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Green Energy Finance

Prospects for Turkey

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Introduction

At the outcome of the Paris Conference, a binding and global climate change agreement was agreed upon for the first time by almost all the countries in the world. The participants jointly committed to limit the global temperature increases to 2 °C above pre-industrial levels with efforts to limit the increase to 1.5 °C¹. This will be no easy task as according to the research undertaken by the Intergovernmental Panel on Climate Change (IPCC), a significant increase in global temperatures has already occurred. It is estimated that global temperature levels rose approximately by 0.85 °C between the years 1880 and 2012². Moreover, more recent estimates signal that the 1 °C threshold may have been crossed within the year 2015³. This will make it considerably hard to limit the warming to the 2 °C target. Additionally, it is already possible to observe the various adverse effects of climate change throughout the world. Adaptation and mitigation are the two courses of action that are necessary to address the threat of climate change. Intense mitigation efforts will be required to limit the further warming of the planet within the universally agreed threshold and substantial adaptation efforts will be required to address the existing adversities caused by climate change. Monumental amounts of investments will be required globally on both ends of the struggle to tackle climate change. A complete transformation of the global energy infrastructure will likely be required to tackle the threat of climate change. Therefore, the issue of finance is currently at the heart of the global climate change discussion.

Climate finance is general term used to refer to the financial resources paid to cover the costs of transitioning to a low-carbon economy and to adapt to or build resilience against current and future climate change impacts⁴. Since the beginning of the industrial age, the bulk of the greenhouse gas (GHG) emissions of the world have historically originated from developed countries who based their early industrialization on a heavy utilization of fossil fuels. However, in the last decades, the process of industrialization has taken up pace in much of the less developed parts of the world. As a result, the responsibility of causing climate change can no longer be solely attributed to the developed countries. The GHG emissions from the developing world have significantly increased and currently several of the largest emitters in the world are developing countries like China and India among others. Therefore, along with the mitigation needs of the developed nations, substantial

¹ UNFCCC, 'Adoption of the Paris Agreement, Proposal by the President', accessed from <http://unfccc.int/resource/docs/2015/cop21/eng/I09.pdf> on 13.12.2015

² Intergovernmental Panel on Climate Change, 'Climate Change 2014 Synthesis Report(2014), p.2

³ 'Warming set to breach 1 C Threshold', BBC News, 9.11.2015 accessed from <http://www.bbc.com/news/science-environment-34763036> on 12.12.2015

⁴ Falconer, Angela and Stadelmann, Martin, 'What is climate finance? Definitions to improve tracking and scale up climate finance'(2014), Climate Policy Initiative, p. 1

mitigation investments will also be required into developing countries to limit future climate change. Furthermore, several of the most vulnerable countries to the impacts of climate change are underdeveloped countries that lack the capacity to properly address these impacts. Such countries have only marginal responsibility in bringing about climate change but they bear the brunt of its impacts. Because of these reasons, it is recognized that a significant flow of climate finance from the developed countries to the developing world will be required to contribute to the investment needs of the developing parts of the world on both fronts of mitigation and adaptation. The discussions on how these funds will be provided generally constitute one of the main divisive issues in the global climate change negotiations.

It is estimated by the International Energy Agency(IEA) that a total of 53 trillion USD worth of low-carbon investments will be required between 2014 and 2035 only for the energy sector in order to keep global temperature rise below the 2 °C target⁵. For the year 2020, it is estimated that around 197 billion dollars of investment in low carbon technologies will be required only to cover the climate finance needs of the developing and emerging countries⁶. The estimates for adaptation costs of the developing countries varied between 10 to 41 billion USD for each year between 2010-2015 as calculated by the World Bank and 86 billion USD per year as calculated by the United Nations Development Program(UNDP)⁷. These enormous figures can only be realized through utilizing multiple sources of finance from a combination of various public and private sources. Transfers of finance from the 'global north' to the 'global south' has to play an important role in this regard, as capital accumulation in the developing world is limited.

There currently are several channels and sources through which climate finance is made available for developing countries. Several multilateral and bilateral funds exist both within and outside of the UNFCCC framework that are providing finance for the developing countries and will continue to do so in the foreseeable future. One of the main expectations of the developing countries from a climate change agreement was to secure an amount of financing guarantees from the developed countries. It was previously agreed in the UNFCCC meetings that the developed nations would increase the amount of climate finance to 100 billion dollars starting from the year 2020⁸. Although this target only got included into the preamble of the Paris Agreement, which is not legally binding, it was agreed on article 9 of the agreement that the developed countries 'should continue to take the lead

⁵ International Energy Agency, 'World Energy Investment Outlook 2014'(2014), p. 19

⁶ United Nations Environmental Programme, 'National Climate Finance Institutions'(2012), p. 2

⁷ International Institute for Environment and Development, 'Assessing the Costs of Adaptation to Climate Change'(2009), p. 8

⁸ Westphal, Michael I., Canfin, Pascal, Ballesteros, Athena and Morgan, Jennifer, 'Getting to 100 billion: Climate Finance Scenarios and Projections to 2020'(2015), World Resources Institute, p. 5

in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds' and that 'such mobilization of climate finance should represent a progression beyond previous efforts'⁹. The Global Environment Facility(GEF), Green Climate Fund(GCF) and the Adaptation Fund are currently among the mechanisms that operate under the UNFCCC to increase climate finance flows into the developing world. The main sources of climate finance outside the UNFCCC framework include several other multilateral funds, funds provided by multilateral development banks(MDB's) and several bilateral climate finance mechanisms.

As an emerging country with rapidly increasing GHG emissions, Turkey needs to transform its energy infrastructure in order to take part in the struggle against climate change. Turkey's current energy strategy involves a significant reliance in coal-fired power generation and threatens to undermine the country's mitigation efforts. Turkey has a substantial potential for utilizing different forms of renewable energy and for increasing its energy efficiency, but significant investments are needed to realize this potential. Additionally, Turkey is geographically located in the Eastern Mediterranean Basin which is set to be considerably affected from climate change impacts according to the research undertaken by the IPCC¹⁰. Therefore, a significant amount of investments will also be required on the adaptation side in order to cope with the adverse effects of climate change. Turkey needs to utilize international sources of finance along with domestic sources in order to adequately address the investment needs in climate change mitigation and adaptation. Benefiting from international climate finance has been one of the main expectations of the country from the UNFCCC climate change negotiations which culminated in the Paris Agreement. The outcome of the negotiations is therefore significant for Turkey's prospects of attracting climate finance. The funds channeled from the UNFCCC as well as the various other sources of international climate finance can potentially play an important role in the country's struggle against climate change and in bolstering economic development of the country in general. In the following part of this report, some of the foremost climate change funds available for developing countries will be analyzed and Turkey's prospects for benefitting from these funds will be discussed.

Overview of Global Climate Finance

According to the calculations made by the Climate Policy Initiative, the global total of climate change related investments increased in 2014 to reach 391 billion USD, up from 331 billion on 2013. Public climate finance sources accounted for 148 billion dollars of the 2014 figure while private sources

⁹ UNFCCC, 'Adoption of the Paris Agreement, Proposal by the President', accessed from <http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf> on 13.12.2015

¹⁰ Intergovernmental Panel on Climate Change, 'Climate Change 2014: Impacts, Adaptation and Vulnerability, Part B: Regional Aspects'(2014), pp. 1269-1272

accounted for the remaining 243 billion¹¹. According to the OECD figures, the total volume of public and private finance flows into the developing world from the developed countries reportedly reached 61.8 billion USD in 2014, up from 52.2 billion dollars on 2013 with the exclusion of high efficiency coal projects¹². It is estimated that of the two year's average of 57 billion US dollars, 40.7 billion USD consisted of public finance, 1.6 billion USD consisted of export credits and 14.7 billion USD consisted of private finance. Around 77% of the total figure was used for mitigation purposes while 16% was used on adaptation and the rest was used for activities that target both adaptation and mitigation¹³. The large share of mitigation related activities can be partially attributed to the fact that a bulk of the private portion flowed into mitigation activities.

A large part of the climate change finance is driven by investments into the renewable energy sector. On 2014, renewable energy investments made up approximately 58.5% of the global power capacity additions of total new energy investments, thus surpassing the total capacity additions made from fossil fuels by some margin¹⁴. One general trend in green energy investments is the continuing spread of renewable energy to new and mostly developing markets. Renewable energy investments in the developing parts of the world have been rapidly increasing in the recent years. The total renewable energy investment in developing countries reportedly stood at 131.3 billion US dollars for the year 2014, while the same figure was 138.9 billion dollars in total for the developed world. Compared to the 2013 figures, the level of increase for the developing markets was 36% while the increase in the developed markets stood only at 3%. 2014 has been the year on which the gap between the investments in the developed and developing countries have narrowed the most¹⁵. This upsurge of renewable energy investment in the developing world originated for the most part, from China. The renewable energy investments in China increased from just 3 billion US dollars on 2004 to 83.3 billion on 2014. Other developing countries have also contributed significantly with 7.6 billion dollars of investments in Brazil, 7.4 billion dollars in India, 5.5 billion dollars in South Africa and more than 1 billion dollars each in Mexico, Chile, Indonesia, Kenya and Turkey¹⁶. It is to be expected that

¹¹ Buchner, Barbara, Trabacchi, Chiara, Mazza, Federico, Wang, David and Abramskieln, Dario, 'The Global Landscape of Climate Finance 2015'(2015), Climate Policy Initiative, p. 1

¹² OECD (2015), "Climate finance in 2013-14 and the USD 100 billion goal", a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI), p.10

¹³ OECD (2015), "Climate finance in 2013-14 and the USD 100 billion goal", a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI), p.11

¹⁴ Renewable Energy Policy Network for the 21st Century Steering Committee, 'Renewables 2015 Status Report'(2015), p. 30

¹⁵ Bloomberg New Energy Finance, 'Global Trends in Renewable Energy Investment 2015'(2015), p. 15

¹⁶ Ibid.

this trend of increasing renewable energy investments in the developing countries will continue for the foreseeable future, with several other countries making a leap forward alongside China. Climate finance flows from the developed world are expected to play an important part in this investment surge.

On 2009, at the 19th Conference of Parties in Copenhagen, the developed countries committed to jointly mobilize to 100 billion dollars of climate finance a year by 2020 to address the needs of developing countries¹⁷. It was agreed that this amount would be supplied through various sources including ‘public and private, bilateral and multilateral, including alternative sources of finance’¹⁸. The OECD figure of 61.8 billion USD of climate finance for 2014 suggests that there is a relatively modest margin of almost 40 billion USD left to reach the 100 billion USD target by 2020. However, the methodology used by the OECD in calculating climate finance is not universally accepted and there are disputes over how to define and how to track climate finance with respect to the 100 billion target. As of yet, there is no generally accepted definition of what flows should be accounted under the title ‘climate’ and under ‘finance’, and what activities should be considered eligible for accounting under climate finance¹⁹. For example, countries like Japan and Australia have argued in the past that financing high efficiency coal plants should be considered as climate finance and they have funded such projects under their climate finance programs²⁰. Also there is no universal tracking mechanism to monitor climate finance flows. These ambiguities will be lingering problems in the future climate change discussions that will need to be figured out.

In their report, Bodnar et al identifies five aspects of the 100 billion target that will need to be further specified. These are listed as motivation, concessionality, causality, geographic origin and recipient. Motivation aspect refers to the question of whether only finance programs that primarily aim to address climate change should be counted towards the 100 billion goal or should those funds that target climate change as one of several benefits or funds that have climate co-benefits be counted. If the latter types of funds are counted towards the 100 billion target, the 100 billion target would be much easier to reach as it can be argued that many of the current official development aid flows already have climate co-benefits. Concessionality refers to what types of financial mechanisms

¹⁷ Westphal, Michael I., Canfin, Pascal, Ballesteros, Athena and Morgan, Jennifer, ‘Getting to 100 billion: Climate Finance Scenarios and Projections to 2020’ (2015), World Resources Institute, p. 5

¹⁸ UNFCCC, ‘Report of the Conference of the Parties on its fifteenth session, held in Copenhagen’, accessed from <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf> on 12.12.2015

¹⁹ C. Clapp, J. Ellis, J. Benn and J. Corfee-Morlot, ‘Tracking Climate Finance: What and How?’, Organization for Economic Cooperation and Development’ (2012), p. 7

²⁰ OECD (2015), “Climate finance in 2013-14 and the USD 100 billion goal”, a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI), p.10

should be counted. The options can be to count only grants or also include concessional loans, market rate loans or guarantees. Causality refers to what types of funds can be claimed to have been mobilized by the countries. Here the question is which sources of private finance should be classified to have been mobilized by the public sector along with direct public funds. To question of geographic origin refers to whether only strictly north to south transfers will be counted or whether the classification will include other types of transfers like multilateral sources, south to south transfers etc. The final issue is what types of recipients will be included. On this issue, the choices may be only to include developing country public sectors, to also include developing country NGO's and private sector²¹.

These lingering ambiguities aside, there recently has been considerable progress in raising climate finance flows into the developing world as several developed countries have announced commitments to significantly increase their contributions. For example, the government of Japan announced on November, 2015 that it has agreed to provide an additional 10.6 billion USD annually to climate finance starting from the year 2020, using both public and private sources²². Other countries like Germany, France, United Kingdom and United States have also announced that they will be substantially increasing their climate finance contributions in the next decade²³. Additionally, several MDB's have also promised to substantially increase their resources allocated to climate finance. African Development Bank, for instance, pledged to increase its climate finance to nearly 5 billion dollars a year by 2020²⁴, the World Bank reported that it could increase its finance to 29 billion a year²⁵ and the Inter-American Development Bank announced that it would double its finance²⁶.

An important part of the climate finance flows are currently being channeled through MDB's. According to a report produced by the collaboration of several MDB's, the total amount of climate finance provided through six main MDB's amounted to 23.8 billion US dollars for the year 2013. Of this amount, around 6.7 billion dollars was provided by the World Bank, 5.2 was provided by the

²¹ Bodnar, Paul and Brown, Jessica, Nakhoda, Smita, 'What Counts: Tools to Help Define and Understand Progress Towards the \$100 Billion Climate Finance Commitment' (2015)

²² US News, 26.11.2015, 'Japan says it plans \$10.6 billion in climate finance for developing countries for 2020', accessed from <http://www.usnews.com/news/science/news/articles/2015/11/26/japan-announces-106-billion-in-climate-financing-for-2020> on 15.12.2015

²³ UNFCCC Newsroom, accessed from <http://newsroom.unfccc.int/financial-flows/list-of-recent-climate-funding-announcements/> on 12.12.2015

²⁴ Climate Investment Funds, accessed from <http://www.climateinvestmentfunds.org/cif/content/african-development-bank-triple-annual-climate-financing-nearly-5-billion-2020> on 5.12.2015

²⁵ World Bank, accessed from <http://www.worldbank.org/en/news/press-release/2015/10/09/world-bank-group-pledges-one-third-increase-climate-financing> on 5.12.2015

²⁶ Climate Investment Funds, accessed from <http://www-cif.climateinvestmentfunds.org/news/idb-aims-double-financing-climate-change> on 5.12.2015

European Investment Bank, 3.5 was provided by the European Bank of Reconstruction and Development, 3.2 was provided by the Asian Development Bank, 2.6 was provided by the International Finance Corporation, 1.2 was provided by the African Development Bank and 1.2 was provided by the Islamic Development Bank. The bulk of this amount went into non-EU Europe and Central Asia with 5.1 billion USD, the East Asia and Pacific Region received 4.3 billion, South Asia received 3.1 billion while the Middle East and African Region only received 559 million USD. Of the total 23.8 billion USD of climate finance, only 4.8 billion was used for adaptation related activities while the rest was used for mitigation purposes²⁷.

The current climate finance framework involves a variety of funds that have different but often overlapping functions. Several multilateral funds both within and without the UNFCCC framework, funds provided by multilateral banks, bilateral programs and multi-donor national funds can be mentioned as the main types of currently active climate finance programs. It is necessary to examine these funds more closely to understand the global climate finance architecture and inspect Turkey's prospects of benefitting from these international climate finance.

Main Climate Change Funds

1. Multilateral Funds

Green Climate Fund

The aforementioned Green Climate Fund is a relatively new financing mechanism established under the UNFCCC. It was proposed at the 15th Conference of Parties at Copenhagen and became operational on the summer of 2014. Several projects were approved as of November, 2015. The fund is designed to be the centerpiece in achieving the goal of providing 100 billion USD of finance flows into the developed world by 2020. It will be capitalized by contributions from donor countries, from private sources and potentially from other innovative financing schemes²⁸. GCF is governed by a board consisting 24 members and is based in South Korea. The members are chosen equally from developed and developing nations. The activities financed by the fund cover a variety of fields such as mitigation, adaptation, technology transfer and development, capacity building and the preparation of national reports. The five investment priorities identified by the fund are transforming

²⁷ African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, International Finance Corporation and World Bank, 'Joint Report on MDB Climate Change' (2014), pp. 1-10, accessed from <http://www.ebrd.com/downloads/news/mdb-climate-finance-2013.pdf> on 6.1.2016

²⁸ Lattanzio, Richard K., 'International Climate Change Financing: The Green Climate Fund' (2014), Congressional Research Service, pp. 1-2

energy generation and access, creating climate-compatible cities, encouraging low-emission and climate-resilient agriculture, scaling up finance for forests and climate change and enhancing resilience in Small Island Developing States²⁹. All developing countries under the UNFCCC framework are eligible to receive funding. This classification suggests that several middle income countries such as Brazil, China and Mexico will also have access to the fund. The financial instruments that will be used include grants, loans and other possible delivery mechanisms³⁰.

Approximately 10 billion USD worth of finance has been pledged to the fund by the developed countries as of the end of 2015, but increased pledges are to be expected in the near future if the fund is going to play a considerable role in reaching the 100 billion USD target. The main donors include the US with 3 billion dollars of contribution, Japan with 1.5 billion, UK with 1.2 billion, France and Germany with 1 billion dollars each and Sweden with 580 million³¹. The funds made available by the GCF can be accessed through a variety of channels including accredited multilateral development banks and UN agencies. To date, 20 such entities have been accredited to the GCF. The initial 8 projects approved by the GCF Board include a range projects focused mostly in poor developing countries such as Bangladesh, Malawi, Senegal and Fiji³².

Adaptation Fund

Adaptation Fund is a climate finance mechanism set up to help vulnerable communities in developing countries to adapt to climate change³³. The fund was set up under the UNFCCC framework and became operational on 2009. It is governed by the Adaptation Fund Board and the World Bank serves as a trustee for the fund on an interim basis. The fund is partially financed by a share of Clean Development Mechanism project activities and partially financed by voluntary pledges of donor governments. All developing countries which are parties to the Kyoto Protocol and which are especially vulnerable to the adverse effects of climate change are eligible to apply to the fund. As of yet, more than 330 million US dollars of grants have been issued for funding various adaptation activities throughout the developing world. The total capitalization of the fund has reached 642 million USD since 2009³⁴. The recipient countries include over 40 countries including several least

²⁹ Green Climate Fund website, accessed from <http://www.greenclimate.fund/ventures/funding> on 15.12.2015

³⁰ Lattanzio, Richard K., 'International Climate Change Financing: The Green Climate Fund'(2014), Congressional Research Service, pp. 1-2

³¹ Green Climate Fund website, accessed from <http://www.greenclimate.fund/contributions/pledge-tracker> on 15.12.2015

³² Green Climate Fund website, accessed from <http://www.greenclimate.fund/-/green-climate-fund-approves-first-8-investmen-1?inheritRedirect=true&redirect=%2Fhome> on 15.12.2015

³³ Adaptation Fund Website, accessed from <http://www.adaptation-fund.org/> on 14.12.2015

³⁴ Barnard, Sam, Caravani, Alice, Nakhooda, Smita and Schalatek, Liane, 'Climate Finance Thematic Briefing: Mitigation Finance'(2014), Heinrich Böll Stiftung North America, Overseas Development Institute, p.2

developed countries from Asia and Africa and middle income countries such as India, Argentina, Chile and South Africa³⁵.

Funds operating under the Global Environment Facility

The Global Environment Facility (GEF) is a financial mechanism founded before the 1992 Rio Earth Summit. It serves as a financial intermediary for promoting several environmental treaties, among which UNFCCC is one³⁶. There currently are three specialized funds working to fight climate change functioning under the GEF umbrella. These include the Least Developed Countries Fund, GEF Trust Fund and the Special Climate Change Fund. All of the three funds utilize finance in the form of grants.

As its name suggests, the Least Developed Countries Fund is specialized in providing finance for the least developed countries. The aim of the funding is to aid the LDC's in their adaptation to the climate change effects. All the least developed countries in the world are eligible to apply for the fund. A total of 964 million USD has as of yet been pledged. Special Climate Change Fund prioritizes investments in the two broad areas of adaptation and technology transfer. A total of 350 million USD has been pledged to the fund. All non-annex 1 countries can apply for the fund but the needs of the most vulnerable countries in the world are prioritized. The Least Developed Countries Fund and the Special Climate Change Fund are governed by a joint board that is responsible for allocating resources.

GEF Trust Fund is financed on 4 year intervals and has been active since 1994. The aim of the fund is to contribute to the developing and emerging countries efforts to objectives of the UNFCCC. This covers both adaptation and mitigation. The eligibility criteria for the fund is different from the other two GEF climate change funds. A country is considered eligible to receive grants from the fund if it is eligible to borrow from the World Bank or if it is eligible to receive technical assistance from the UNDP. Since 2006, 3.5 billion USD has been committed into the fund, mainly by several developed countries.

Funds administered by the United Nations Development Program

The United Nations Development Program (UNDP) administers two climate funds which are the UN-REDD Program and the MDG Achievement Fund. UN-REDD Program is set up with the aim to reduce the global emissions from deforestation and forest degradation in developing countries. A total of

³⁵ Adaptation Fund Website, accessed from <https://www.adaptation-fund.org/projects-programmes/project-information/projects-table-view/> on 14.12.2015

³⁶ Global Environment Facility Website, accessed from <https://www.thegef.org/gef/whatisgef> on 15.12.2015

257 million dollars have been donated to the fund³⁷. There are 64 UN-REDD partner countries from the regions of Africa, Asia and Latin America which are eligible to apply for UN-REDD grants.

Millennium Development Goals(MDG) Achievement Fund was established by the initiative of the Spanish Government and the UNDP on 2007. It was functional between the years 2007 and 2010 and provided help to the 59 countries identified by the Spanish Government in achieving the identified Millennium Development Goals³⁸. Addressing climate change was one of the focus areas of the program.

Funds administered by the European Commission

The two climate finance programs administered by the European Commission are Global Climate Change Alliance and Global Energy Efficiency and Renewable Energy Fund. Global Climate Change Alliance was set up on 2007 to ‘to strengthen dialogue and cooperation with developing countries’. The eligible countries to grants include the most vulnerable developing countries to climate change, especially the least developed countries and the small island states³⁹. Global Energy Efficiency and Renewable Energy Fund is devoted to promoting energy efficiency and renewable energy technologies in developing countries. This is done through supplying private equity and grants including technical assistance. All countries that are eligible for official development assistance can receive funding. The governance of the fund is undertaken by the European Investment Bank⁴⁰. The total amount of the two funds is approximately 500 million USD⁴¹.

2. Funds supplied through Multilateral Development Banks

Climate Investment Funds

Climate Investment Funds are a pair of funding programs with the general aim of ‘initiating transformational change towards low-carbon and climate-resilient development’. The funds are channeled through several multilateral development banks including the World Bank, African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development and Inter-American Bank⁴². The two programs functioning under the Climate Investment Banks are

³⁷ UN-REDD website, accessed from <http://mptf.undp.org/factsheet/fund/CCF00> on 15.12.2015

³⁸ MDG Fund Website, accessed from <http://www.mdgfund.org/> on 18.12.2015

³⁹ Global Climate Change Alliance, accessed from <http://www.gcca.eu/about-the-gcca/what-is-the-gcca> on 12.12.2015

⁴⁰ The Global Energy Efficiency and Renewable Energy Fund, accessed from <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:l27063> on 5.12.2015

⁴¹ Climate Funds Update, accessed from <http://www.climatefundsupdate.org/> on 5.12.2015

⁴² Climate Investment Funds, accessed from <http://www.climateinvestmentfunds.org/cif/node/1> on 11.12.2015

the Clean Technology Fund and the Strategic Climate Fund. Requirements for applying to the funds involve being eligible to receive official development aid and the existence of a multilateral development bank program.

Clean Technology Fund works to promote low-carbon technologies through the funding of renewable energy and energy efficiency investments. The financial mechanisms used include grants, concessional loans and guarantees⁴³. The fund has been active through 12 country programs and 1 regional program. To date, the recipient countries have been Chile, Colombia Egypt, India, Indonesia, Kazakhstan, Mexico, Morocco, Nigeria, Philippines, South Africa, Thailand, Turkey, Ukraine and Vietnam. The World Bank is the trustee organization and is responsible for the administration of the fund. The cumulative amount of finance pledged has reached around 5.3 billion USD since the fund's inception in 2008.

Strategic Climate Fund is the name given to the financing program consisting of three separate funds. The total amount of the funds have been around 2.2 billion USD. The three funds within the Strategic Climate Fund are the Forest Investment Program(FIP), Pilot Program for Climate Resilience(PPCR) and Scaling up Renewable Energy Program for Low Income Countries(SCRP)⁴⁴. FIP is designed to promote developing countries' efforts to reduce deforestation and forest degradation, PPCR is tailored to offer financial assistance to developing countries in aiding their climate resilient national development plans and SCRP provides grants to developing countries in their mitigation efforts specifically in the field of renewable energy.

Forest Carbon Partnership Facility

Forest Carbon Partnership Facility is a fund within the World Bank that provides finance in the form of grants to UN-REDD eligible countries to assist developing national REDD strategies, scenarios and monitoring systems. The total amount of funds donated to the program reached 861 million USD since 2008⁴⁵.

⁴³ Climate Investment Funds, accessed from https://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/CTF_Financing_Products_Terms_Public_Sector_Nov2013_0.pdf on 5.12.2015

⁴⁴ Climate Investment Funds, 'Criteria for Selecting Country and Regional Pilots under the Program for scaling up Renewable Energy in Low Income Countries'(2010), accessed from http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/March_criteria_for_selecting_pilots_SREP_031410.pdf on 5.12.2015

⁴⁵ Forest Carbon Partnership Facility, accessed from <https://www.forestcarbonpartnership.org/> on 8.12.2015

Bio-carbon Fund

Bio-carbon Fund is another fund administered by the World Bank that delivers grants and technical assistance to developing countries with the aim to limit deforestation and forest degradation. A total of 361 million USD have been raised for the fund since it became operational on 2004⁴⁶.

Partnership for Market Readiness

Partnership for Market Readiness is a program carried through the World Bank that is designed to promote mitigation specifically in middle-income countries. The program was initiated on 2011 and accumulated a total of around 120 million USD. It mainly provides grants for countries to build up market readiness components⁴⁷.

Adaptation for Smallholder Agriculture Program

The International Fund for Agricultural Development (IFAD) is an international financial institution connected to the United Nations that functions to finance agricultural development projects primarily aimed at food production in the developing countries. Adaptation for Smallholder Agriculture Program is a specialized funding program administered by IFAD. The program became operational on 2012 and accumulated a total of 366 million dollars. Grants are issued with the purpose of building up agricultural resilience and improving land management particularly aiming at small-holder agricultural communities⁴⁸.

3. Bilateral Funds

Several developed countries in the world have also set up their bilateral programs for funding climate action in the developing world. The foremost countries that have set up bilateral climate finance programs include countries like the United Kingdom, Germany, Japan, Norway, Australia and Denmark. These funds provide a mixture of grants and loans to mostly mitigation projects but some of the programs also allocate resources for adaptation projects.

⁴⁶ Biocarbon Fund, accessed from <http://www.biocarbonfund-isfl.org/> on 8.12.2015

⁴⁷ Partnership for Market Readiness Website, accessed from <https://www.thepmr.org/> on 11.12.2015

⁴⁸ IFAD website, accessed from <http://www.ifad.org/climate/asap/index.htm> on 12.12.2015

Main Bilateral Climate Funds and Pledged Amounts⁴⁹

Name of Fund	Focus Area	Amount (million USD)
Germany's Climate Initiative	General	1082
Danish Climate Investment Fund	Mitigation	190
Japan's Fast Start Finance	General	15000
UK's International Climate Fund	General	6000
Norway's International Climate and Forest Initiative	Mitigation	1608
Australia's International Forest Carbon Initiative	Mitigation	216

4. Regional and National Multi-Donor Funds

Another type of climate funds are national or regional funds that aim to enhance climate finance in specific locations by mobilizing a multitude of donors. The examples to such funds are the Amazon Fund, Indonesia Climate Change Trust Fund, Congo Basin Forest Fund, Bangladesh Climate Change Trust Fund and South Africa Green Fund among others. Amazon Fund has been the largest of these by attracting more than 1 billion USD of finance since its inception⁵⁰.

South to South Finance

Aside from the flow of capital from the developed world into the global south, there is also a growing trend of south to south flows of climate finance. Developing countries can no longer be viewed solely as receivers of international climate finance as the climate finance flows within the developing world reached a sizable amount. Reportedly, south to south transfers of climate finance made up for more than 11% of the total climate finance flows on the year 2013. Both bilateral and multilateral providers contributed to this figure. Some of the prominent finance institutions that are set to provide climate finance within the developing world include the Islamic Development Bank, the New

⁴⁹ Climate Funds Update, accessed from <http://www.climatefundsupdate.org/> on 5.12.2015

⁵⁰ Barnard, Sam, Caravani, Alice, Nakhooda, Smita and Schalatek, Liane, 'Climate Finance Thematic Briefing: Mitigation Finance'(2014), Heinrich Böll Stiftung North America, Overseas Development Institute, p. 4

Development Bank operated by the BRICS states (Brazil, Russia, India, China, South Africa) and the Asian Infrastructure Investment Bank led by China⁵¹.

Climate Finance Situation in Turkey

Since the establishment of multilateral climate finance programs, Turkey has been able to attract a considerable amount of climate finance. Among the developing countries, Turkey has ranked 7th in terms of attracting climate finance. Only Brazil, Mexico, Morocco, India, South Africa and Indonesia ranked higher.

Top 10 Recipients of Multilateral Climate Funds⁵²

Top 10 Recipients of Climate Funds	Amount (million USD)
Brazil	711.3
Mexico	666.1
Morocco	628.3
India	559.8
South Africa	513.6
Indonesia	430.9
Turkey	399.4
Ukraine	393.9
China	317
Vietnam	249.1

Although the amount of finance attracted by the country can be considered substantial, almost all of this amount consisted of loans received from the Clean Technology Fund administered by the World Bank. Of the 400 million of USD attracted by Turkey in the form of climate finance, flows from the

⁵¹ OECD (2015), "Climate finance in 2013-14 and the USD 100 billion goal", a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI), p.10

⁵² Climate Funds Update, accessed from <http://www.climatefundsupdate.org/> on 5.12.2015

Clean Technology Fund accounted for 365 million, the GEF Trust Fund accounted for 24 million, MDG Achievement fund accounted for 7 million and the funds from the Partnership for Market Readiness accounted for 3.5 million USD. Nearly all of the climate finance that Turkey has been able to attract was spent on activities related to mitigation.

Multilateral Sources of Finance Received by Turkey⁵³

Climate Funds received by Turkey	Amount(million USD)
Clean Technology Fund	364.9
MDG Achievement Fund	7
Partnership for Market Readiness	3.4
GEF Trust Fund-Climate Change Focal Area	24.3
Total	399.4

The CTF funds Turkey has attracted helped finance a range of mitigation activities mainly involving providing concessional loans to renewable energy and energy efficiency investments. According to the OECD classifications, Turkey is an eligible recipient of official development assistance as an upper middle income country⁵⁴. Therefore, Turkey meets the criteria to be eligible to benefit from CTF funds. Reportedly, the CTF has so far contributed to cutting the CO₂ emissions of the country by 4 million tons per year⁵⁵.

GEF Trust Fund was the only source of climate finance received by Turkey tied to the UNFCCC. The GEF financing was in the form of grants and focused mainly on promoting energy efficiency across different sectors especially for small and medium enterprises and helping the country prepare its national communications to the UNFCCC⁵⁶.

⁵³ Climate Funds Update, accessed from <http://www.climatefundsupdate.org/> on 5.12.2015

⁵⁴ OECD, accessed from <http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf> on 14.12.2015

⁵⁵ Climate Investment Funds, accessed from <http://www-cif.climateinvestmentfunds.org/news/clean-technology-fund-drives-turkeys-renewable-energy-growth> on

⁵⁶ Global Environment Facility, accessed from https://www.thegef.org/gef/gef_projects_funding on 11.12.2015

Turkey had acquired a modest amount of grant from the MDG Achievement Fund to help the country adapt to the effects of climate change⁵⁷. However, the MDG Achievement Fund will no longer be relevant since the fund is set to expire on 2015 and most likely will not be renewed⁵⁸.

Turkey joined the Partnership for Market Readiness(PMR) Program on 2011. A preparation grant for the country was approved on the same year. On the year 2013, a final draft of the proposal was introduced to the Partnership Assembly members. The PMR program in Turkey mainly aims to support the implementation of market based instruments in the country's mitigation effort and enhance the country's monitoring capacities. The specific PMR activities in the country include helping to develop Turkey's NAMA portfolio, identifying key sectors with the most GHG mitigation opportunities, developing legal, technical and institutional capabilities necessary for the adoption of a national emissions trading system, raising awareness about carbon markets and carrying out baseline studies at the sectoral level to aid in the implementation of market based instruments⁵⁹. Being a EU candidate country, Turkey aims to fully implement the EU Emissions Trading Scheme directive as part of the environmental acquis. The PMR aid can be helpful in establishing an MRV framework compatible with the EU-ETS⁶⁰. Carbon taxation is also considered as a non-market mechanism especially for the mitigation efforts in the transportation sector⁶¹.

In addition to funding from these multilateral sources, Turkey was able to attract a small amount of finance from bilateral climate funds. The country attracted a total of 57 million dollars from Japan's Fast Track Finance and 11 billion dollars from Germany's International Climate Initiative⁶².

The amount of climate finance supply into the developing countries is set to increase substantially in the next decade. Securing a portion of these elevated funds will be critical for Turkey's future carbon mitigation and low-carbon growth. However, the country's eligibility for accessing an important amount of these funds is in question because of the peculiar classification of the country under the

⁵⁷ MDG Achievement Fund, 'Environment and Climate Change - Thematic window development results report'(2013), accessed from

<http://mdgfund.org/sites/default/files/Environment%20and%20Climate%20Change%20-%20Development%20Results%20Report.pdf> on 18.12.2015

⁵⁸ MDG Fund Website, accessed from <http://www.mdgfund.org/> on 18.12.2015

⁵⁹ The Partnership for Market Readiness Website, accessed from <https://www.thepmr.org/country/turkey-0#page-title> on 6.1.2016

⁶⁰ Ministry of Environment and Urbanization, 'Market Readiness Proposal Under the Partnership for Market Readiness Program'(2013), pp. 4-5 accessed from https://www.thepmr.org/system/files/documents/TUR-FINAL-MRP_2013-05-03%20Final.pdf on 6.1.2016

⁶¹ Ministry of Environment and Urbanization, 'Market Readiness Proposal Under the Partnership for Market Readiness Program'(2013), p. 27 accessed from https://www.thepmr.org/system/files/documents/TUR-FINAL-MRP_2013-05-03%20Final.pdf on 6.1.2016

⁶² Climate Funds Update, accessed from <http://www.climatefundsupdate.org/> on 5.12.2015

UNFCCC framework. Due to being an OECD member, Turkey was included in the Annex 1 of the protocol alongside the developed countries when the UNFCCC was first formed. This classification lists Turkey separately from the developing nations and prevents the country from benefitting from UNFCCC based climate finance that is aimed at developing countries. This is problematic because countries like Chile, Brazil and Mexico have similar developmental levels and per capita incomes⁶³ compared to Turkey although they are classified as developing countries and are eligible to receive UNFCCC climate finance while Turkey is not. Over the years, Turkey has requested to be left out of the Annex 1 of the UNFCCC. This could not be possible but instead Turkey has succeeded to make its 'special circumstances' recognized. The 'special circumstances' refers to the country's separate position from the other Annex 1 countries as a country that still has developmental needs. Additionally, it exempts the country from the commitments of the other Annex-1 states while supposedly making it eligible to receive climate finance according to the decision adopted at COP 16⁶⁴.

However, this decision did not legally classify Turkey as a developing state and for most of the climate finance programs channeled through the UNFCCC, being classified as a developing country is required to be a recipient. The 100 billion climate finance target also refers to developed and developing countries as the appropriate donors and recipients. In the absence of another generally accepted definition, being a non-Annex 1 country is generally accepted as the defining feature of being a developing country. That classification is why Turkey hasn't been eligible for benefitting from finance sources designed for developing countries. To include a mention of the country's special circumstances was one of the main objectives of Turkey coming into the climate change talks⁶⁵. However, the country's 'special circumstances' were not referenced in the final text of the Paris Agreement even though Turkey reiterated its position at the final round of the talks⁶⁶. Therefore, Turkey is still formally recognized as a developed country under the UNFCCC framework. This was seen as a considerable diplomatic failure for the Turkish side. The main finance programs under the UNFCCC like the Green Climate Fund and the Adaptation Fund all require the recipients to be classified as developing countries. Therefore, even though newly industrialized countries like China,

⁶³ World Bank, accessed from <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD> on 18.12.2015

⁶⁴ UNFCCC, 'Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010', p. 24 accessed from <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf> on 18.12.201

⁶⁵ Vatan Gazetesi, 8.12.2015, accessed from <http://www.gazetevatan.com/-turkiye-ye-ozel-kosullar-olmali--892257-gundem/> on 6.1.2016

⁶⁶ 'Speech by Fatma Güldemet Sarı, The Minister of the Environment and Urbanization, The Republic of Turkey', accessed from http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/cop21cmp11_hls_speech_turkey.pdf on 6.1.2016

Mexico and Brazil will be eligible to receive funding from these sources, in the current situation Turkey will not be eligible. This is problematic for Turkey especially when it is considered that GCF was designed to be at the center of the climate finance architecture. A significant concern of the country is that if the bulk of the existing sources of climate finance gets diverted to the GCF, there will be considerably less climate finance opportunities for the country to benefit from. If the situation can't be changed in the near future, it is clear that Turkey will have to rely on alternative climate finance mechanisms. This would mean that the country will continue to receive climate finance mostly in the form of loans as opposed to various grant mechanisms issued through the UNFCCC. On the other hand, there may still be a chance to review the country's status before COP 22, this possibility was reportedly verbally expressed during the Paris Conference⁶⁷.

In the current picture, Turkey won't be able to benefit from UNFCCC climate funds except some of the specialized funds like the GEF Trust Fund. MDB's and especially the CTF will continue to be important sources of climate finance for Turkey, issuing finance mostly through concessional loans. Increased financing from the European Union can also potentially play an important role in this regard. Another potential source of finance for Turkey can be finance from the developing world in south to south transfers of finance. Several aforementioned international development banks have recently started to play extended roles in the area of climate finance. These types of flows have been increasing in the recent years and they are expected to further increase in the coming years.

Recent Developments in the Turkish Market

There are also several internal developments taking place in the Turkish market that will positively affect the accumulation of green climate finance. A variety of measures are being taken by the government with the purpose of promoting renewable energy and energy efficiency investments inside the country. The feed-in tariff applied for renewable energy technologies, the authorization of unlicensed generation for renewable energy investments with lower than 1 MW of capacity and the investment incentives program are among the main policies adopted to boost renewable energy investments⁶⁸. The measures that are being taken on the energy efficiency front include promoting

⁶⁷ Yeşil Gazete, 24.12.2015 <https://yesilgazete.org/blog/2015/12/24/yorumlari-anladik-ama-paris-antlasmasi-tam-olarak-ne-diyor-funda-gacal/>

⁶⁸ 'National Renewable Energy Action Plan for Turkey' (2014), pp. 26-29 , accessed from http://www.eie.gov.tr/duyurular_haberler/document/National_Renewable_Energy_Action_For_Turkey.PDF on 25.12.2015

the energy service market, adopting efficiency standards and a variety of sector specific measures to boost energy efficiency⁶⁹.

In addition to the existing framework for supporting green energy investments, several new mechanisms are taken under consideration by the policy-makers. These include measures like providing subsidized long-term loans for renewable energy projects, providing financial support to the private sector for geothermal exploration activities, the introduction of green certificates for electricity generated in renewable energy power plants⁷⁰, setting up a national energy efficiency fund and setting up a monitoring and review mechanism for financial flows into energy efficiency related projects⁷¹.

The European Bank for Reconstruction and Development (EBRD) has set up two major finance institutions, TurSEFF (Turkey Private Sector Sustainable Energy Financing Facility) and MidSEFF (Turkey Mid-Size Sustainable Energy Financing Facility), in the country which are influential in allocating green energy finance. These two agencies provide a significant amount of financing through several local banks specifically targeting renewable energy and energy efficiency projects. The agencies gather their financing sources from EBRD, also with support from other international institutions such as the European Investment Bank and the European Commission. It is expected that within MidSEFF, a total of 1 billion Euros of loans will be provided through 7 local banks to private sector borrowers⁷². On the other hand, a total of 265 million USD of loans is expected to be provided by TurSEFF⁷³.

In addition to these measures, EPIAŞ has recently begun operations which is an exchange market founded within the Borsa Istanbul specifically aimed at providing an official platform for electricity trading. The exchange market officially started operations on September, 2015⁷⁴. It is expected by the policymakers that this development will make longer term electricity trading possible, thus

⁶⁹ 'Template for the National Energy Efficiency Action Plan' (2015), accessed from http://www.eie.gov.tr/duyurular_haberler/document/UEVEP_TASLAK.pdf on 29.12.2015

⁷⁰ 'National Renewable Energy Action Plan for Turkey' (2014), pp. 26-29, accessed from http://www.eie.gov.tr/duyurular_haberler/document/National_Renewable_Energy_Action_For_Turkey.PDF on 25.12.2015

⁷¹ 'National Renewable Energy Action Plan for Turkey' (2014), accessed from http://www.eie.gov.tr/duyurular_haberler/document/National_Renewable_Energy_Action_For_Turkey.PDF on 25.12.2015

⁷² MidSEFF Website, accessed from <http://www.midseff.com/> on 25.12.2015

⁷³ TurSEFF Website, accessed from <http://www.turseff.org/en> on 25.12.2015

⁷⁴ Anadolu Agency, 12.09.2015, accessed from <http://aa.com.tr/tr/ekonomi/elektrik-piyasasinda-epias-donemi-basladi/11777> on 25.12.2015

reducing the market risks and create a more stable environment for prospective investors into the electricity market⁷⁵.

Conclusion

Aside from striving to be recognized as a non-Annex 1 country, there are several things that Turkey can do to increase the inflows of climate finance. Currently, it can't be claimed that Turkey has a comprehensive strategy for transforming its economy towards a low carbon pathway. Although Turkey has established plans to elevate renewable energy sources and increase energy efficiency and there are several mechanisms in place to promote such technologies, the country's main energy strategy still involves radically increasing power generation capacity fueled by coal power. This will hinder the mitigation efforts of Turkey and hamper the country's chances of attracting increased climate finance in a time when it is becoming clearer that the global economy is shifting away from coal. In its Intended Nationally Determined Contribution, Turkey pledged to decrease its emission levels by 21% from the business-as-usual scenario by 2030. However, according to the business-as-usual scenario propounded by Turkey, this translates as increases in the country's GHG levels by more than 100% between the years 2015 and 2030⁷⁶. Turkey's INDC was found to be deficient by the experts and the Climate Action Tracker ranked Turkey's INDC as 'inadequate' placing it with the least ambitious countries in terms of climate mitigation policies⁷⁷. Abandoning coal based policies and establishing a meaningful mitigation strategy can function as a powerful signal to attract increased climate finance.

After the conclusion of the Paris Conference it once again becomes clear that the world is heading toward a low carbon energy system. The future for the coal industry looks bleaker than ever. On November, 2015 the OECD countries reached an agreement to restrict financing overseas coal projects starting from 2017, the only exceptions including the most efficient coal plants and some investments in the poorest countries⁷⁸. Several influential finance groups have also decided to limit

⁷⁵ Bloomberg HT, 26.10.2015, accessed from <http://www.bloomberght.com/haberler/haber/1831930-elektrikte-yatirimlar-epiasla-guvende-olacak> on 28.12.2015

⁷⁶ 'Republic of Turkey, Intended Nationally Determined Contribution', accessed from http://www4.unfccc.int/submissions/INDC/Published%20Documents/Turkey/1/The_INDC_of_TURKEY_v.15.19.30.pdf on 18.12.2015

⁷⁷ Climate Action Tracker, accessed from <http://climateactiontracker.org/countries/turkey.html> on 18.12.2015

⁷⁸ The Guardian, 18.11.2015, 'OECD countries agree to restrict financing for overseas coal power plants', accessed from <http://www.theguardian.com/environment/2015/nov/18/oecd-countries-agree-to-restrict-financing-for-overseas-coal-power-plants> on 9.12.2015

their coal finance flows such as Morgan Stanley and Wells Fargo⁷⁹. The Allianz Group, which is one of the world largest insurance funds, announced that it would start divesting their finance from coal investments in favor of investing in wind energy⁸⁰. On the other hand, green finance opportunities through the world are greatly increasing as more pledges are being made by developed states and private actors to increase climate finance. Given this picture, it is important for Turkey to significantly adjust its climate change and energy policies in order to fully benefit from this global shift. The current coal policies pursued by the country is hindering its climate policy and preventing the country from reaching its potential in terms of clean energy and increased energy efficiency.

⁷⁹ Bloomberg Business, 30.11.2015, 'Wells Fargo, Morgan Stanley Join Banks Edging Away From Coal', accessed from <http://www.bloomberg.com/news/articles/2015-11-30/wells-fargo-morgan-stanley-join-banks-edging-away-from-coal> on 9.12.2015

⁸⁰ 'Allianz divest coal in favor of wind investments', Clean Technica, 25.11.2015, accessed from <http://cleantechnica.com/2015/11/25/allianz-divest-coal-favour-wind-investments/> on 18.12.2015