

JOINT REPORT ON MDB CLIMATE FINANCE 2012¹

A report by a group of Multilateral Development Banks (MDBs) comprising the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), the World Bank (WB) and the International Finance Corporation (IFC).

November 2013

EXECUTIVE SUMMARY

1. The Joint MDB Report on Climate Finance is now in its second year, and the information provided has been expanded to include a better sectoral as well as a regional breakdown of MDB financing. This report presents basic data on which further analysis could be based. Multilateral Development Banks (MDBs) provided approximately USD27 billion in financing to address the challenges of climate change in 2012.
2. Of the total USD27 billion in climate finance, 78%, or USD21 billion was dedicated to mitigation and 22%, or nearly USD6 billion to adaptation. Of the total commitments, 8%, or USD2 billion came from external resources, such as bilateral or multilateral donors, including the Global Environment Facility and the Climate Investment Funds.
3. In terms of regional coverage, Latin America and the Caribbean received the highest total share of MDB climate finance, 18%, while the EU 13 countries received 11%. In regards to sector coverage, 36% of adaptation finance went to the infrastructure, energy, and built environment sector, while 33% went to support increasing the resilience to climate change of the agriculture sector. In mitigation finance, renewable energy took by far the largest share of finance, with 36% of the total. The difference between mitigation and adaptation finance is greatest in the EU 13 and Other Europe and Central Asia regions, where 95% and 93% of climate finance commitments from MDBs respectively is for mitigation measures.

SECTION 1: INTRODUCTION

4. The international community recognizes the need to join forces to avert dangerous climate change. This requires mobilizing financial resources from a wide range of sources, public and private, bilateral and multilateral, including alternative sources. That makes it increasingly important to track and report financial flows that support climate change mitigation and adaptation, to build trust and accountability with regard to climate finance commitments and monitor trends and progress in climate-related investment.
5. The present report is based on the joint MDB approach for climate finance reporting, which was first defined in 2012 by the above group of MDBs to work towards better climate finance monitoring. It responds to the particular context of the activities that the MDBs carry out in developing and emerging economies and is built on the premise that climate finance and development are closely aligned.
6. The joint MDB approach differs in how it treats mitigation and adaptation. For mitigation, it is based on a common list of mitigation activities at the intersection of what all MDBs consider mitigation, while some

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MDBs may consider additional activities not covered by the joint approach as mitigation. The total volume of each MDB's climate finance calculated following internal methodologies is separately reported in Table 10. For adaptation, the MDBs report under the joint approach agreed in 2012 (see section 3.3 for the definition). Some MDBs may also have a different internal accounting approach, which is reported separately in this report.

7. The joint approach is also a work in progress aimed at assisting the MDBs, as well as other organizations that might want to join or more clearly understand their climate engagement. This will hopefully lead to gradual convergence towards a harmonized approach for climate finance monitoring. This report covers both mitigation and adaptation oriented climate finance, and provides substantially higher granularity in regional and sector-level reporting, compared to the reports issued in 2012 with 2011 numbers².
8. Section 1 of this report is an introduction. Section 2 contains the detailed numbers for 2012, while Section 3 contains the definitions of terms, regional coverage, and the adaptation and mitigation methodologies.

SECTION 2: MDB CLIMATE FINANCE, 2012

2.1 TOTAL MDB CLIMATE FINANCE, 2012

9. The tables below present total climate finance provided by the MDBs for fiscal year 2012 in developing, emerging, and transition economies. Data reported correspond to the financing of those components and/or sub-components or elements within projects that provide mitigation and/or adaptation co-benefits (rather than the entire project cost).
10. Table 1 reports total climate finance for mitigation and adaptation using the joint MDB approach for reporting that is based on the principles set out in the first reports published in 2012 (see also Section 3). Table 2 shows the same data with a regional breakdown developed for the purposes of this report.
11. The MDBs recognize that some projects contribute to both mitigation and adaptation. The numbers reported here assign the corresponding finance to either mitigation or adaptation, or divide it into mitigation and adaptation, so that there is no double-counting. The total volume of climate finance through the MDBs in 2012 can therefore be derived by adding mitigation and adaptation. While the MDBs are working towards identifying the overlap separately, this remains a work in progress due to data-tracking and reporting format issues.

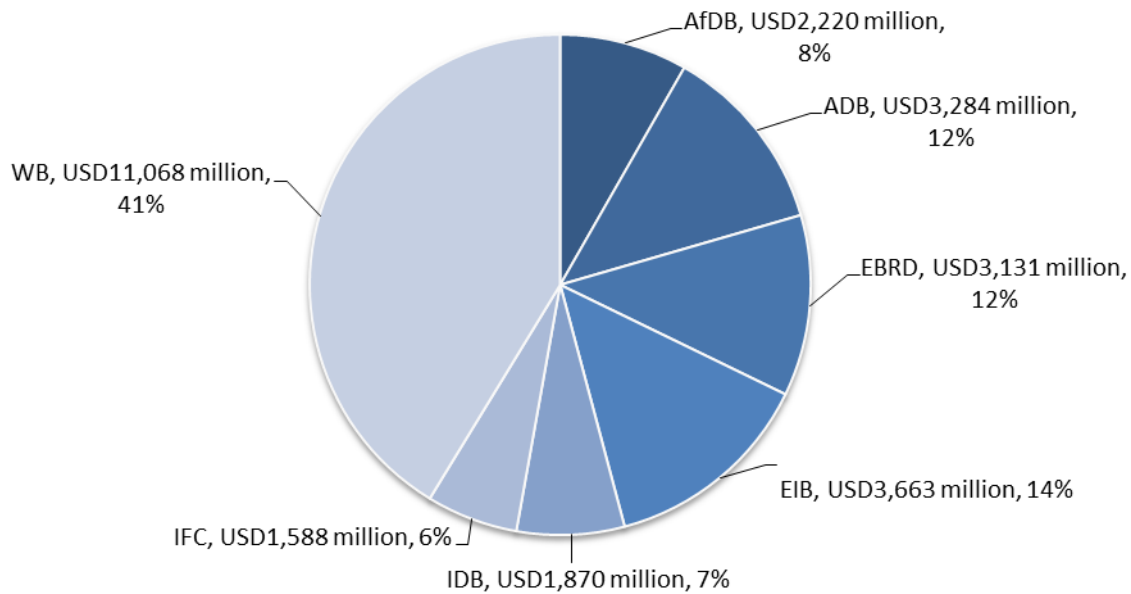
² Mitigation report 2011: http://climatechange.worldbank.org/sites/default/files/MMF_2011_version_21.pdf

Adaptation Report 2011: <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Joint%20MDB%20Report%20on%20Adaptation%20Finance%202011.pdf>

Table 1: MDB Climate Finance, 2012³ (USD millions⁴)

MDB	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
AfDB	1,908	0	312	0	2,220
ADB	2,822	0	462	0	3,284
EBRD	3,000	0	132	0	3,131
EIB	3,663	0	0	0	3,663
IDB	1,581	177	111	0	1,870
IFC	1,552	0	36	0	1,588
WB	7,584	2,398	1,086	0	11,068
Total	22,109	2,576	2,138	0	26,823

Figure 1: MDB Climate Finance, 2012



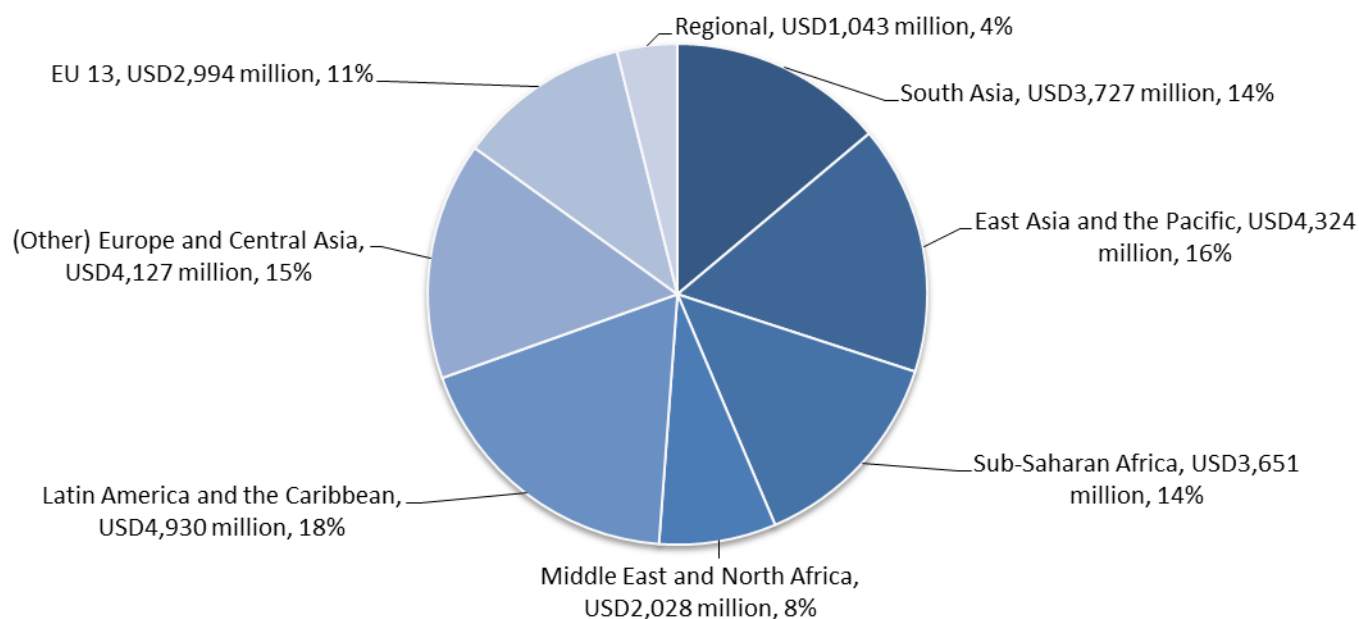
³ For geographic coverage of the climate finance totals, see section 3.2.

⁴ Currency conversions from MDB reports were carried out at the average 2012 rate of 1.32 EUR/USD.

Table 2: MDB Climate Finance by Region⁵, 2012 (USD millions)

Country/Region	MDB Resources		External Resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
South Asia	3,609	0	118	0	3,727
East Asia and the Pacific	2,855	735	735	0	4,324
Sub-Saharan Africa	3,141	32	477	0	3,651
Middle East and North Africa	1,702	0	326	0	2,028
Latin America and the Caribbean	3,786	918	226	0	4,930
(Other) Europe and Central Asia	3,561	452	115	0	4,127
EU 13	2,479	440	76	0	2,994
Regional	978	0	65	0	1,043
Total	22,109	2,576	2,138	0	26,823

Figure 2: MDB Climate Finance by Region, 2012



⁵ See Section 3.2 for definitions of the regions as listed below.

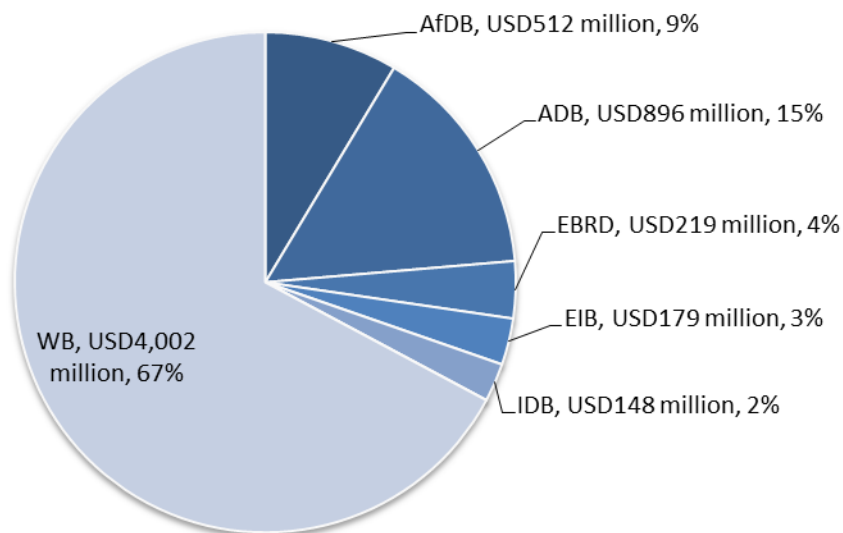
2.2. MDB Adaptation Finance, 2012

12. The tables below present adaptation finance provided by the MDBs for fiscal year 2012. Data reported correspond to the financing of adaptation projects or of those components, sub-components or elements within projects that provide adaptation co-benefits (rather than the entire project cost).

Table 4: MDB Adaptation Finance, 2012 (USD millions)⁶

MDB	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
AfDB	445	0	67	0	512
ADB	821	0	75	0	896
EBRD	188	0	32	0	219
EIB	179	0	0	0	179
IDB	7	132	9	0	148
IFC ⁷	-	-	-	-	-
WB	2,604	1,209	188	0	4,002
Total	4,244	1,342	370	0	5,956

Figure 4: MDB Adaptation Finance, 2012



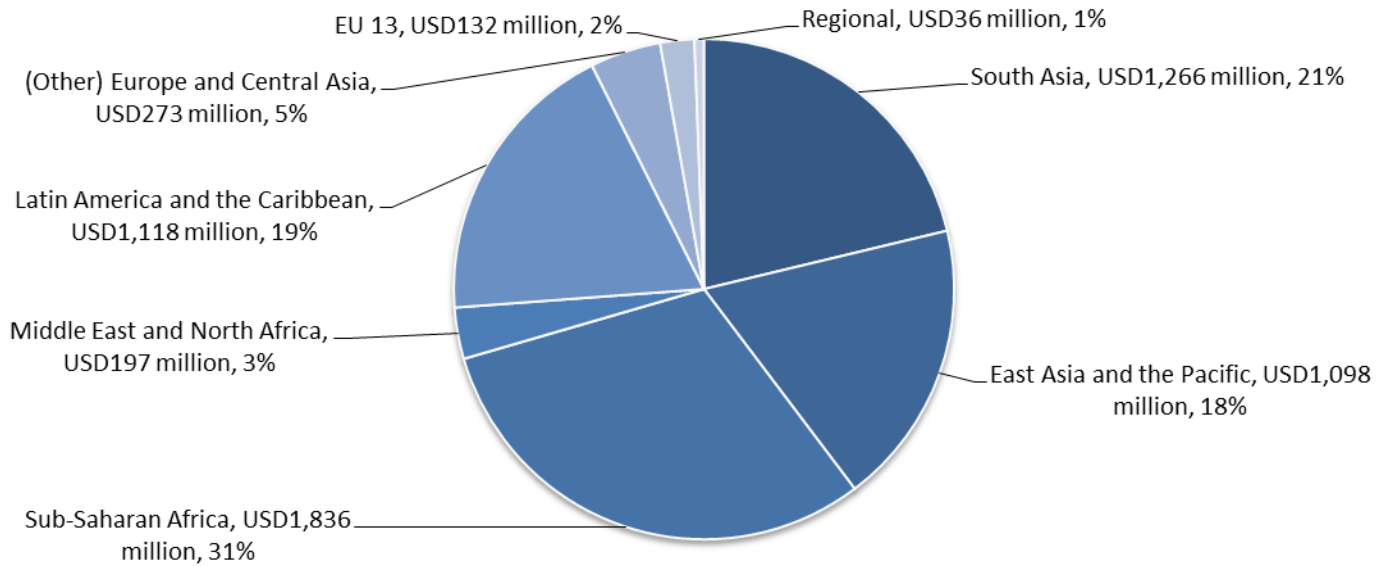
⁶ Unlike for mitigation, most MDBs do not report adaptation volumes outside the joint approach. The exception is IDB, which has a different internal climate finance tracking approach. Its numbers are as follows: MDB resources, investment and technical assistance: USD95 M; MDB resources, policy-based instruments: USD393 M; external resources, investment and technical assistance: USD9 M.

⁷ IFC started tracking adaptation finance in FY13 and will provide these amounts in the next reporting period.

Table 5: MDB Adaptation Finance by Region, 2012 (USD millions)

Country/Region ⁸	MDB Resources		External Resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
South Asia	1,195	0	71	0	1,266
East Asia and the Pacific	484	562	51	0	1,098
Sub-Saharan Africa	1,645	12	179	0	1,836
Middle East and North Africa	197	0	0	0	197
Latin America and the Caribbean	374	730	15	0	1,118
(Other) Europe and Central Asia	192	38	43	0	273
EU 13	132	0	0	0	132
Regional	25	0	11	0	36
Total	4,244	1,342	370	0	5,956

Figure 5: MDB Adaptation Finance by Region, 2012

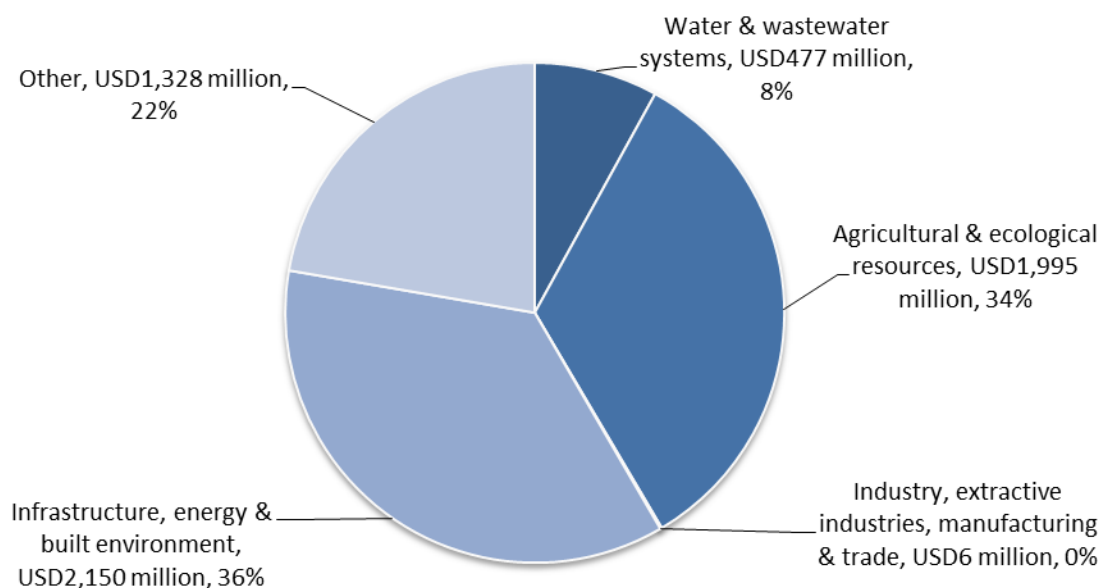


⁸ See Section 3.2 for definitions of the regions as listed below.

Table 6: MDB Adaptation Finance by Sectors, 2012⁹ (USD millions)

Sectors	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
Water & wastewater systems	385	62	29	0	477
Agricultural & ecological resources	1,759	26	209	0	1,995
Industry, extractive industries, manufacturing & trade	4	0	2	0	6
Infrastructure, energy & built environment	1,490	585	75	0	2,150
Other	605	669	55	0	1,328
Total	4,244	1,342	370	0	5,956

Figure 6: MDB Adaptation Finance by Sectors, 2012



⁹ Typical subsectors for adaptation finance are given in section 3.3.

2.3. MDB Mitigation Finance, 2012

13. Tables 7-9 report mitigation finance in total, by region, and by sector, using the joint MDB approach for reporting that is based on a common list of mitigation activities at the intersection of what all MDBs consider mitigation. Data reported correspond to the financing of those components and/or sub-components within projects that provide mitigation co-benefits (rather than the entire project cost). Details of the approach are given below. Table 10 shows data on mitigation finance reported by each MDB following their own methodologies.

Table 7: MDB Mitigation Finance According to the Joint Approach, 2012 (USD millions)

MDB	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
AfDB	1,463	0	245	0	1,708
ADB	2,001	0	386	0	2,388
EBRD	2,812	0	100	0	2,912
EIB	3,484	0	0	0	3,484
IDB	1,574	45	102	0	1,722
IFC	1,552	0	36	0	1,588
WB	4,979	1,189	898	0	7,066
Total	17,866	1,234	1,768	0	20,867

Figure 7: MDB Mitigation Finance According to the Joint Approach, 2012

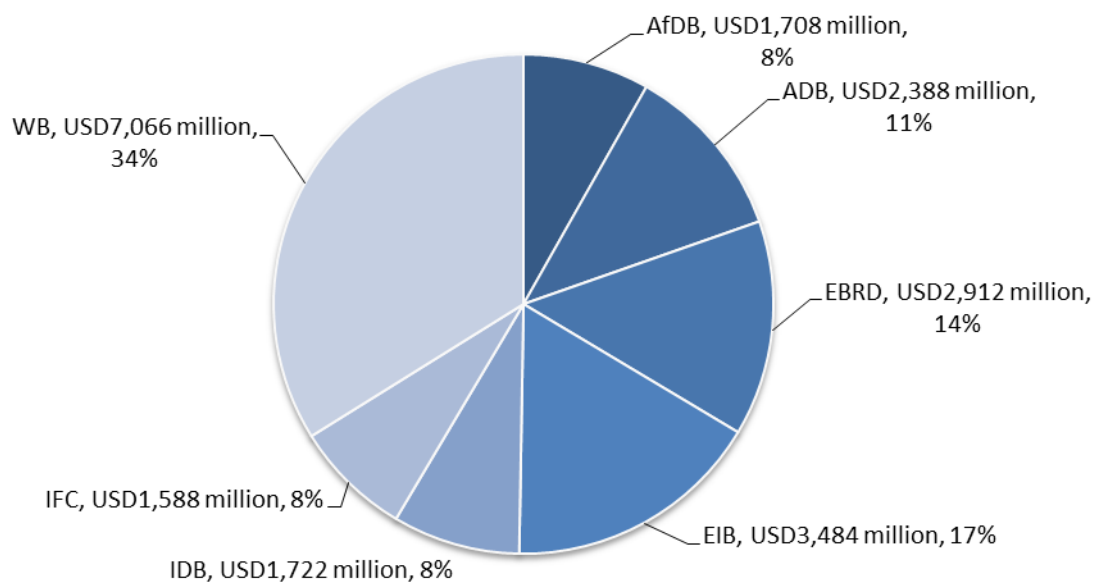
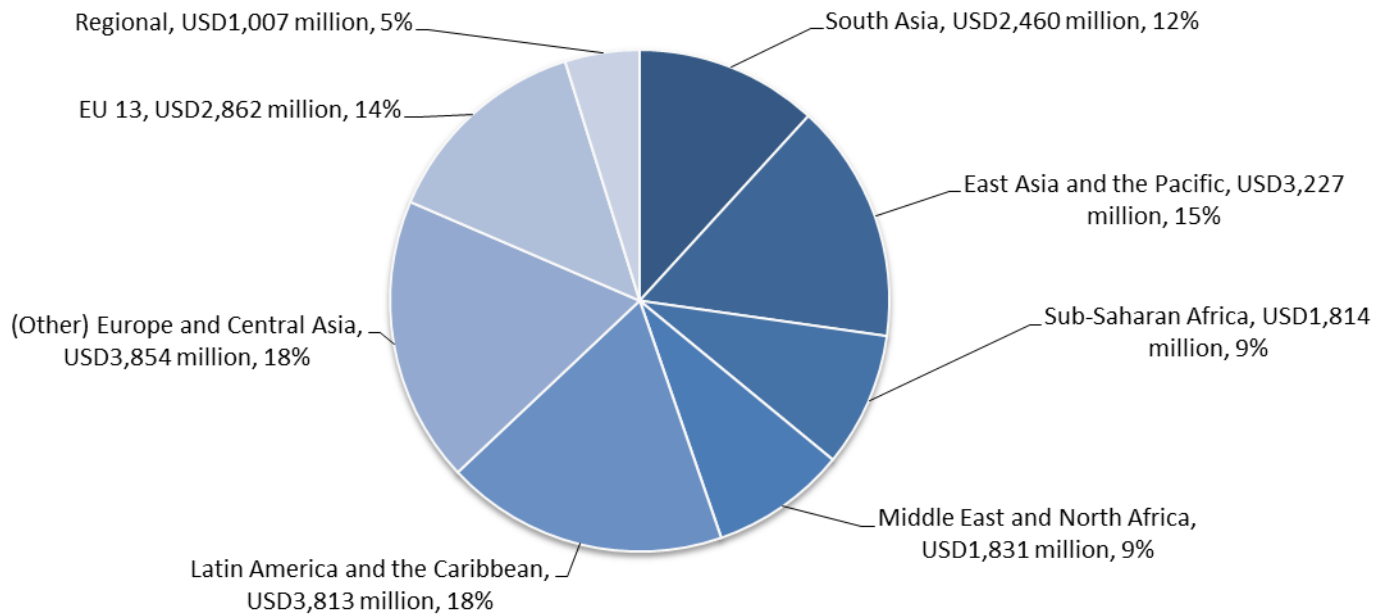


Table 8: MDB Mitigation Finance by Region, 2012 (USD millions)

Country/Region ¹⁰	MDB Resources		External Resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
South Asia	2,414	0	47	0	2,460
East Asia and the Pacific	2,371	172	684	0	3,227
Sub-Saharan Africa	1,496	20	299	0	1,814
Middle East and North Africa	1,505	0	326	0	1,831
Latin America and the Caribbean	3,413	188	212	0	3,813
(Other) Europe and Central Asia	3,369	414	72	0	3,854
EU 13	2,347	440	76	0	2,862
Regional	953	0	54	0	1,007
Total	17,866	1,234	1,768	0	20,867

Figure 8: MDB Mitigation Finance by Region, 2012

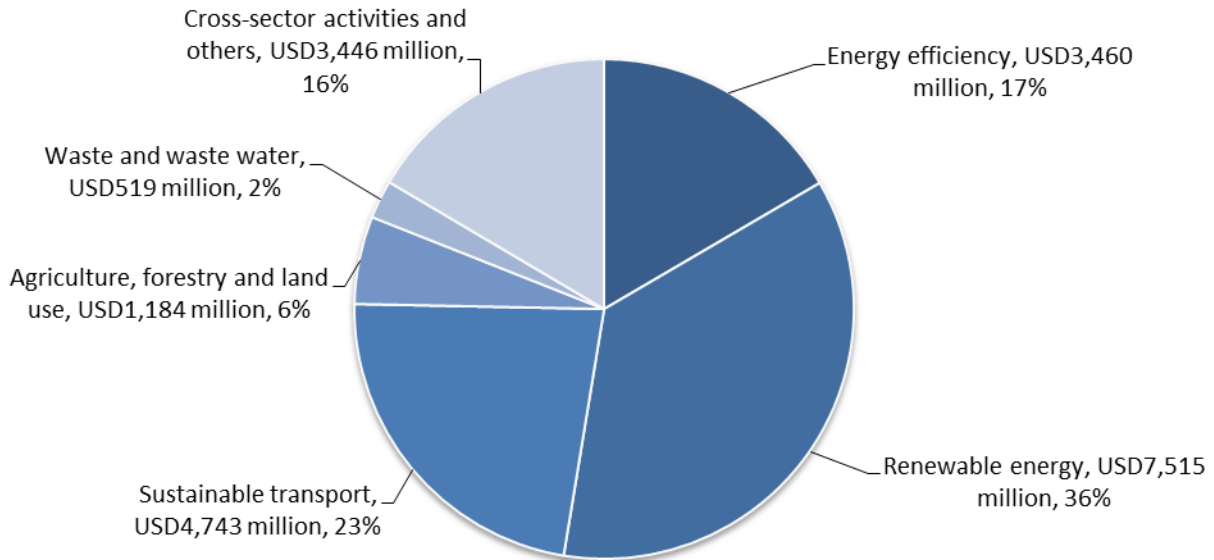


¹⁰ See Section 3.2 for definitions of the regions as listed below.

Table 9: MDB Mitigation Finance by Sectors, 2012 (USD millions)

Sectors ¹¹	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
Energy efficiency	2,889	482	89	0	3,460
Renewable energy	6,669	95	751	0	7,515
Sustainable transport	4,646	0	97	0	4,743
Agriculture, forestry and land use	940	103	141	0	1,184
Waste and waste water	309	0	210	0	519
Cross-sector activities and others	2,412	554	479	0	3,446
Total	17,866	1,234	1,768	0	20,867

Figure 9: MDB Mitigation Finance by Sectors, 2012



¹¹ Please see section 3.4.3 for a mapping of these sectors against the typology.

Table 10: MDB Mitigation Finance According to MDB Own Methodologies and Differences from MDB Mitigation Finance According to the Joint Approach, 2012
(USD millions)

MDB	MDB resources		External resources		Total
	Investments and technical assistance	Policy-based instruments	Investments and technical assistance	Policy-based instruments	
AfDB <i>(Difference from Joint Approach)</i>	1,463 0	0 0	245 0	0 0	1,708 0
ADB <i>(Difference from Joint Approach)</i>	2,109 +107	0 0	386 0	0 0	2,495 +107
EBRD <i>(Difference from Joint Approach)</i>	3,012 +200	0 0	100 0	0 0	3,112 +200
EIB <i>(Difference from Joint Approach)</i>	3,484 0	0 0	0 0	0 0	3,484 0
IDB <i>(Difference from Joint Approach)</i>	1,641 +67	45 0	110 +8	0 0	1,796 +75
IFC <i>(Difference from Joint Approach)</i>	1,624 +72	0 0	36 0	0 0	1,660 +72
WB <i>(Difference from Joint Approach)</i>	5,124 +145	1,189 0	898 0	0 0	7,211 +145

SECTION 3: DEFINITIONS

3.1 GENERAL

14. Definitions:

- **Reporting period:** Data cover fiscal year 2012. Even though MDBs do not follow the same reporting cycle, data remain comparable across MDBs as they all correspond to a 12-month period.
- **Point of reporting:** Data correspond to commitments at time of Board approval or financial agreement signature, and are therefore based on ex-ante estimation. All due efforts have been taken to prevent double-counting. No corrections will be issued in cases where a project's scope has changed to either increase or decrease climate financing.
- **Sources covered:** MDBs' own resources as well as a range of external resources managed by the MDBs.
- **Financing instruments:** All instruments associated with the resources covered (grant, loan, guarantee, equity, performance-based instrument).
- **Comparability:** The numbers in this report cover a different group of countries compared to the 2011 numbers, and are therefore not directly comparable. In 2011 EIB did not include the EU 13 in its reporting, thereby understating the volume of its climate finance for the year, while other MDBs covering this region did include all or some of them. In 2012 the EU 13 are included.
- **Extrapolation of data:** Given that the MDBs' climate finance numbers are for only one year and data are not comparable to the 2011 numbers, they should not be used to make any extrapolations about the MDBs' level of engagement in climate finance.
- **External resources:** refers to trust-funded operations (including dedicated climate finance facilities) which might be reported to the OECD's Development Assistance Committee by the contributor countries as well.
- **Policy-based instruments:** fast-disbursing financing instruments provided to the national budget in the form of loans or grants together with associated policy dialogue and economic and sector work in support of nationally driven policy and institutional reforms.
- **Investments and technical assistance:** relates to all vehicles used by MDB clients to support specific investments covering a mix of capital and recurrent expenditures as well as advisory services and capacity building.
- **Granularity:** Finance reported covers only those components (and/or sub-components to the extent data is available) or elements with activities that directly contribute to (or promote) adaptation and/or mitigation.
- **Reporting:** Reporting is complete for all fields and all tables, i.e. if a value in a table is '0' or '-', this means nothing was reported. It does not mean that no data was available and the field was therefore left blank.

3.2 GEOGRAPHICAL COVERAGE OF THE REPORT, AND REGIONAL BREAKDOWNS

Countries included in this list are all countries covered by at least one of the MDBs reporting. Inclusion of countries in this list does not imply any recognition of country names, borders, etc. by any of the MDBs in question.

REGIONAL

Any operation by an MDB that implemented across 2 or more countries including activities with a global focus.

SOUTH ASIA

Afghanistan	India	Pakistan
Bangladesh	Maldives	Sri Lanka
Bhutan	Nepal	

EAST ASIA AND THE PACIFIC

Cambodia	Marshall Islands	Samoa
China, People's Republic of	Micronesia, Federated States of	Solomon Islands
Cook Islands	Mongolia	Thailand
Fiji	Myanmar	Timor-Leste
Indonesia	Nauru	Tonga
Kiribati	Palau	Tuvalu
Lao People's Democratic Republic	Papua New Guinea	Vanuatu
Malaysia	Philippines	Viet Nam

MIDDLE EAST AND NORTH AFRICA

Algeria	Jordan	West Bank and Gaza Strip
Egypt	Lebanon	Tunisia
Iran, Islamic Republic of	Libya	Western Sahara
Iraq	Morocco	Yemen
Israel		

SUB-SAHARAN AFRICA

Angola	Gabon	Réunion
Benin	Gambia	Rwanda
Botswana	Ghana	Sao Tome and Principe
Burkina Faso	Guinea	Saint Helena
Burundi	Guinea-Bissau	Senegal
Cameroon	Kenya	Seychelles
Cape Verde	Lesotho	Sierra Leone
Central African Republic	Liberia	South Africa
Chad	Madagascar	Somalia
Comoros	Malawi	South Sudan
Congo	Mali	Sudan
Cote d'Ivoire	Mauritania	Swaziland
Democratic Republic of the Congo	Mauritius	Togo
Djibouti	Mayotte	Uganda
Equatorial Guinea	Mozambique	United Republic of Tanzania
Eritrea	Namibia	Zambia
Ethiopia	Niger	Zimbabwe
	Nigeria	

LATIN AMERICA AND THE CARIBBEAN

Anguilla
Antigua and Barbuda
Argentina
Aruba
Bahamas
Barbados
Belize
Bolivia, Plurinational State of
Bonaire, Saint Eustatius and
Saba
Brazil
British Virgin Islands
Cayman Islands
Chile
Colombia
Costa Rica
Cuba
Curaçao

Dominica
Dominican Republic
Ecuador
El Salvador
Falkland Islands (Malvinas)
French Guiana
Grenada
Guadeloupe
Guatemala
Guyana
Haiti
Honduras
Jamaica
Martinique
Mexico
Montserrat
Nicaragua
Panama

Paraguay
Peru
Puerto Rico
Saint-Barthélemy
Saint Kitts and Nevis
Saint Lucia
Saint Martin (French part)
Saint Vincent and the
Grenadines
Sint Maarten (Dutch part)
Suriname
Trinidad and Tobago
Turks and Caicos Islands
United States Virgin Islands
Uruguay
Venezuela (Bolivarian Republic
of)

EU 13

Bulgaria
Croatia
Cyprus
Czech Republic
Estonia

Hungary
Latvia
Lithuania
Malta
Poland

Romania
Slovakia
Slovenia

(OTHER) EUROPE AND CENTRAL ASIA

Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Georgia
Kazakhstan

Kyrgyz Republic
Kosovo
Montenegro
Republic of Moldova
Russian Federation
Serbia
The former Yugoslav Republic of

Macedonia
Turkey
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

3.3 GUIDANCE SECTION ON THE ADAPTATION FINANCE TRACKING METHODOLOGY

15. *Background and guiding principles*

The MDB climate adaptation finance tracking methodology uses a context- and location-specific, conservative and granular approach that is intended to reflect the specific focus of adaptation activities, and reduce the scope for over-reporting of adaptation finance against projects. The approach drills down into the 'sub-project' or 'project element' level as appropriate, in line with the overall MDB climate finance tracking methodology. It also employs a clear process in order to ensure that project activities address specific climate vulnerabilities identified as being relevant to the project and its context/location.

16. *Overview of the adaptation finance tracking methodology*

The methodology comprises of the following key steps:

- Setting out the **context of climate vulnerability** of the project
- Making an **explicit statement of intent** to address climate vulnerability as part of the project
- Articulating a **clear and direct link** between the climate vulnerability context and the specific project activities

Furthermore, when applying the methodology, the **reporting of adaptation finance is limited** solely to those activities (i.e. projects, project components, or proportions of projects) that are clearly linked to the climate vulnerability context.

17. *Context of vulnerability to climate variability and change*

For a project to be considered as contributing to adaptation, the context of climate vulnerability needs to be set out clearly using a robust evidence base. This could take a variety of forms, including the use of material from existing analyses and reports, or original, bespoke vulnerability assessment analysis carried out as part of the preparation of a project.

Examples of good practice in the use of existing analyses or reports include using sources that are authoritative and preferably peer-reviewed, such as academic journals, National Communications to the UNFCCC, IPCC reports, Strategic Programmes for Climate Resilience, etc.

Examples of good practice in conducting original, bespoke analysis include using records from trusted sources showing recent climate trends including any departures from historic means. These may be combined with climate change projections drawn from a wide range of climate change models, with high and low GHG emissions scenarios, in order to explore the full envelope of projected outcomes and uncertainties. Climate projection uncertainties should be presented and interpreted in a transparent way. The timescale of the projected climate change impacts should match the intended lifespan of the assets, systems or institutions being financed through the project (e.g. time horizon of 2030, 2050, 2080, etc.).

18. *Statement of purpose or intent*

The project should set out how it intends to address the context- and location-specific climate change vulnerabilities, as set out in existing analyses, reports or in the project's climate vulnerability assessment. This is important for making the distinction between a project contributing to climate change adaptation and a standard 'good development' project. The methodology is flexible about exactly where/how the statement of intent/purpose is documented. As long as the MDB concerned is able to record and track the rationale for each adaptation project or adaptation component of a project, this could be documented in the final technical document, Board document, or an internal memo, or other associated project document.

19. *Clear and direct link between climate vulnerability and project activities*

In line with the principles of the overall MDB climate finance tracking methodology, only the specific project activities that explicitly address climate vulnerabilities identified in the project documentation are reported as climate finance. 'Project activities' may refer to the entire project, specific project components, or proportions of projects. It may also include project preparation activities if appropriate, depending on the standard practices of the specific MDB in question.

20. *Reporting of specific activities only as adaptation finance*

As the methodology takes a conservative approach, adaptation finance should be tracked at the sub-project level or project component level where possible, and will only be counted for project activities that correspond with the climate vulnerability context. Where the same project, sub-project or project element contributes to climate mitigation and adaptation, then the MDB's individual processes will determine what proportion is counted as mitigation or as adaptation, so that the actual financing will not be recorded more than once. The MDBs are working on the best reporting method for projects where the same components or elements contribute to both mitigation and adaptation. Some MDBs may then decide to report this as a separate category.

Table 11: Adaption Sectors and Example Sub-Sectors

Sector grouping ¹²	Examples of specific (sub)sectors
Water & wastewater systems	Water supplies Wastewater infrastructure Water resources management
Agricultural & ecological resources	Primary agriculture & food <u>production</u> Agricultural irrigation Forestry Livestock production Fishing Ecosystems (including ecosystem-based flood protection measures)
Industry, manufacturing & trade	Manufacturing Food <u>processing</u> , distribution & retail Trade Extractive industries (oil, gas, mining, etc.)
Infrastructure, energy & built environment	Construction Transport Coastal and riverine infrastructure (including <u>built</u> flood protection infrastructure) Urban development Tourism ¹³ Waste management Energy generation (including renewables) Energy transmission and distribution
Other	Financial services (banking, insurance) Institutional capacity (professional services, ICT) Human capacity (education, health) Disaster risk management

¹² This sector categorization is a work in progress by the MDBs with the goal of harmonizing their respective systems in order to develop a robust framework for reporting adaptation finance. Further iterations may therefore be made in subsequent MDB climate finance reports.

¹³ Tourism is included in this category as the sector essentially revolves around 'built environment', e.g. hotels, transport facilities.

Table 12: Indicative Examples of Climate Resilience Activities by Sub-Sector

Potential sectors	Potential impact of climate change	Example of adaptation activity
Financial services	Increased risk of failure of public infrastructure due to increased extremes	Incorporation of climate risk assessment in ministerial investment appraisal processes
ICT	Damage to key national data centers from storms or floods	Identification of sites at greatest risk and enhancement of resilience of those sites
Manufacturing	Historic specifications for equipment inappropriate under new climate	Design of climate resilient equipment, e.g. stable cranes for harbors in cyclone zones
Trade	Disruption of national trade due to climate disasters	Local government support for business continuity planning amongst local employers
Professional services	Increase in the demand for professional services for climate risk assessment	Provision of finance to SMEs providing relevant services, e.g. engineering or insurance
Education	Climate change results in technical syllabus is outdated for high risk sectors	Building technical capacity building for training the trainers in water and agri-sectors
Construction	Shift in zones affected by typhoons/ hurricanes/storm surges	More robust building regulations and improved enforcement practices.
Oil, gas, mining	Shift in zones affected by typhoons/ hurricanes	Increased intensity of seismic survey and off-shore drilling outside hurricane seasons
Health	Changing patterns of diseases in response to changing climatic conditions	Monitoring of disease outbreaks and development of a national response plan
Disaster risk management	Increased frequency and/or intensity of climate related disasters	Financial assistance for improved planning of government bodies/NGOs
Water resources	Reduction in river water levels due to reduced rainfall	Improved catchment management planning and regulation of abstraction
(Waste) water infrastructure	Increased groundwater salinity due to sea level rise and/ or coastal flooding	Provision of microfinance for domestic rainwater harvesting equipment and storage
Waste management	Increased risk of pollution of areas below landfill sites due to risk of flood	Completion of a climate risk assessment prior to location of landfill sites
Fossil fuel energy generation	Increased seasonality of rainfall, creating periods of low river flows	Investment in coal fired generators with minimal cooling water requirements
Renewable energy	Reduction in river flows lead to loss of generation from hydroelectric plant	Hydro-infrastructure subject to due diligence against climate and hydrological models
Transmission and distribution	Higher temperatures reduce distribution efficiency	Investment in embedded renewable generation to reduce distribution requirements
Tourism	Drought disrupts mammal migrations and causes large scale starvation	Diversification of tourist attractions to encompass biodiversity/conservation
Transport	High river flows cause erosion of embankments and loss of bridges	Use of revised recurrence intervals for extreme events in infrastructure design
Ecosystems	Drought causes loss of forest cover with impacts on livelihoods/biodiversity	Identification of protected areas and establishment of migration corridors
Forestry	Increased frequency of forest fires, causing damage to timber	Engagement with local communities to limit the source, e.g. uncontrolled burning
Agriculture	Increased variability in crop productivity	Provision of information on crop diversification options, with assessment of costs
Livestock production	Loss in forage quantity or quality	Increased production of fodder crops to supplement rangeland diet
Fishing	Loss of river fish stocks due to changes in water flows and/ or temperature	Adoption of sustainable aquaculture techniques to supplement local fish supplies
Urban development	Increased urban flooding from extreme rainfall events	Asset review to identify assets vulnerable to flooding, then prioritize protection works

21. Case Studies

The following case studies are intended to illustrate how the adaptation finance tracking approach has been recently used by MDBs.

Project title	Modernisation of an agribusiness facility	Climate change development policy operation	Transport connections in mountainous provinces	Climate adaptation for rural livelihood and agriculture
Sector	Agricultural & ecological resources	Infrastructure, energy & built environment	Infrastructure, energy & built environment	Agriculture and ecological resources
Brief description of project	MDB finance was provided for the modernisation of equipment by an agribusiness firm that grows tomatoes and manufactures tomato paste.	The objective is to support the government in its efforts to address climate change by adopting policies and strengthening institutions for climate-resilient and low-emissions development. The operation focuses on select policy areas with an emphasis on resilient water resources and energy efficiency. The operation also aims at building a platform to prioritize and integrate climate actions into development planning and improve the climate financing framework.	The project rehabilitates about 297 km of provincial roads in six northern mountainous provinces of the country. The project outcome is improved and reliable road connectivity in the project areas with increased resilience to climate change. A parallel co-financing will be provided to integrate climate-proofing and adaptation measures in project design and enhance capacity of the provincial staff in the design, planning and maintenance of road infrastructure with regard to climate change.	The project will be implemented in three vulnerable districts in the country as identified under the National Adaptation Programme of Action (NAPA) in 2006. The goal of the project is to improve resilience to current climate variability and future climate change by developing and implementing adaptation strategies and measures that will improve agricultural production and rural livelihoods.
Climate vulnerability context	Agricultural production in the project areas has been affected by shifting climate conditions, for example the extreme heat wave and drought of summer 2010. Climate change projections as set out in the respective National Communication to the UNFCCC indicate that these risks are likely to intensify in the coming decades. The MDB together with the firm identified that fact that there is an increasing need for water-efficient irrigation in high-value crop production (such as tomatoes) for this country, in order to make production more resilient to climate change.	Climate change will significantly add to growing pressures on water resources, aggravating problems of vulnerable households by increasing crop water requirements, with greater irrigation water demand and additional stress to the sustainability of irrigation schemes. Water availability is expected to decrease in dry season and increase in wet season but greater variability in rainfall and incidence of extreme weather events are likely to increase the overall uncertainty and risk associated with water resources. Higher water temperatures can also cause water quality issues and disturb ecological balances.	Most of the project roads are in areas vulnerable to climate impacts, and the mountainous terrain is prone to natural disaster risks. The project looked at historical climate patterns, observations by local residents, and studies by local and international organizations in the region. The project then used these data and observations in conducting climate change modelling exercises to determine annual flows of rivers, storms and floods, which may exacerbate damages to existing and planned road infrastructure.	The selected districts experience changing rainfall patterns and higher temperatures that have shortened the growing season. Frequent droughts and floods are eroding assets and knowledge, leaving people more vulnerable to disaster. Moreover, an upsurge in malaria and cholera due to climate change requires the smallholder farmers to spend more time tending to the sick and less time working in their fields. Rainfall is unimodal and occurs from November to May, which varies from less than 600 mm in the Southern region to over 1,800 mm in highlands. The mean annual temperature ranges from 8°C in the highlands to over 32°C in the lower shire valley.
Statement of purpose or intent	The project documentation developed by the MDB recognised the risks to the firm's operations posed by climate variability and climate change. The project design and investment plan specifically prioritised the inclusion of water-efficient drip irrigation systems as a direct response to these risks.	This operation will support the implementation of the government's multi-sector platform and institutional development agenda on climate change. For adaptation, focus is on improving climate resilience of water resources. The water sector was chosen not only due to the urgency of its adaptation challenges, but also due to cross-linkages with most other adaptation areas, including agriculture.	The project outcome is improved and reliable road connectivity in the project areas with increased resilience to climate change. The outputs include "climate proofing" the 297-km road project and building the capacity of provincial staff to manage potential climate change impacts.	The project document has a climate change impact section: “(…) It is in this context that the project was conceived as a climate change adaptation project. The goal is therefore to improve resilience to climate variability and future climate change by developing and implementing adaptation strategies and measures that will improve agricultural production and rural livelihoods. The expected impact of the project is improved resilience to

				current climatic variability and future climate change. (...)"
Link to project activities	Building on the above analysis and statement of intent, the project was structured to include a component providing highly-water efficient drip irrigation systems intended to help the client maintain productivity in the face of increasing climatic variability and climate change.	This operation aims to promote a more integrated approach to water resources management as a foundation for climate resilience. The prior action for this operation relates to submission for Prime Minister approval of a national target program for water resources management. Triggers for subsequent operations include developing the new law on water resources and priority actions, and defining responsibilities for the implementation of this national action plan. Other actions target irrigation efficiency and water productivity in order to increase the resilience and sustainability of irrigation schemes.	The grant component is designed to (i) enhance the capacity of provincial staff in designing, planning and maintaining road infrastructure vulnerable to climate change, (ii) conduct vulnerability mapping of selected roads, (iii) identify and prioritize adaptation approaches, (iv) prepare detailed design to increase the climate resilience of roads, and (v) strengthen policies for climate-resilient road infrastructure. The loan component will implement the designed and selected climate adaptation activities according to the recommendations of the vulnerability assessment.	The project has the following components: <ol style="list-style-type: none"> 1- Community-based integrated climate change adaptation 2- Strengthening the capacity of national and district agencies in climate change adaptation All the activities under these components link to the context of climate vulnerability described above.
Calculation of adaptation finance	The proportion of the project finance by the bank that was allocated for the drip irrigation systems (i.e. EUR 1.05 million out of a total of EUR 15.2 million) was reported as adaptation finance.	This USD70 million operation includes five prior actions, of which four contribute to climate resilience: <ul style="list-style-type: none"> • One prior action for improving resilience of water resources – explained above; • Two prior actions for strengthening the capacity and preparedness to formulate, prioritize and implement climate change policies; • One prior action for strengthening the climate finance framework (this action is also considered to support mitigation). Four out of five prior actions provide adaptation co-benefits and 80% of program of USD70 million (USD56 million) is therefore reported as having adaptation co-benefits. Carving out the overlap between mitigation and adaptation, 3.5 prior actions are considered to support adaptation only and therefore 70% of USD70 million (USD49 million) are mapped to adaptation finance.	The total estimated cost of the project is about USD108 million, which includes a loan, grant and government counterpart. Of the total estimated project cost: <ul style="list-style-type: none"> • USD2.78 million in grant finance was obtained externally from a development fund to assess the project’s vulnerability to climate change and strengthen the capacity of the local staff in planning, designing and maintaining road infrastructure with due consideration to climate impacts. • USD3 million is tentatively allocated from the loan component of the project to implement the climate-proofing and adaptation activities recommended by and derived from the vulnerability assessment 	All the project finance (including project management) qualifies for adaptation finance reporting: USUSD3 million (100%).
Type of adaptation finance	MDB non-concessional loan (private sector project)	Development policy operation	Concessional loan and externally financed grant.	Grant

3.4 JOINT MDB APPROACH FOR MITIGATION FINANCE REPORTING

3.4.1. Principles of the Joint MDB Mitigation Finance Reporting

22. The joint MDB approach for mitigation finance reporting is based on the following principles or attributes:
- a) It is **activity-based**, namely, it focuses on the type of activity to be executed, and not on its purpose, the origin of the financial resources, or its actual results.
 - b) The classification is **ex-ante** project implementation.
 - c) An activity can be a project or a project component: the joint approach aims to report on mitigation activities disaggregated from non-mitigation activities through a reasonable level of data **granularity** by dissecting projects into main components. For example, a project with a total cost of USD100 million may have a USD10 million component for energy efficiency improvements – only the USD10 million would be reported.
 - d) The joint approach measures **financial flows**, rather than greenhouse gas (GHG) emissions reduced by the investment.
 - e) An activity can be labeled as contributing to climate change mitigation if it promotes “efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration.”¹⁴ In the absence of a commonly-agreed method for GHG analysis among MDBs, mitigation activities considered in this joint approach are assumed to lead to emission reductions, **based on past experience** and/or technical analysis. Ongoing efforts to harmonize GHG analysis among MDBs will bring more consistency regarding the identification of mitigation activities in the long-term.
 - f) The purpose of this joint approach is to enable **practical**, harmonized climate finance classification categories without having to resort to long, complex studies or highly specialized experts.
 - g) The approach covers both MDBs’ own resources as well as external resources managed by the MDBs (such as funding from the Global Environment Facility, the Climate Investment Funds, or Carbon Funds). To prevent double counting (in particular as some external resources may already be covered in bilateral reporting), **external** resources managed by the MDBs are clearly **separated** from MDBs’ own resources.
 - h) The qualification of a project under this methodology does not imply evidence of its climate change effects. Inclusion is not a substitute for project-specific theoretical and/or quantitative evidence of GHG emissions mitigation, and projects seeking to demonstrate such effects must do so through project-specific data.

3.4.2 Typology of Mitigation Activities Included in the Joint MDB Mitigation Finance Reporting

1 Demand-side, brownfield energy efficiency¹⁵

1.1 Commercial and residential sectors (buildings)

- 1.1.1 Energy-efficiency improvement in lighting, appliances and equipment
- 1.1.2 Substitution of existing heating/cooling systems for buildings by cogeneration plants that generate electricity in addition to providing heating/cooling

¹⁴ OECD DAC. Definition of the Rio Marker on climate change mitigation. <http://bit.ly/RioMit>.

¹⁵ The general principle for brownfield energy efficiency activities involving substitution of technologies or processes is that (i) the old technologies are substituted well before the end of their lifetime and the new technologies are substantially more efficient, or (ii) new technologies or processes are substantially more efficient than those normally used in greenfield projects.

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- 1.1.3 Retrofit of existing buildings: Architectural or building changes that enable reducing energy consumption
 - 1.1.4 Waste heat recovery improvements
 - 1.2 Public services
 - 1.2.1 Energy-efficiency improvement in utilities and public services through the installation of more efficient lighting or equipment
 - 1.2.2 Rehabilitation of district heating systems
 - 1.2.3 Utility heat loss reduction and/or increased waste heat recovery
 - 1.2.4 Improvement in utility scale energy efficiency through efficient energy use, and loss reduction.
 - 1.3 Agriculture
 - 1.3.1 Reduction in energy use in traction (e.g. efficient tillage), irrigation, and other agriculture processes
 - 1.4 Industry
 - 1.4.1 Industrial energy-efficiency improvements through the installation of more efficient equipment, changes in processes, reduction of heat losses and/or increased waste heat recovery
 - 1.4.2 Installation of cogeneration plants
 - 1.4.3 More efficient facility replacement of an older facility (old facility retired)
 - 2 Demand-side, greenfield energy efficiency¹⁶**
 - 2.1 Construction of new buildings
 - 2.1.1 Use of highly efficient architectural designs or building techniques that enable reducing energy consumption for heating and air conditioning, exceeding available standards and complying with high energy efficiency certification or rating schemes
 - 3 Supply-side, brownfield energy efficiency**
 - 3.1 Transmission and distribution systems
 - 3.1.1 Retrofit of transmission lines or substations to reduce energy use and/or technical losses, excluding capacity expansion
 - 3.1.2 Retrofit of distribution systems to reduce energy use and/or technical losses, excluding capacity expansion
 - 3.1.3 Improving existing systems to facilitate the integration of renewable energy sources into the grid
 - 3.2 Power plants
 - 3.2.1 Renewable energy power plant retrofits
 - 3.2.2 Energy-efficiency improvement in existing thermal power plant
 - 3.2.3 Thermal power plant retrofit to fuel switch from a more GHG-intensive fuel to a different, less GHG-intensive fuel type
 - 3.2.4 Waste heat recovery improvements
 - 4 Renewable Energy**
 - 4.1 Electricity generation, greenfield projects
 - 4.1.1 Wind power

¹⁶ The general principle for greenfield activities is that they prevent a long-term lock-in in high-carbon infrastructure (urban, transport and power sector infrastructure).

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- 4.1.2 Geothermal power
 - 4.1.3 Solar power (concentrated solar power, photovoltaic power)
 - 4.1.4 Biomass or biogas power that does not decrease biomass and soil carbon pools
 - 4.1.5 Ocean power (wave, tidal, ocean currents, salt gradient, etc.)
 - 4.1.6 Hydropower plants only if net emission reductions can be demonstrated
 - 4.2 Transmission systems, greenfield
 - 4.2.1 New transmission systems (lines, substations) or new systems (e.g., new information and communication technology, storage facility, etc.) to facilitate the integration of renewable energy sources into the grid
 - 4.3 Heat production, greenfield or brownfield projects
 - 4.3.1 Solar water heating and other thermal applications of solar power in all sectors
 - 4.3.2 Thermal applications of geothermal power in all sectors
 - 4.3.3 Thermal applications of sustainably-produced bioenergy in all sectors, including efficient, improved biomass stoves
 - 5 Transport**
 - 5.1 Vehicle energy efficiency fleet retrofit
 - 5.1.1 Existing vehicles, rail or boat fleet retrofit or replacement (including the use of lower-carbon fuels, electric or hydrogen technologies, etc.)
 - 5.2 Urban transport modal change
 - 5.2.1 Urban mass transit
 - 5.2.2 Non-motorized transport (bicycles and pedestrian mobility)
 - 5.3 Urban development
 - 5.3.1 Integration of transport and urban development planning (dense development, multiple land-use, walking communities, transit connectivity, etc.), leading to a reduction in the use of passenger cars
 - 5.3.2 Transport demand management measures to reduce GHG emissions (e.g., speed limits, high-occupancy vehicle lanes, congestion charging/road pricing, parking management, restriction or auctioning of license plates, car-free city areas, low-emission zones)
 - 5.4 Inter-urban transport and freight transport
 - 5.4.1 Improvement of general transport logistics to increase energy efficiency of infrastructure and transport, e.g. reduction of empty running
 - 5.4.2 Railway transport ensuring a modal shift of freight and/or passenger transport from road to rail (improvement of existing lines or construction of new lines)
 - 5.4.3 Waterways transport ensuring a modal shift of freight and/or passenger transport from road to waterways (improvement of existing infrastructure or construction of new infrastructure)
 - 6 Agriculture, forestry and land use**
 - 6.1 Afforestation and reforestation
 - 6.1.1 Afforestation (plantations) on non-forested land
 - 6.1.2 Reforestation on previously forested land
 - 6.2 Reducing emissions from the deforestation or degradation of ecosystems
 - 6.2.1 Biosphere conservation projects (including payments for ecosystem services)

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- 6.3 Sustainable forest management
 - 6.3.1 Forest management activities that increase carbon stocks or reduce the impact of forestry activities
 - 6.4 Agriculture
 - 6.4.1 Agriculture projects that do not deplete and/or improve existing carbon pools (Reduction in fertilizer use, rangeland management, collection and use of bagasse, rice husks, or other agricultural waste, low tillage techniques that increase carbon contents of soil, rehabilitation of degraded lands, etc.)
 - 6.5 Livestock
 - 6.5.1 Livestock projects that reduce methane or other GHG emissions (manure management with biodigestors, etc.)
 - 6.6 Biofuels
 - 6.6.1 Production of biofuels (including biodiesel and bioethanol)
 - 7 Waste and wastewater**
 - 7.1.1 Solid waste management that reduce methane emissions (e.g. incineration of waste, landfill gas capture, and landfill gas combustion)
 - 7.1.2 Treatment of wastewater if not a compliance requirement (e.g. performance standard or safeguard) as part of a larger project
 - 7.1.3 Waste recycling projects that recover or reuse materials and waste as inputs into new products or as a resource
 - 8 Non-energy GHG reductions**
 - 8.1 Industrial processes
 - 8.1.1 Reduction in GHG emissions resulting from industrial process improvements and cleaner production (e.g. cement, chemical)
 - 8.2 Air conditioning and cooling
 - 8.2.1 Retrofit of existing industrial, commercial and residential infrastructure to switch to cooling agent with lower global warming potential
 - 8.3 Fugitive emissions and carbon capture
 - 8.3.1 Carbon capture and storage projects (including enhanced oil recovery)
 - 8.3.2 Reduction of gas flaring or methane fugitive emissions in the oil and gas industry
 - 8.3.3 Coal mine methane capture
 - 9 Cross-sector activities**
 - 9.1 Policy and regulation
 - 9.1.1 National mitigation policy/planning/institutions
 - 9.1.2 Energy sector policies and regulations (energy efficiency standards or certification schemes; energy efficiency procurement schemes; renewable energy policies)
 - 9.1.3 Systems for monitoring the emissions of greenhouse gases
 - 9.1.4 Efficient pricing of fuels and electricity (subsidy rationalization, efficient end-user tariffs, and efficient regulations on electricity generation, transmission, or distribution),
 - 9.1.5 Education, training, capacity building and awareness raising on climate change mitigation/sustainable energy/sustainable transport; mitigation research
 - 9.2 Energy audits
 - 9.2.1 Energy audits to energy end-users, including industries, buildings, and transport systems

9.3 Supply chain

9.2.1 Improvements in energy efficiency and GHG reductions in existing product supply chains

9.4 Financing instruments

9.4.1 Carbon markets and finance (purchase, sale, trading, financing, guarantee and other technical assistance). Includes all activities related to compliance-grade carbon assets and mechanisms, such as Clean Development Mechanism (CDM), Joint Implementation (JI), Assigned Amount Units (AAUs), as well as well-established voluntary carbon standards like the Verified Carbon Standard (VCS) or the Gold Standard.

9.4.2 Renewable energy and energy efficiency financing through financial intermediaries or similar (e.g. earmarked lines of credit; lines for microfinance institutions, cooperatives, etc.)

9.5 Low-carbon technologies

9.5.1 Research and development of renewable energy or energy efficiency technologies

9.5.2 Manufacture of renewable energy and energy efficiency technologies and products

9.6 Activities with greenhouse gas accounting

9.6.1 Any other activity not included in this list for which the results of an ex-ante greenhouse gas accounting (undertaken according to commonly agreed methodologies) show emission reductions that are higher than a commonly agreed threshold

3.4.3. Mapping Report Sectors against the Typology

Table 13: Mitigation Sector Definition

Sector Label from Table 9	Mapped Sections of the Typology
Energy efficiency	Sections 1-3 of the typology
Renewable energy	Section 4 of the typology
Sustainable transport	Section 5 of the typology
Agriculture, forestry and land use	Section 6 of the typology
Waste and waste water	Section 7 of the typology
Cross-sector activities and others	Sections 8 -9 of the typology

This report was prepared by professional staff at the Multilateral Development Banks. The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the MDBs, their governing bodies or their members.