–105).

^aFor example, mitigation and adaptation.

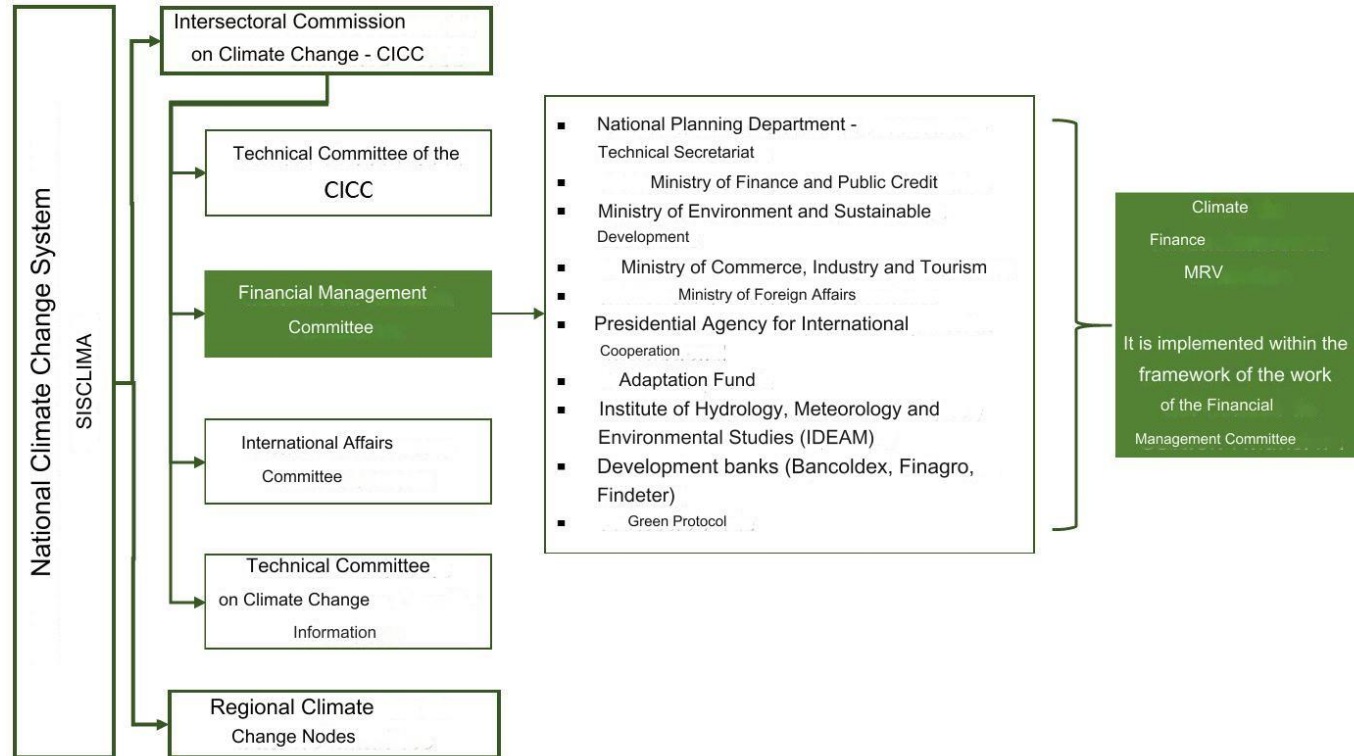
^bFor example, energy, transport and agriculture.

^cReceived or approved. Parties are shown in alphabetical order. The 20 non-Annex I Parties included in this table are those that had submitted their BURs as at 30 June 2016 and that provided summary information on financial support received during a certain period of time. In total, 32 non-Annex I Parties had submitted their BURs by 30 June 2016. Twelve of these 32 non-Annex I Parties do not appear in this table because they indicated financial support received only for some projects, activities, sectors or donors, or did not include quantitative financial information at all in their BURs.

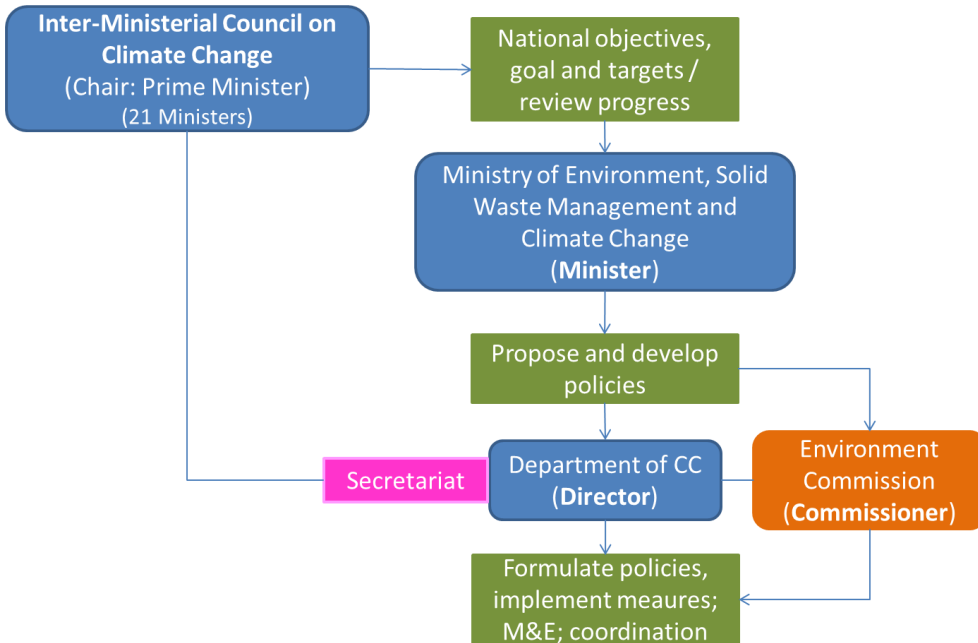
Climate Support - Approaches for Institutional arrangements

Type of Finance		Sources of information		Compilation into reports to UNFCCC	QA & QC (in addition to internal procedures)	Validation	Use
		Potential decentralized data sources	Centralized				
Public	Domestic	-Each sectoral ministry	-Ministry of Finance	Ministry of Environment / CC Department or similar	-Academia -National Statistics -Independent units in Ministry of Environment / Finance	-Council of Ministers -Ministry of Finance	-National and regional governments -Climate finance providers (Nat. /Int. - Public /private -Private sector -Academia -UNFCCC
		-Regional / Local governments					
	International	-National Development Bank					
		-Mix of sectoral ministries					
Private	Domestic	-National Development Bank	-CC Committee				
		-Chamber of Commerce	-Ministry of Finance				
		-Ministry of Finance	-Climate Change Committee				
	International	-Private companies	- Business association /Chamber of Commerce				
		-Chamber of Commerce					
		-Ministry of Finance					
	-Mix of sectoral ministries						

Approaches for Institutional arrangements - Colombia



Institutional arrangements - Mauritius



Source: Dr Prakash (Sanju) Deenapanray, 2020

The Department shall, in collaboration with the Ministries be responsible for the formulation of a National Climate Change Adaptation and Mitigation Strategy and Action Plan, including:

1. national development priorities
2. policy formulation
3. an action plan and investment programme
4. information on compliance with international commitments
5. research and development
6. climate data and information
7. recommendations on education, training and public awareness
8. approaches for monitoring, evaluation and reporting

Take home points

- Lack of common definitions, methods and approaches
- Define how you classify climate finance and financial support
- Identify where mandates, data and information resides and structure arrangements around that

Approaches to assess support received

- Assigning climate components / climate relevance to budgets
- Concessionality aspects of climate finance



Climate support received

Financial

- Funds received in country accounts / transferred?
 - Depends on country's own definition (e.g. private finance)
- Includes activities related to:
 - Technology development and transfer
 - Capacity building
 - Transparency? (avoid double counting)

Technology development and transfer

- Including support not received in country accounts / transferred

Capacity-building

- Including support not received in country accounts / transferred

Transparency (Article 13)

- *Both in and out of country accounts / transferred (avoid double counting)*

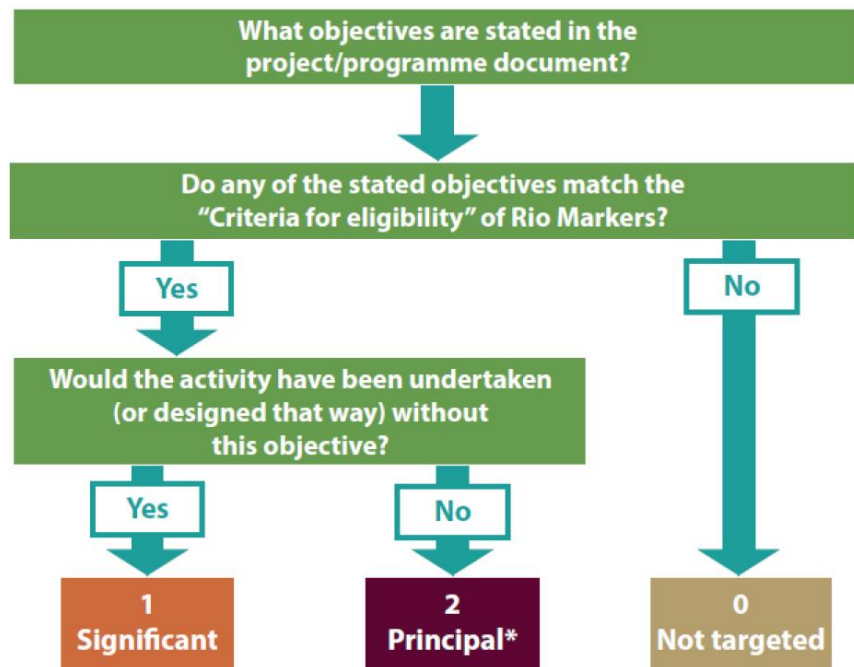


Financial support for CC?

Depending on the provider /recipient perspective



Rio Markers Scoring system - simple



Source: OECD, *OECD DAC Rio Markers for Climate Handbook*

Used for financial contributions labelled as Official Development Assistance (ODA)

Indicate if the objective is related to environmental issues including climate change

Not Targeted (0)

The activity does not target the objective (mitigation or adaptation) significantly

Significant (1)

Mitigation or adaptation is explicitly stated but it is not the fundamental driver. The activity has other prime objectives but it has been formulated or adjusted to help meet the relevant climate concerns.

Principal (2)

Mitigation or adaptation is explicitly stated as fundamental in the design of, or the motivation for, the activity.

Fixed percentages of the overall budget are considered to be relevant for the respective themes. (E.g. The EU uses 0%, 40% and 100%, respectively)

CPEIR weight examples – more precise

High relevance	Rationale	Clear primary objective of delivering specific outcomes that improve climate resilience or contribute to mitigation
Weighting more than 75%	Examples	<ul style="list-style-type: none"> • Energy mitigation (e.g. renewables, energy efficiency) • Disaster risk reduction and disaster management capacity • The additional costs of changing the design of a programme to improve climate resilience (e.g. extra costs of climate proofing infrastructure, beyond routine maintenance or rehabilitation) • Anything that responds to recent drought, cyclone or flooding, because it will have added benefits for future extreme events • Relocating villages to give protection against cyclones/sea-level • Healthcare for climate sensitive diseases • Building institutional capacity to plan and manage climate change, including early warning and monitoring • Raising awareness about climate change • Anything meeting the criteria of climate change funds (e.g. GEF,PPCR)

Medium relevance	Rationale	Either (i) secondary objectives related to building climate resilience or contributing to mitigation, or (ii) mixed programmes with a range of activities that are not easily separated but include at least some that promote climate resilience or mitigation
Weighting between 50% to 74%	Examples	<ul style="list-style-type: none"> • Forestry and agroforestry that is motivated primarily by economic or conservation objectives, because this will have some mitigation effect • Water storage, water efficiency and irrigation that is motivated primarily by improved livelihoods because this will also provide protection against drought • Bio-diversity and conservation, unless explicitly aimed at increasing resilience of ecosystems to climate change (or mitigation) • Eco-tourism, because it encourages communities to put a value of ecosystems and raises awareness of the impact of climate change • Livelihood and social protection programmes, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability. This will include programmes to promote economic growth, including vocational training, financial services and the maintenance and improvement of economic infrastructure, such as roads and railways

Low relevance	Rationale	Activities that display attributes where indirect adaptation and mitigation benefits may arise
Weighting between 25% – 49%	Examples	<ul style="list-style-type: none"> • Water quality, unless the improvements in water quality aim to reduce problems from extreme rainfall events, in which case the relevance would be high • General livelihoods, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability in areas of low climate change vulnerability • General planning capacity, either at national or local level, unless it is explicitly linked to climate change, in which case it would be high • Livelihood and social protection programmes, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability. This will include programmes to promote economic growth, including vocational training, financial services and the maintenance and improvement of economic infrastructure, such as roads and railways

Marginal relevance	Rationale	Activities that have only very indirect and theoretical links to climate resilience
Weighting less than 25%	Examples	<ul style="list-style-type: none"> • Short term programmes (including humanitarian relief) • The replacement element of any reconstruction investment (splitting off the additional climate element as high relevance) • Education and health that do not have an explicit climate change element

Project based accounting – even more precise

Look at each individual component / activity in projects and tag by component / activity.

- Time consuming but more precise
- Needs a decentralized approach where project managers are involved.

Concessionality

- Is all climate relevant finance support?

Figure 1.4. Bilateral climate finance loans by concessionality level, (2016-18, %)

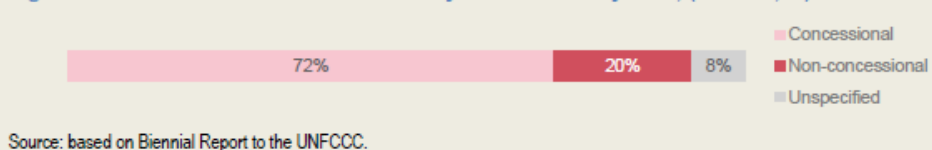
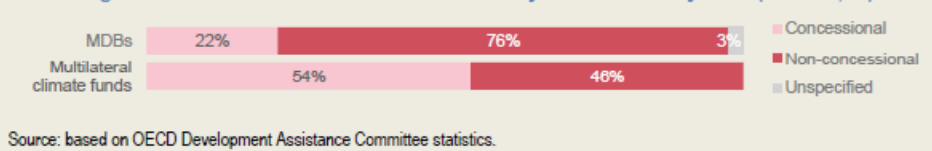
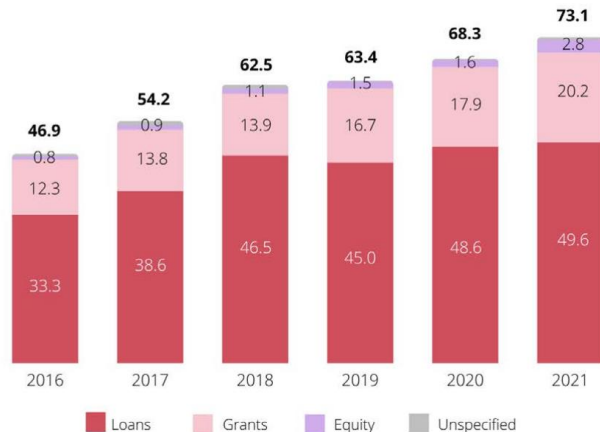


Figure 1.5. Multilateral climate finance loans by concessionality level (2016-18, %)



OECD (2020), Climate Finance Provided and Mobilised by Developed Countries in 2013-18, OECD Publishing, Paris, <https://doi.org/10.1787/f0773d55-en>

Figure 3. Instrument split of public climate finance in 2016-2021 (USD billion)



Note: Figures may not add up to totals due to rounding.
Source: Based on Biennial Reports to the UNFCCC and OECD Development Assistance Committee, as well as complementary reporting to the OECD.

OECD (2023), Climate Finance Provided and Mobilised by Developed Countries in 2013-2021: Aggregate Trends and Opportunities for Scaling Up Adaptation and Mobilised Private Finance, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris, <https://doi.org/10.1787/e20d2bc7-en>

Things to consider:

- What is the support aspect of the loan or financial instrument?
 - Is it fair to only report the grant component?
- Can loans at market rate be considered support?
 - Potentially yes, if the recipient could not get it under regular circumstances?

Existing databases – if you are starting from scratch

OECD Home | Development Co-operation Directorate | Financing for sustainable development | Development finance topics | Climate Change: OECD DAC External Development Finance Statistics

Climate Change: OECD DAC External Development Finance Statistics

OECD development finance statistics capture an integrated picture of both bilateral and multilateral climate-related external development finance flows.

Explore statistics with the following:

- Definition and guidance for the Climate Rio Markers
- Guidance table for Climate Change Rio markers (xls)
- Methodological note on the OECD-DAC climate-related development finance databases (pdf)
- Results of the survey on the coefficients applied to Rio Marker data when reporting to the UN Conventions on Climate Change and Biodiversity (pdf)
- Impuded multilateral shares (xls)
- Climate-related bilateral development finance by objective (xls)
- **Keynote perspectives (Excel)**
 - 2000-2009, 2010-2011, 2012-2013, 2014-2015, 2016, 2017, 2018
 - Provider perspective (Excel)
 - 2012-2013, 2014-2015, 2016, 2017, 2018



Climate-related development finance data (2015)
Download the pdf

- Year
- Provider
- Amounts
- Scope
- Sector/sub-sector
- Financial instrument
- Short description
- From developing country perspective:
- Inflated financial support?
- Doesn't capture technology development and transfer and capacity building

OECD DAC External Development Finance Statistics: <http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm>

Year	Provider	Prevent	Prevent+Adapt	Adapt	Agency	Extended	CRS ID	Source	Recipient	Preceptor	Preceptor	General	Climate	Adapt	Mitigat	Adapt	Mitigat	Mitigat	Overall	Overall	Climate	Climate	Channel	Channel	Subsector	Subsector	Type of	Type of	Short	Short	Country	Country	Share	Gender			
2014	Multilateral	Austria	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2014	Multilateral	Austria	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2014	Multilateral	Austria	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2014	Multilateral	Austria	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



copenhagen climate centre



Take home points



Existing databases to get information on support provided as bases to map support received and cross reference

Make your own assessment of what you consider climate relevant and appropriate weights

Consider what you classify and differentiate between finance and support taking different financial instruments and use of funds into consideration

Approaches to assess support needed

- What is financial support needed from a developing country perspective?
- Proposed steps to map support needed



Financial support needed - tentative

In theory: Total climate related investments needed (public and private, national and international), and subtract available/expected national (public and private) contributions

In practice, more complex...

There might be overlaps, focus should be on clear definitions and descriptions

- Full size of investment VS
- Financial support addressing investment barriers, technology and capacity gaps VS
- Only concessional aspects (grant equivalent)

Financial support –

1. NDC costing (and benefits)



You cannot communicate financial support needs without an overview of costs.

- Map costs / investment needs for the NDC, action by action
- Translate policies and programmes into activity data and assign costs to the activities (e.g. number of PV systems, type of early warning system, trees to be planted, number of rangers for forest protection etc.)
- Identify technology and capacity needs and estimate costs of technical assistance

Financial support –

2. Estimate revenue streams / savings



Climate action is not only costs. Many actions will generate revenues or lead to savings (e.g. electricity sales / savings, reduced damage from flooding etc.)

- For each costed action identify revenue streams / savings to identify the cost/revenues expected from each action
- Compare Costs and Benefits
- Costs should include the cost of financing

Efficient residential air conditioner (1000 units)			
Costs in US\$	Reduction Option	Reference Option	Increase (Red.-Ref.)
Total investment	130,000		
Project life	8		
Lev. investment	21,771	0	
Annual O&M	0	0	
Annual electricity cost	315,000	471,910	-156,910
Total annual cost	336,771	471,910	-135,139
Annual emissions (tons)			
	Tons	Tons	Reduction
Fuel CO2-eq. emission	2,580	3,865	1,285
Other			
Total CO2-eq. emission	2,580	3,865	1,285
US\$/ton CO2-eq.			-105
Notes: COP=Coefficient Of Performance = cooling capacity divided by input power Most air conditioner have input power of 9000 Btu/hr (995W) or 12000 Btu/hr (1120 W) Conventional COP from PWC Energy Audit Efficient COP from most used efficient air conditioner			

General inputs:	
Discount rate	7%
Average electricity price	0.12 US\$/kWh
CO2-eq. emission coefficient	0.80 ton CO2-eq./MWh
Grid loss	18.6%
Reduction option: Efficient air conditioner	
O&M	0% US\$
Activity	1,000 Air conditioner
Lifetime	5 yrs
Extra cost for eff. air conditioner	130.0 US\$
Cooling capacity	2.50 kW
COP	4.00
Input power	0.63 kW
Annual usage	4,200 hrs
Annual electricity used	2625 MWh
Reference option: Conventional air conditioner	
O&M	- US\$
Activity	1000 Air conditioner
Cooling capacity	2.50 kW
COP	2.67
Input power	0.94 kW
Daily usage	14 Hours/day
Days used	300 Days/year
Annual usage	4,200 hrs
Annual electricity used	3933 MWh
Electricity saved 1 unit	1308 MWh
Electricity saved compared to reference	0 Saving

1 MW Biomass power from biomass residues - 2025			
Costs in US\$	Reduction Option	Reference Option	Increase (Red.-Ref.)
Total investment	1,489,720		
Project life	20		
Lev. investment	140,619		140,619
Annual O&M	59,589		59,589
Annual fuelcost	169,541	600,000	-430,459
Total annual cost	369,749	600,000	-230,251
Annual emissions (tons)			
	Tons	Tons	Reduction
Fuel CO2-eq. emission		4,000	4,000
Other			
Total CO2-eq. emission	0	4,000	4,000
US\$/ton CO2-eq.			-57.6
Notes:			

General inputs:	
Discount rate	7%
Reference electricity price	0.12 US\$/kWh
CO2-eq. emission coefficient	0.80 tCO2/MWh
Reduction option: Biomass residues power plant	
O&M	4.0%
Activity	1 MW
Investment in Activity	1489.7 Million US\$
Capacity factor	5000 Full time hours
Electricity production	5000 MWh/ year
Calorific value of biomass	13.0 GJ/t
El. efficiency of power plant	30.0%
Specific use of biomass	0.93 ton biomass/MWh
Use of biomass	4626 ton/year
Price of biomass	16.0 US\$/t
Cost of electricity produced	0.832 US\$/kWh
Reference option: No Biomass power	
	programme

3. Assess national sources of finance



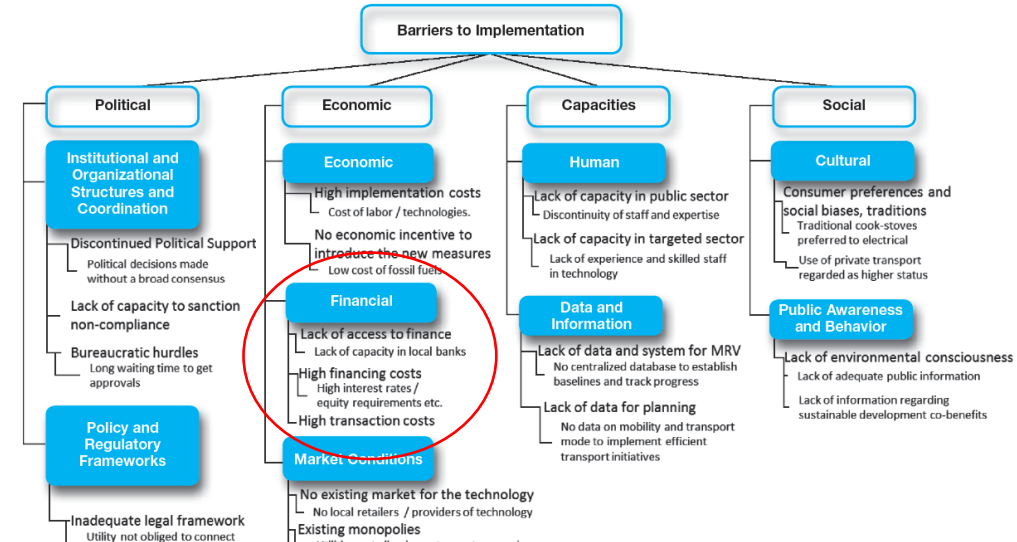
Climate action operates seldom in a vacuum and is usually part of the general development of a country

- Estimate available sources of finance for each action (relates to unconditional component, if relevant)
 - Public programmes, infrastructure and interventions
National financial resources allocated, the national budget
 - Private sector investments
Market trends, costs of technology and assumptions for future developments
- National sources of finance should be subtracted from needed amounts

4. Assess financial / investment barriers

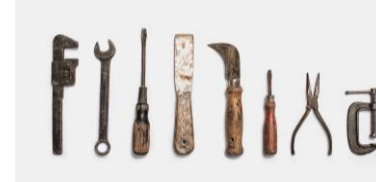
E.g.:

- High cost of capital (e.g. interest rates)
- Risk profile of investments (e.g. currency exchange)
- Long term nature of investments and pay-back
- Expected IRR for investors in local context
- Level of indebtedness



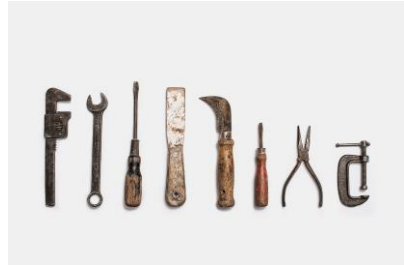
Financial Barriers	<ul style="list-style-type: none"> • Local financial institutions are unfamiliar with the energy efficiency financing mechanism with persistent implementation failure of precedents. • Banks are highly risk-averse in energy efficiency financing, thereby imposing high interest rates and asking a borrower for providing stringent credit and/or collateral and high equity injection which local SMEs are remotely capable of clinging to. • No credit mitigation technique including the de-risking mechanism (such as guarantee or insurance) for energy efficiency in the local market. • Financial institutions, in particular large-sized banking institutions, have little interest in financing energy efficiency projects since many are relatively small-scale projects led by SMEs with low credit. • High interest rates or collateral requirements for energy efficiency projects due to risk analysis difficulties.
---------------------------	---

5. Identify appropriate financial instruments

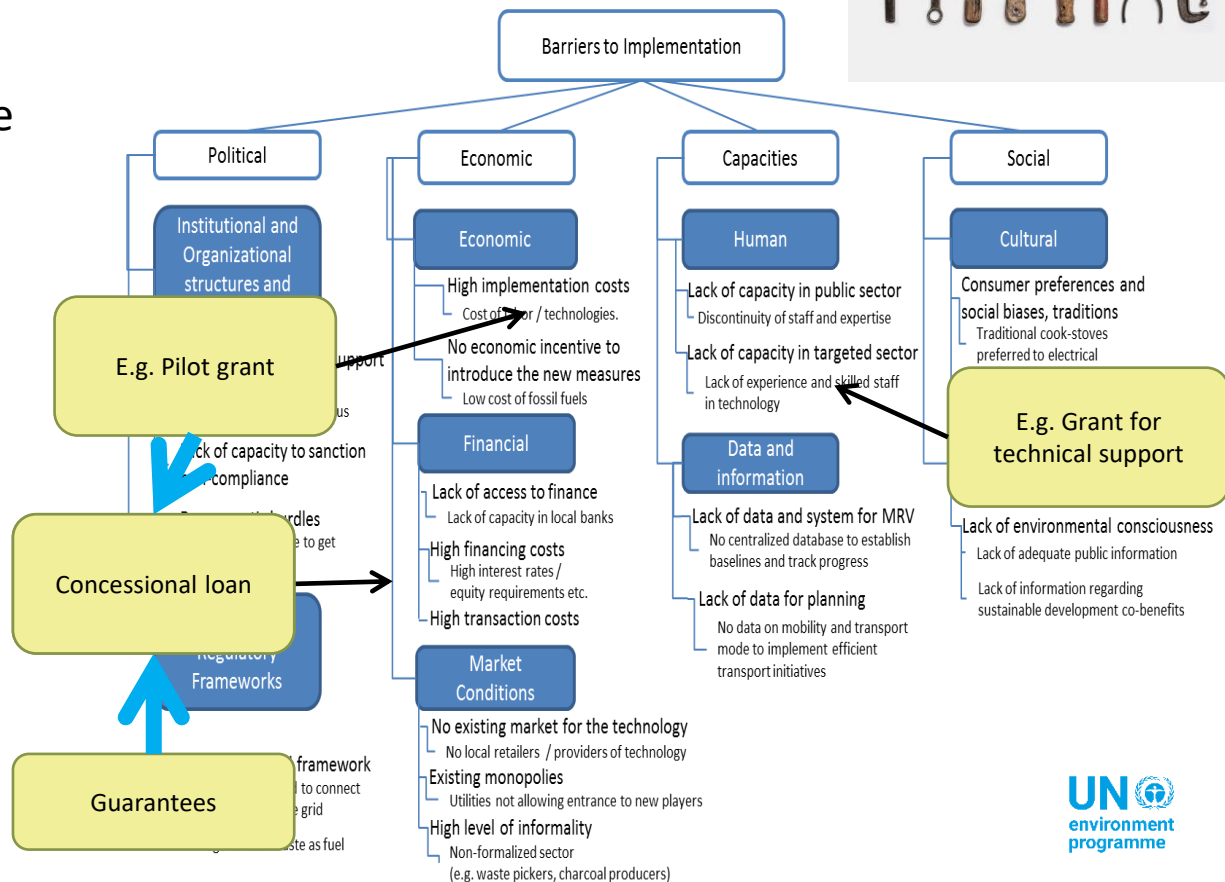


Instruments	Description
Grant	Transfers made in cash, goods, or services for which no repayment is required.
Concessional loan	These are loans that are extended on terms substantially more generous than market loans. The concessionality is achieved either through interest rates below those available on the market or by grace periods, or a combination of these. Concessional loans typically have long grace periods.
Market loan	A marketing loan is a variation of the non-recourse loan whereby, for specified commodities, a producer may repay a loan at a lower rate than the loan rate, equivalent to the prevailing world market price.
Lines of credit	Credit is an amount for which there is a specific obligation of repayment. Credits include loans, trade credits, bonds, bills, etc., and other agreements which give rise to specific obligations to repay over a period of time usually, but not always, with interest.
Risk or credit guarantee	Commitment by an export credit agency to reimburse a lender if the borrower fails to repay a loan. The lender pays a guarantee fee.
Equity	Equity refers to the value of the interest of an owner or partial owner in an asset.

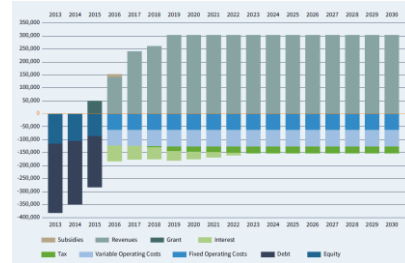
5b. Identify appropriate financial instruments



- Consider the most effective instrument to achieve the desired outcome (remove identified barriers)



5c. Identify appropriate financial instruments



- Consider the most effective instrument to achieve the desired outcome (remove identified barriers)
- Grants are usually not provided for investments, but can be applied for technical assistance, preparatory activities and potentially investments in pilots
- Debt finance is usually used to cover CAPEX and concessional finance (support) is an effective instrument to improve the overall attractiveness of the investment
- Guarantees ensuring expected revenues are realised or losses by investors prevented are effective at lowering financing costs without the need for upfront disbursements
- Financial support dedicated for O&M unrealistic
- Adaptation more likely to receive grants than mitigation

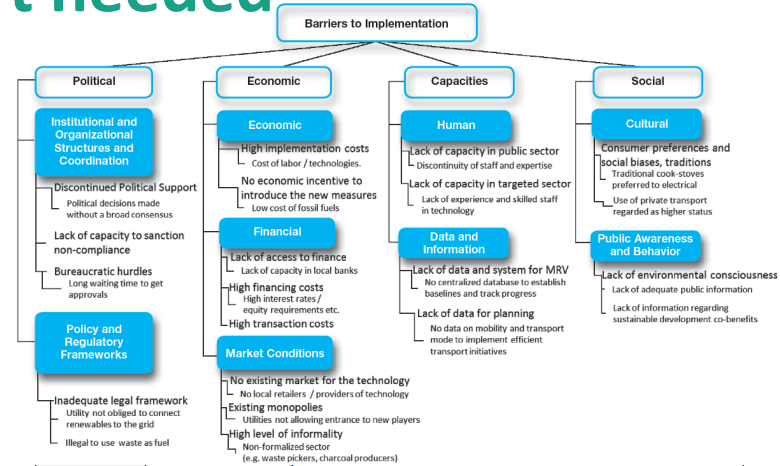


	Activities	Estimated cost	Month start	Month finish
Proposal preparation				
P1	Permits	15,000	1	12
P2	Technical analysis	15,000	1	24
P3	Consultancy contracts	15,000	1	24
	<i>Subtotal</i>	<i>45,000</i>		
Construction & pre-operation				
C1	Land acquisition	240,000	6	12
C2	Engineering	110,000	6	12
C3	Machinery 1	2,381	6	12
C4	Machinery 2	200,000	13	24
C5	Machinery 3	111,000	13	24
C6	Machinery 4	22,333	13	24
C7	Testing 1	300,000	25	36
C8	Testing 2	33,334	25	36
C9	Interest payment during construction	50,952	6	36
	<i>Total</i>	<i>1,070,000</i>		
Operation Phase				
Revenue				
R1	Revenue	Table 4	37	216
Operating costs				
O1	Labour	Table 5	37	216
O2	Rent	Table 5	37	216
O3	Communication	Table 5	37	216
O4	Fuels	Table 5	37	216
O5	General & administration	Table 5	37	216

UNEP-World Partnership, 2020 Finance Guide for Implementation of Technology Action Plans

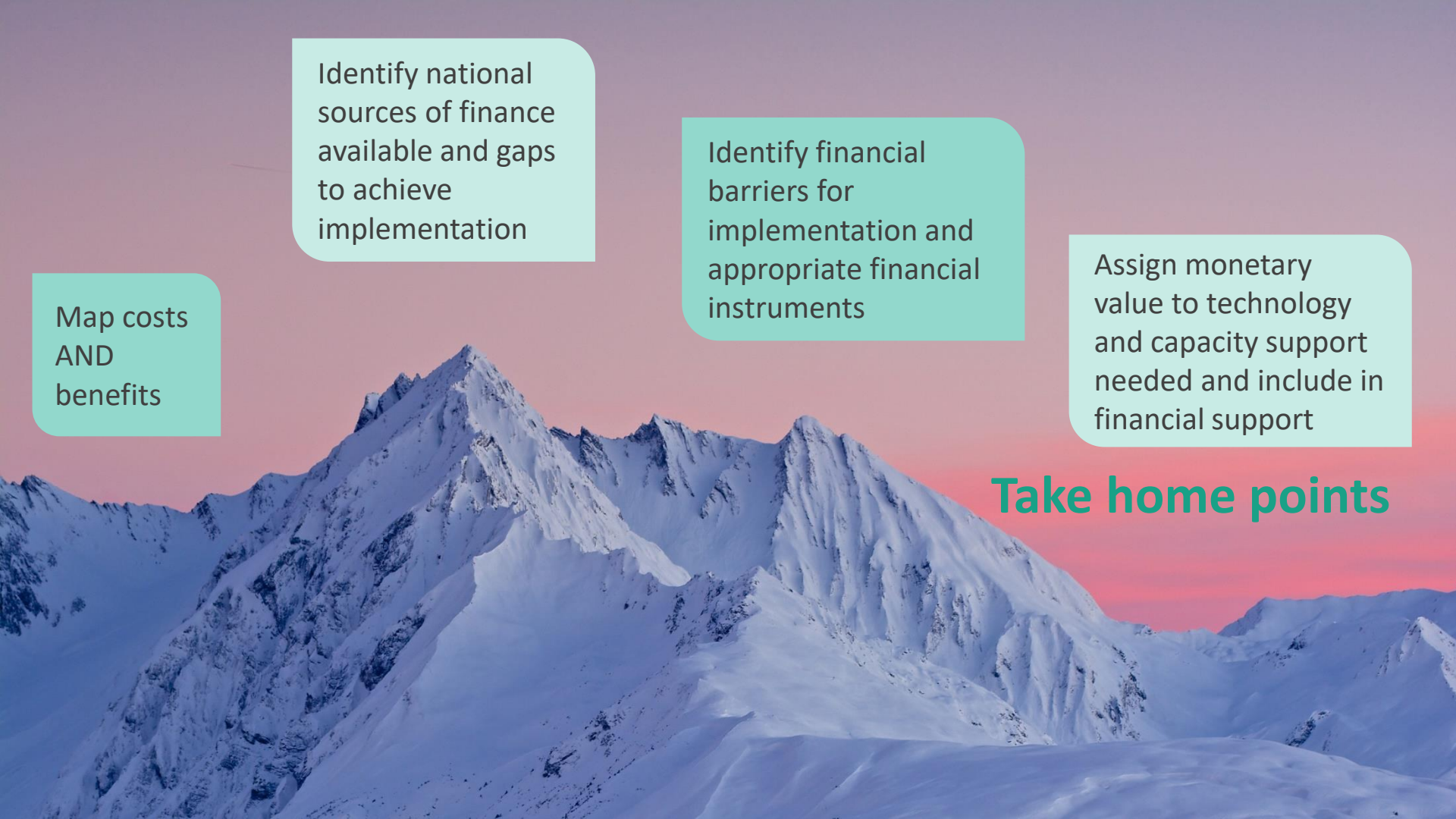
6. Technology and capacity support needed

- Identify technology and capacity constraints
- Assign monetary value to support needed and incorporate in financial support needed
- Cross-reference between financial and technology and capacity support needed



Demand-side Barriers	<ul style="list-style-type: none"> • Low demand for high-energy efficiency facilities due to low energy tariffs. • Market players lack awareness of assessing energy efficiency technologies and capacity and resources in carrying out its cost-benefit analysis, which partially results in a low prioritisation of investing in energy efficient projects. • Industries are yet to recognise the regulatory requirements with respect to energy efficiency reporting and implementation. • There are not many well-trained in-house energy managers nor extensive pools of experienced experts in energy efficiency, mainly due to little
-----------------------------	--

Regulatory Barriers	<ul style="list-style-type: none"> • The subsidised energy tariff is a disincentive for industries to invest in energy savings; the price of electricity is US\$ 0.078/kWh for businesses (medium voltage),¹⁰ which is lower than that of other ASEAN Member states.¹¹ As part of the COVID-19 recovery measure, an incentive of 100% (later reduced to 50%) discount on electricity was provided, especially for low-income households and small businesses. • No minimum energy performance standard (MEPS) for industrial equipment and appliance is available to serve as guidance. • No regulation to encourage less energy intensive sectors (motor, boiler, etc.) due to lack of awareness amongst policy makers, despite the large GHG emission from those sectors. • Existing fiscal or non-fiscal incentives from the government to promote the energy efficiency area have not been disseminated to industries or financiers, nor been sufficient enough to boost the market. For instance, Article 20 of Government Regulation No.70/2009 (Energy Conservation) states that incentives may vary in the form of provision from taxation facility for energy saver equipment to low interest-rate funds for the need of investment in energy conservation. It, however, does not work in the market.
----------------------------	--



Identify national sources of finance available and gaps to achieve implementation

Map costs AND benefits

Identify financial barriers for implementation and appropriate financial instruments

Assign monetary value to technology and capacity support needed and include in financial support

Take home points