ISLAMIC DEVELOPMENT BANK GROUP

Climate Change Mitigation in Member Countries: The Role of IsDB Group

November 2016

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1. Background

The Intergovernmental Panel on Climate Change (IPCC, established by the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) in 1988, defines mitigation as "technological change and substitution that reduce resource inputs and emissions per unit of output with respect to climate change, mitigation means implementing policies to reduce GHG emissions and enhance sinks".

Measures can include reducing demand for emission-intensive goods and services, boosting efficiency gains, and increasing the use of low-carbon technologies. Another way to mitigate the impacts of climate change is by enhancing reservoirs that absorb CO2, such as forests. Mitigating climate change is about reducing the release of greenhouse gas emissions which are trapping heat in the atmosphere causing the warming of the planet.

To tackle global warming, most countries of the world have signed an international treaty - the UNFCCC (United Nations Framework Convention on Climate Change) - in June 1992. As of 2015, the UNFCC has 197 parties including all United Nations member states (including all IsDB member countries). The main purpose of the UNFCCC is to consider what can be done to reduce global warming, and to cope with whatever temperature increases which are inevitable.

The 22nd session of the Conference of the Parties (COP22) to the UNFCCC is scheduled to take place on November 7-18, 2016, in Marrakech - Morocco. During COP22 parties will, inter alia, begin preparations for entry into force of the Paris Agreement adopted at the Paris climate conference (COP21) in December 2015 where 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement, due to enter into force in 2020, sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.

Countries, including IsDB member countries, publicly outlined what post-2020 climate actions they intended to take under the new international agreement, known as their Intended Nationally Determined Contributions (INDCs). The climate actions communicated in these INDCs largely determine whether the world achieves the long-term goals of the Paris Agreement: to hold the increase in global average temperature to well below 2°C, to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century.

To design an effective mitigation strategy, it is vital to determine the GHG emission pattern, available mitigation options, role of technology and market-based mechanisms. We also need to design the mitigation strategy in such a way that it helps ensure sustainable development.

The many mitigation strategies include retrofitting buildings to make them more energy efficient; adopting renewable energy sources like solar, wind and hydroelectric plants; helping cities develop more sustainable transport such as bus rapid transit, electric vehicles and biofuels; and promoting more sustainable uses of land and forests.

2. Overview of Climate Change Mitigating Projects Financed by IsDB

Since inception, IsDB has contributed to development of renewable energy projects in its Member Countries (MCs) by providing total financing of about US$2.75 billion. The bank also has taken the following actions to support environmental protection and mitigate Climate Change at its constituencies: (i) Made provision for environmental protection in all its project documents; (ii) Drafted environmental safeguard's statements and commitments; (iii) Gained observer status with the UN Framework Convention on Climate Change (UNFCCC); (iv) Launched in 2014 the Renewable Energy for Poverty reduction (REPoR) program to tackle the energy challenges in the MCs via application of renewable energy resources; and (v) Adopted the Energy Policy calling for more Renewable Energy Financing.

The REPoR Program will be implemented through decentralized renewable electrification projects, with particular focus on solar off-grid solutions in Sub-Saharan Africa, over a period of three years starting from 1435H (2014).

The overall indicative program envelop is US$180 million. Up to 2015, the Bank already approved projects for an amount of US$40.3 Million for Burkina Faso and Senegal. (Burkina Faso: US$13.4 Million, Senegal: US$27 Million). For the year (1437H, 2016) the Bank is preparing to finance projects for about US$36 million. (Chad: US$20 million and Afghanistan: US$16 million).

Since its inception in 1976, about 6% of IsDB operations was allocated to climate change mitigating projects. IsDB financing for climate change-related projects start to have some importance from 1994 with a ratio of about 3% of the operation portfolio, a constant progress was maintained in general since that time and we have recorded about 4% in 1996 and in 1997. The significant boost of IsDB participation in climate change related projects started from 2008 with a ratio exceeding 10%.

The share of IsDB climate change mitigating projects in the operation portfolio is fluctuating up and down from year to year, however considering the last two decades i.e. from 1996 to 2005 and from 2006 to 2015 the average share for each of these two decades is respectively 1.2% and 6%. This shows the average progress of IsDB financing to climate change over the last 20 years.

It shall be highlighted that all these projects were related to renewable energy projects i.e. hydraulic, solar and wind, as the concept of financing other type of climate change related projects i.e. transport and urban was not mature within the member countries where most of them are focusing their efforts to raise the electrification rates and to develop basic infrastructure facilities.

In 2016, IsDB's operation portfolio related to financing climate change projects recorded the highest ratio more than 16%. This is due to the consideration of transport projects related to mitigation to climate change.

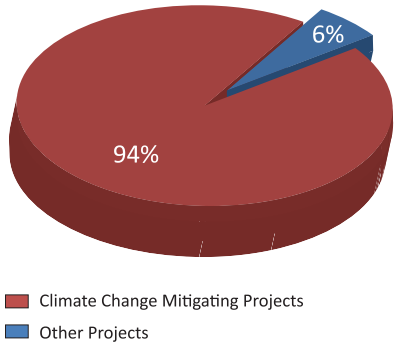
We expect that this trend will continue due to:

- The tendency in the world to develop large-scale solar plants (industrially and ecumenically became mature and viable)
- The adoption of IsDB safeguard and policy for reporting climate change related projects
- IsDB member countries are getting more involved in climate change by developing their Intended Nationally Determined Contribution (INDC)

The selection of the projects was based on MDBs Adopted Criteria for classifying projects related to climate mitigation.

IsDB projects related to climate change mitigation are distributed in four regions:

Figure 1: IsDB Contribution to Climate Change Mitigation Compared to the Overall Portfolio since inception (1976-2016)



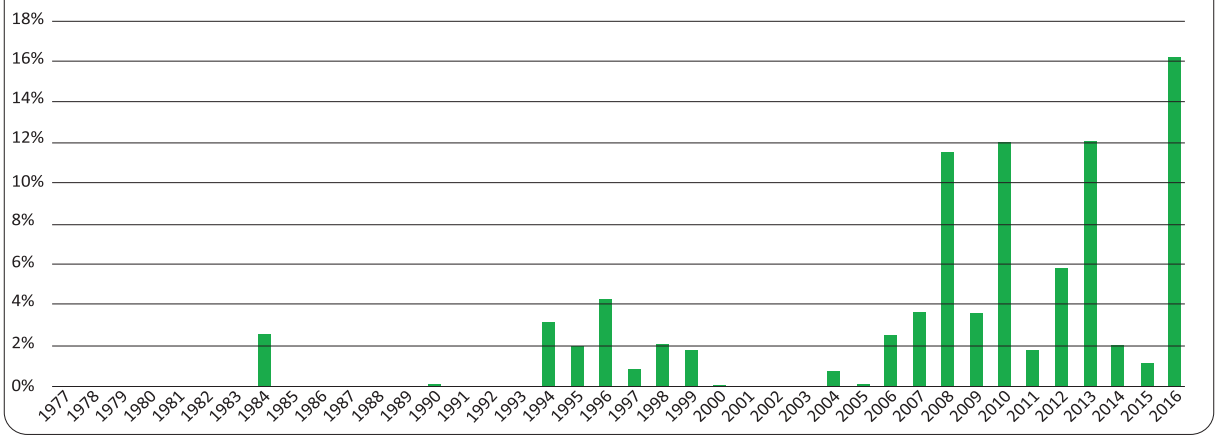
3. Success Stories

a. Mini Hydropower (MHPPs) Plants in Tajikistan

The aim of these plants is to provide a reliable supply of electricity in rural areas where previously supply has been limited, especially during the winter periods.

The initial phase of the project, which was approved and commenced in 2004, included the construction of eight MHPPs (five of them were financed by IsDB) in various remote and rural areas of the country. The IsDB financing amounted to US$11.15 million out of an overall project budget of US$14.6 million. By March 2013, all eight MHPPs had been successfully constructed and launched in Aini (Marzich MHPP), Tajikabad (Fathobod MHPP), Nurabad (Shashboloi MHPP), Jirgatal (Pitavkul MHPP), Rasht (Sangikar MHPP), Tursunzade (Shirkent MHPP), Shahrinav (Toj MHPP) and Baldjuvan (Horma MHPP) districts. Together, the eight plants produce 7.75 MW of electricity.

Figure 2: Evolution of IsDB Contribution to Climate Change Mitigation Compared to the Overall Portfolio



Sub-Saharan Africa (SSA), Asia, Countries in Transition (CIT) and Middle East and North Africa (MENA). About 57% of these projects are located in Asia due to the nature of this region with advanced development and the availability of hydro resources. However, the tendency shows that SSA region will have an important progress in the near future since huge resources in hydro and solar are available and grids infrastructure is being extended to be able to integrate big capacity of power plants based on renewable resources mainly solar and wind.

Figure 3: Regional Repartition of IsDB Contribution to Climate Change Mitigation

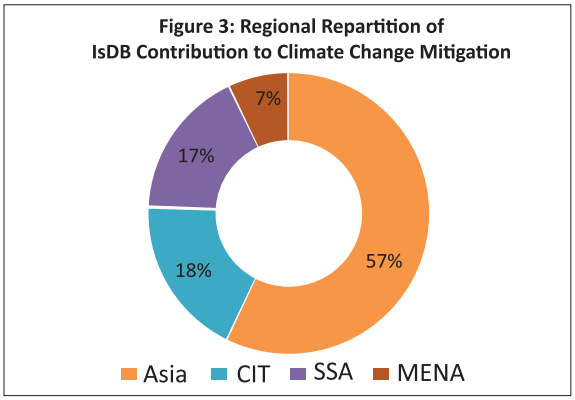


Figure 4: Mini Hydropower plant in Tajikistan

b. A Clean, Secure Future: Reshaping Turkey's Energy Sector

In recent years, Turkey has dramatically stepped up efforts to develop its renewable energy resources through private investments. Between 2012 and 2015, the IsDB provided financing for the energy sector, supporting four renewable-energy development projects and six energy-efficiency projects. These are now making significant contributions to Turkey's energy mix, while providing many additional benefits as well.

To contribute towards these national goals, IsDB extended a Financing Facility that enabled four renewable-energy projects – two hydropower dams, one solar plant and one wind plant – and six energy-efficiency projects to be realized. These were spread across Turkey (see Fig. 5).

Under this Facility approach, IsDB worked through an implementing partner. The Türkiye Sınai Kalkınma Bankası (TSKB, known in English as the Industrial Development Bank of Turkey) is one of Turkey's leading development and investment banks and was the first bank to finance renewable-energy projects in the country. Its expertise and experience in this sector proved extremely valuable, with almost all the projects being completed within budget and on schedule.

The combined cost of the 10 projects was US$641.2 million. IsDB provided US$100 million, using a Restricted Mudarabah mode of financing for the first time. International co-financers were the World Bank, the International Finance Corporation, the European Investment Bank and KfW (Kreditanstalt für Wiederaufbau). Turkish lenders included Türkiye Garanti Bankası, Türkiye İş Bankası and Yapı ve Kredi Bankası.

The combined impact of these projects greatly exceeded the initial targets. The renewable-energy plants have the capacity to provide 370 megawatts (MW) against a target of 150 MW, and their combined supply to the National Grid already exceeds 500 gigawatt hours (GWh) per year delivering 430,000 tons of annual CO2 reduction. Meanwhile, the energy-efficiency projects have already saved 1,006,000 tons of greenhouse gases (the target was 300,000 tons).

A new approach to Islamic financing

This was the first time IsDB used Restricted Mudarabah financing. Under a Mudarabah mode of financing, a Rab al-maal (in this case, IsDB) provides capital to a Mudarib (in this case, TSKB) to invest in business enterprises, as per agreed criteria. This approach eliminated the need for IsDB to enter into individual financing agreements for each sub-project being financed. It also gave a lot of freedom to TSKB as the local executing agency (Mudarib), for example to use its own procedures for appraisal, quality assessment and risk assessment, as well as the procurement of goods and services.

The Restricted Mudarabah Facility complies with Shariah principles and is operationally compatible and administratively competitive with the Financing Facilities being extended by other development partners. It is also highly efficient and has client-friendly implementation mechanisms. These attributes will benefit IsDB's future operations in Member Countries, allowing them to develop their own energy-sector projects. In particular, it will increase IsDB's outreach to rural communities through local financial intermediaries.

In this Facility, TSKB used its extensive knowledge of Turkey's energy sector to identify a pipeline of suitable, high-quality projects. The Restricted Mudarabah Facility gave the bank the flexibility it needed to screen and select the projects according to stringent criteria and continuously monitor them during implementation, yet still disburse funds swiftly.

Figure 5: IsDB's renewable-energy and energy-efficiency projects in Turkey

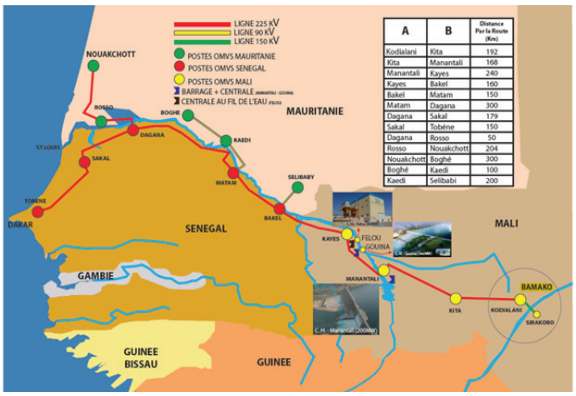
Figure 6: IsDB's renewable-energy and energy-efficiency projects in Turkey – Solar Plant

c. Manantali Hydropower Project (OMVS)

The Manantali hydropower project involves cross-border cooperation of Senegal, Mali and Mauritania under the egis of the Organization pour la Mise en Valeur du fleuve Sénégal (Senegal River Basin Development Authority or OMVS), a regional river basin organization. It established a unique sub-regional power system including a 200 MW hydroelectric plant at the foot of the Manantali dam with a capacity to produce annually around 800 GWh per year which will result in 478,000 tons of CO2 reducton. And a 1000-kilometer long system of 225 kV transmission lines and sub-stations that distribute electricity produced to the main load centers in Mali, Mauritania and Senegal, both operated in real time by a central load dispatching system located at Manantali.

This regional cooperation contributed efficiently to reduce the energy deficit by country and showed that regional cooperation in energy sector can succeed. IsDB was one of the main financiers of this project by approving in 1997 the financing the power evacuation system (220 kV transmission line) in the three countries (Senegal, Mali and Mauritania) with a total package of about USD 21 million for a total project cost of about USD 400 million.

Figure 7: Manantali (OMVS) Project



d. Mini Solar Home System in Bangladesh

When the World Bank and the Global Environment Facility (GEF) financed the solar program in 2003, they were counting on 50,000 systems being installed by 2008. In fact, demand proved so great that this target was achieved by 2005. And demand shows no sign of trailing off – 50,000 systems are now being installed every month! The World Bank has repeatedly reviewed the program, and has continued financing it. The Government of Bangladesh set a target of installing 2.5 million SHS by 2014, with 1 million Solar Home System (SHS) to be installed in 2012 alone.

Since the program began, other development partners have joined. Financial institutions, including the IsDB which joined in 2009, provide loan funds, while other partners support the program by subsidizing the cost of the SHS.

In 2009, the ISFD, the poverty alleviation arm of the IsDB Group, contributed US$18 million to the refinancing scheme, joining the World Bank's International Development Association (IDA), the Asian Development Bank and the German Government-owned development bank, Kreditanstalt für Wiederaufbau (KfW).

Grants to provide the subsidies used in the program came originally from the Global Environment Facility (GEF) and more recently from the UK Department for International Development (DFID) and the Swedish International Development Cooperation Agency (Sida), through the Global Partnership on Output-Based Aid. In addition to funding from the Government of Bangladesh, grants have also been received from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Netherlands Development Organisation (SNV).

Figure 8: Mini Solar Home System in Bangladesh

4. Conclusion

Climate Change Mitigation projects are estimated to grow as the renewable energy becomes a viable option in both fossil fuel scarce and resource rich economies. Recent surge of investment in Renewable Energy, which saw the record level of $329 billion financing in 2015 is setting a promising ground for future trends. Moreover, Member Countries submitted their INDCs which call for project-based actions in various sectors of their economies. IsDB will support its MCs to deliver INDC targets in selected sectors by providing the Islamic Financing.

The Sub-Saharan African region, with a promising solar energy potential, is expected to have, in the near future, an important development of climate change mitigating projects by the implementation of large-scale solar systems.

Corporate profile of the Islamic Development Bank

Establishment

The Islamic Development Bank (IDB) is an international financial institution established pursuant to Articles of Agreement done at the city of Jeddah, Kingdom of Saudi Arabia, on 21 Rajab 1394H corresponding to 12 August 1974. The Inaugural Meeting of the Board of Governors took place in Rajab 1395H (July 1975) and the IDB formally began operations on 15 Shawwal 1395H (20 October 1975).

Vision

By the year 1440H, the Islamic Development Bank will have become a world-class development bank, inspired by Islamic principles, that has helped significantly transform the landscape of comprehensive human development in the Muslim world and helped restore its dignity.

Mission

To promote comprehensive human development, with a focus on the priority areas of alleviating poverty, improving health, promoting education, improving governance and prospering the people.

Membership

The IDB has 57 member countries across various regions. The prime conditions for membership are that the prospective country should be a member of the Organization of the Islamic Cooperation (OIC), that it pays the first instalment of its minimum subscription to the Capital Stock of IDB, and that it accepts any terms and conditions that may be decided upon by the Board of Governors.

Capital

At its 38th Annual Meeting, the IDB's Board of Governors approved the 5th General Capital Increase whereby the Authorized Capital was increased to ID100 billion and the Subscribed Capital (available for subscription) was increased to ID50 billion. By the same Resolution, the Board of Governors agreed to the calling in of the callable (in cash) portion of the 4th General Capital Increase. As at the end of 1436H, the subscribed capital of the IDB stood at ID49.92 billion.

Islamic Development Bank Group

The IDB Group comprises five entities: the Islamic Development Bank (IDB), the Islamic Research and Training Institute (IRTI), the Islamic Corporation for the Development of the Private Sector (ICD), the Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC), and the International Islamic Trade Finance Corporation (ITFC).

Head Office, Regional and Country Offices

Headquartered in Jeddah, the Kingdom of Saudi Arabia, the IDB has four regional offices in Rabat, Morocco; Kuala Lumpur, Malaysia; Almaty, Kazakhstan; and in Dakar, Senegal and Country Gateway offices in Turkey (Ankara and Istanbul), Indonesia, and Nigeria.

Financial Year

The IDB's financial year used to be the lunar Hijra Year (H). However, starting from 1 January 2016, the financial year will be Solar Hijra year starting from 11 of Capricorn, (corresponding to 1 January) and ends on the 10 of Capricorn (corresponding to 31 December of every year).

Accounting Unit

The accounting unit of the IDB is the Islamic Dinar (ID), which is equivalent to one Special Drawing Right (SDR) of the International Monetary Fund.

Language

The official language of IDB is Arabic, but English and French are also used as working languages.

ISLAMIC DEVELOPMENT BANK
8111 King Khaled Street, Al Nuzlah Yamania
Jeddah-22332-2444 - Kingdom of Saudi Arabia

Tel: (+966-12) 6361400 | Fax: (+966-12) 6366871 | Email: idbarchives@isdb.org | Website: www.isdb.org