

INTERNATIONAL CLIMATE FINANCE: ESTIMATION IN THE CASE OF THE REPUBLIC OF NORTH MACEDONIA

Aleksandar NAUMOSKI

Ss. Cyril and Methodius University in Skopje, Faculty of Economics, Blvd. Goce Delcev 9V 1000 Skopje, Republic of North Macedonia Correspondence: aleksandar.naumoski@eccf.ukim.edu.mk

ABSTRACT

International climate finance is funds provided to support developing countries to respond to the challenges and opportunities of climate change aiming to reduce greenhouse gas emissions and/or adapt to the impacts of climate change. In this paper, we estimate the received international climate financial support in the Republic of North Macedonia. Data for the analysis are collected using survey approach on a project-based level for the 2018-2020 period. We applied the OECD DAC Rio climate markers methodology for weighing climate relevance of project budget and used two-year averages to smooth out annual fluctuations in data. Our findings show that, in the analysed period, a total of 61 projects have been implemented or are in some stage of implementation, which are related to climate activities for which international financial support of USD 34.4 million is obtained. The pandemic of COVID-19 has a negative impact on both, the number of projects which fell from 38 in 2018/2019 to 23 in 2019/2020, and to the international climate financial support received, which declined from USD 23.2 million to USD 11.2 million.

KEYWORDS: international climate finance, UNFCCC, Enhanced Nationally Determined Contributions (ENDCs), North Macedonia

JEL CLASSIFICATION: H72, Q51, Q54

INTRODUCTION

Providing funding for climate activities on a consistent basis is essential. In this regard, international support for financing climate activities is crucial for developing countries. Undertaking climate action is equally necessary in developing countries as well as in developed industrialized countries. Reducing Greenhouse Gas







emissions (GHGs) in any country benefits the whole world because GHGs do not recognize country borders. Thus, reducing emissions in developing countries is also to the benefit of developed countries. The lack of own resources of developing countries discourages and limits them in undertaking climate activities at an appropriate level or in general. The United Nations Framework Convention on Climate Change (UNFCCC or Convention hereafter) clearly recognizes the weaknesses of developing countries as well as the enormous benefits of the inflow of foreign resources, primarily financial, in addition to technical, technological, and capacity building, from developed countries to developing countries to support the execution of their nationally determined contributions (NDCs). The Convention established a strong financial mechanism, presented in Figure 1 below, to stimulate and direct finances from developed to developing countries to support their activities to mitigate and adapt to climate change, in addition to bilateral support. As a non-Annex I country to the Convention, the Republic of North Macedonia is a recipient of international support and is therefore required to report the amount of support received in the subsequent two-year period. In the last three-year period, the bilateral support from the European Union denotes the highest contribution to financing climate activities. In particular, the Instrument for Pre-Accession Assistance (IPA) has enabled many municipalities, NGOs, and ministries to implement projects, especially in the field of energy efficiency, and thus contribute to the global fight to reduce greenhouse gas emissions and mitigate the adverse effects of climate change. In fact, much of the support that has been received has been used to finance projects predominantly to mitigate the effects of climate change. One of the Convention funds, the Global Environment Facility (GEF), is the second largest provider of climate financial support in North Macedonia. Large amounts of funds have also been received from the Food and Agriculture Organization of the United Nations (FAO), generally aimed at supporting activities to mitigate the adverse effects of climate change. Nevertheless, it must be emphasized that the amount of support received in the developing countries is far from sufficient to meet the needs of undertaking more serious mitigation and adaptation climate activities required towards green transition, which is a commitment to greater engagement in the future.



Climate finance in the Paris Agreement

Article 9 of the Paris Agreement stipulates that developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention. Other Parties are encouraged to provide or continue to provide such support voluntarily (United Nations, 2015). Furthermore, as part of a global effort, developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and considering the needs and priorities of developing country Parties. Such mobilization of climate finance should represent a progression beyond previous efforts. In addition, Article 9 states that the provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into consideration country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States, bearing in mind the need for public and grant-based resources for adaptation.

Regarding ex-ante communication of information, developed country Parties shall biennially communicate indicative quantitative and qualitative information related to paragraphs 1 and 3 of Article 9, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties (United Nations, 2015). Other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis. The global stocktake referred to in Article 14 of the Agreement shall consider the relevant information provided by developed country Parties and/or Agreement bodies on efforts related to climate finance. Regarding the issue of transparency of support, developed country Parties shall provide transparent and consistent information on support for developing country Parties provided and mobilized through public interventions biennially. Other Parties are encouraged to do so.

The Financial Mechanism of the Convention, including its operating entities, and the Standing Committee on Finance, shall serve as the financial mechanism of



this Agreement. In addition, Article 9 stipulates that the institutions serving the Agreement, including the operating entities, shall aim to ensure efficient access to financial resources by means of simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States, in the context of their national climate strategies and plans.

Underdeveloped and developing countries face several economic, political, and existential problems. Undertaking climate activities in these countries facing a shortage of climate finance is supported by developed industrialized countries. In line with the "common but differentiated responsibilities and respective capabilities" principle (Article 4, UNFCCC), developing countries have articulated their financial and capacity-building needs in their NDCs and made their contributions conditional on receipt of international support. At the 15th Conference of Parties (COP15) of the UNFCCC in Copenhagen in 2009, developed countries committed to a collective goal of mobilizing USD 100 billion per year by 2020 to assist and address the needs for climate action in developing countries, in context of meaningful mitigation actions and transparency in implementation. The goal was formalized at COP16 in Cancun (UNFCCC, 2010) and was reiterated for 2020 and extended to 2025 at COP21 in Paris (UNFCCC, 2015).

At COP 21, it was also decided that developed countries intend to continue their existing collective mobilization goal through 2025 in context of meaningful mitigation actions and transparency on implementation, and that prior to 2025 the Conference of the Parties serving as the meeting of the Parties (CMA) to the Paris Agreement shall set a new collective quantified goal from a floor of USD 100 billion per year, considering the needs and priorities of developing countries.

Furthermore, the COP resolved to enhance the provision of urgent and adequate finance, technology, and capacity-building support by developed country Parties in order to enhance the level of ambition of pre-2020 action by Parties, and in this regard strongly urges developed country Parties to scale up their level of financial support, with a concrete roadmap to achieve the goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation while significantly increasing adaptation finance from current levels and to further provide appropriate technology and capacity-building support. Parties also decided to



conduct a facilitative dialogue in conjunction with the twenty-second session of the Conference of the Parties to assess the progress in implementing decision 1/CP.19, paragraphs 3 and 4, and identify relevant opportunities to enhance the provision of financial resources, including for technology development and transfer and capacity-building support, with a view to identifying ways to enhance the ambition of mitigation efforts by all Parties, including identifying relevant opportunities to enhance the provision and mobilization of support and enabling environments (UNFCCC, 2014).

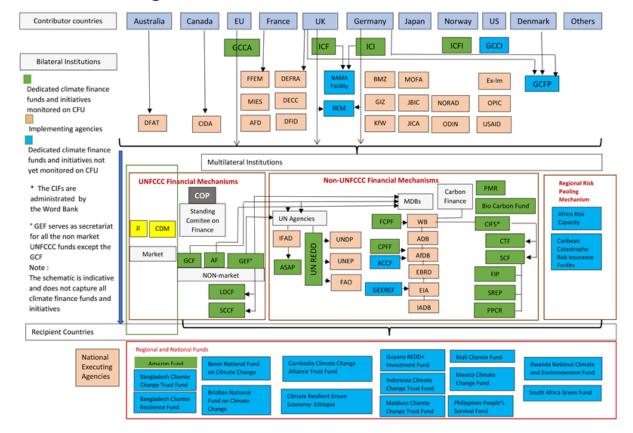


Figure 1. Global climate finance architecture

Source: Watson et al. (2022)

The fight against climate change is high on the agenda of the Government of the Republic of North Macedonia, which is strictly committed to the green transition and the achievement of carbon neutrality. The preparation of the new law on climate action is in the final stage, which will thoroughly pave the way, but also the commitment and obligations of all stakeholders from the public and private sector for the implementation of climate actions. In 2021, the Government submitted its



Enhanced Nationally Determined Contributions (ENDCs), providing a clear roadmap to reduce greenhouse gas emissions by 51% by 2030. Their effective implementation is provided through 63 mitigation policies and measures (PAMs) (MASA, 2020). The estimated amount of funds needed for their execution is EUR 25.03 billion, where the funding structure is planned to be by Government only (4%), other source of financing only (no government) (43%), and mixed financing (government + other - private sector, donors, consumer) (54%) (McClellan, 2021). The Republic of North Macedonia is a country that faces many development challenges and a great lack of its own resources. From the planned financial structure, it is clear that the implementation of ENDCs will mostly depend on the inflow of international climate finance.

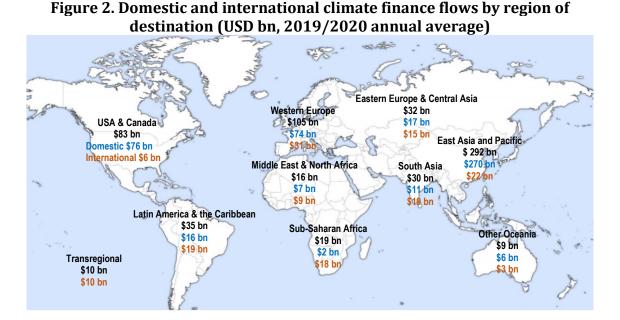
INTERNATIONAL CLIMATE FINANCE GLOBALLY AND THE IMPACT OF COVID-19 PANDEMIC

Climate Policy Initiative's Global Landscape of Climate Finance provides the most comprehensive overview of global climate-related primary investments. In their annual reports, they provide two-year data, but use biannual averages to smooth out the annual fluctuations in data. Global climate finance in 2019/2020 reached a record USD 632 bn, which is an increase of 75% compared to 2011/2012, but only 10% compared to 2017/2018. In previous years, the average growth was 25% per year, while this slowdown in growth is due to impact of the global pandemic of COVID-19's virus on climate finance (Naumoski and Angelova, 2022). To meet the climate objectives to limit the global temperature rise to well below 2° C and pursuing efforts to limit it to 1.5° C by 2030, annual climate finance must increase by 588% to USD 4.35 trillion, and 1,078% to USD 7.45 trillion (mean scenario) by 2050. Domestic climate finance flows reached USD 479 bn, and international climate finance amounts to USD 153 bn with an increase of USD 13 billion from 2017/2018, primarily driven by increased public investments from multilateral and national DFIs (CPI, 2021).

The COVID-19 pandemic has drastically altered the context for international climate finance. It has resulted in the most damaging humanitarian and economic crisis since the Second World War and its impacts have been particularly severe on emerging markets and developing economies (EMDEs). They have suffered large



losses of revenue with knock-on effects on their fiscal and debt positions (IEGCF, 2020). Global COVID-19 pandemic negatively affected the growth of the global climate finance in 2020 and lowered the level of public climate finance in many developing countries. They were impacted negatively since the implementation of their national NDC mostly rely on international support. International climate finance has decreased during the pandemic since many developed countries cut these flows. For example, in July 2020 the United Kingdom announced a total cut of £2.9 billion in its planned ODA budget for 2020 (FCO, 2020). This caused the proportion of ODA to projects with a significant focus on climate adaptation or mitigation to fall from 25% in 2019 to 17% in 2020, while ODA to projects with climate as a principal objective fell from 18% to 14% (DI, 2021). Most of the funding of domestic climate finance in developing countries took the form of loans, and they have reallocated or decreased their domestic climate flows because of the high costs of responding to the pandemic (Alayza and Caldwell, 2021). As a result, climate-related projects have been delayed.



In 2020, International Development Finance Club (IDFC) institutions committed USD 185 billion in green finance (of which USD 178.5 billion relate to climate finance), representing a 6% decrease from 2019, primarily due to the unprecedented challenge posed by the COVID-19 pandemic and the need to

Source: adapted from CPI, 2021



reallocate public resources to emergency response and economic recovery. While the COVID-19 pandemic may have negatively impacted green finance flows in 2020, in 2021 IDFC members have made strong pledges to climate action and green finance (IDFC, 2021).

At the request of developed countries, the OECD has, since 2015, produced analyses of progress towards this goal. The most recent historical OECD figures indicate that climate finance provided and mobilized by developed countries reached USD 79.6 billion in 2019, up by only 2% from 2018 (OECD, 2021). OECD has developed two forward-looking scenarios for climate finance provided and mobilized by developed countries to developing countries in 2021-2025 where significant growth is forecasted between USD 83 billion – USD 117 billion annually (OECD, 2021).

DATA AND METHODOLOGY FOR ESTIMATING INTERNATIONAL CLIMATE FINANCE IN NORTH MACEDONIA

Definition and scope of climate finance

Finance for climate change related activities, or climate finance, is a diverse concept. It is in some instances discussed separately, or often integrated with related and overlapping concepts of green finance, sustainable finance, or low-carbon finance. Climate finance refers to local, national, or transnational financing - drawn from public, private, and alternative sources of financing - that seeks to support mitigation and adaptation actions that will address climate change.

While there is no single definition of climate finance, the closest one can get is Framework provided by the United **Nations** Convention on Climate Change (UNFCCC) Standing Committee on Finance, which defines it as: "finance that aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts." (Climate Change Secretariat, 2014, p. 2). This definition represents finance for climate change in its broadest form as it relates to the flow of funds to all activities, programmes or projects that support climate change related projects, whether mitigation or adaptation, anywhere in the world.



Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions. Climate finance is equally important for adaptation, as significant financial resources are required to adapt to the adverse effects and reduce the impacts of a changing climate.

Climate change mitigation activity: An activity should be considered as climate change mitigation related if it contributes to the objective of stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration (OECD, 2011)

Climate change adaptation activity: An activity should be considered as adaptation related if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience. This encompasses a range of activities from information and knowledge generation, to capacity development, planning and the implementation of climate change adaptation actions (OECD, 2011).

International climate finance is funds provided to support developing countries to respond to the challenges and opportunities of climate change aiming to reduce greenhouse gas emissions and/or adapt to the impacts of climate change. These finances cover all foreign inflows provided by developing countries bilaterally, through multilateral development financial institutions (MDFIs), or through the multilateral climate funds of the UNFCCC financial mechanism.

Data

Given that there is no single centralized system for automatic data collection of received support (list of projects, purpose, the amount of support, source, i.e., provider), the biggest challenge is the approach to obtain relevant, reliable, and comprehensive data, so that accurate assessment of the international financial support received can be made. The approach adopted here to collect the data on international financial support received was through a survey that was sent to all potential support users (government institutions, line ministries, municipalities, NGOs, etc.). As usual, some of the respondents did not respond. Consequently, much



of the data was collected from research on the websites of beneficiaries of the international financial support, and, especially, from the websites of funders (donors and lenders). The support received was aimed on project financing, so support for climate activities was assessed at project-based level. All amounts are expressed in USA dollars.

In our survey, entities were required to provide more detailed general information on projects (name of the project, purpose of the project, the description of the project, implementing organization, donor or creditor, project start and end date), financial data related to the project (amount of the total budget, separate amounts spent in 2018, 2019 and 2020, total international funder contribution), the climate purpose of the project (mitigation, adaptation, capacity building, technical support, technology support, general). Not all respondents provided complete data on the amount of funds spent by years, so the assessment was conducted as a combination of committed/received funds, according to the data provided. Greater problem in the assessment was that there are projects that have started before 2018 and have not yet been completed, but also projects that have started in 2018 or 2019 and would continue after 2020.

All pieces of information provided in this estimation are related to active and ongoing projects, mostly by the amounts received and spent in this three-year period. When there is no such data, the committed amount was taken. North Macedonia is a beneficiary of significant amounts of funds from the EU Instrument for Pre-Accession Assistance, especially in the field of cross-border cooperation. For these EU IPA funded projects, which relate to funding two or more countries, we managed to extract and allocate only the amount committed/spent in North Macedonia for each project. We excluded from the analysis all those projects where only the committed amount was reported, but without any implementation in this two-year period. Likewise, projects where there is only a contract with the funder (donor or lender), with a commitment to the amount, but for which funds have not yet been received in the analysed period, have been excluded from the analysis.

OECD DAC Rio markers methodology for weighing climate relevance

The second step towards accurate estimation of the international climate financial inflows into North Macedonia was to determine what part of the spent



project budget expenditures is related to climate change. This means that the entire project budget cannot be anticipated ex-ante as climate-related. Some projects are fully climatical, but in other projects part of the budgets may be spent on non-climatic purposes or only part of the project budget may be related to climate activities. Closer specification of climate relevance and weighting of amounts by climate relevance was performed by applying the OECD DAC Rio Markers Methodology (OECD, 2011).

The OECD Development Assistance Committee (DAC) collects statistics on aid and other resource flows to developing countries from bilateral and multilateral donor agencies every year. The data are publicly available in the Creditor Reporting System (CRS) database. Since 1998, the DAC has monitored aid targeting the objectives of the Rio Conventions through the CRS using the so-called "Rio markers". The Rio marker on climate change mitigation was established by the DAC in close collaboration with the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). It tracks aid flows that support the implementation of the Convention. In December 2009, the DAC approved a new marker to also track aid in support of climate change adaptation. This complements the climate change mitigation marker, and thus allows the presentation of a more complete picture of climate-change-related aid.

These climate markers indicate donors' policy objectives in relation to each aid activity. A principal objective (mitigation or adaptation) score is given when promoting the objectives of the UNFCCC is stated in the activity documentation to be one of the principal reasons for undertaking the activity. In other words, the activity would *not* have been funded but for that objective. Activities marked "significant" have other prime objectives, but have been formulated or adjusted to help meet climate concerns.

The markers allow an approximate quantification of aid flows that target climate objectives. In marker data presentations, the figures for principal and significant objectives should be shown separately, and the sum referred to as the "estimate" or "upper bound" of climate-change-related aid.

Data collection on the climate markers is based on a scoring system with three values:

principal objective (marker 2),



- significant objective (marker 1),
- not targeted to the policy objective (marker 0).

An activity can be marked as "principal" when the objective (climate change mitigation, climate change adaptation, biodiversity, combating desertification) is explicitly stated as fundamental in the design of, or the motivation for, the activity. Promoting the objective will thus be stated in the activity documentation to be one of the principal reasons for undertaking the activity. In other words, the activity would not have been funded (or designed that way) but for that objective.

An activity can be marked as "significant" when the objective (climate change mitigation, climate change adaptation, biodiversity, combating desertification) is explicitly stated but is not the fundamental driver or motivation for undertaking and designing the activity. The activity has other prime objectives but has been formulated or adjusted to help meet the relevant environmental concerns.

The score "not targeted" ("0") means that the activity was examined but found not to target the objective in any significant way. For activities that have not been assessed with the Rio markers in mind, the "0" value should not be used, but rather the marker field should be left empty. Thus, there is no confusion between activities that do not target the objective (score = "0"), and activities for which the answer is not known (score = "null"). This important distinction has implications for statistical presentations of Rio marker data.

What objectives are stated in the project/programme document?

Do any of the stated objectives match the "Criteria for eligibility" of Rio Markers?

Yes

No

Would the activity have been undertaken (or designed that way) without this objective?

Yes

No

1

2

O

Not targeted

Figure 3. The scoring system of OECD DAC Rio Climate Markers

Source: OECD (2011), p.7



Markers identify activities contributing to meeting the objectives of the corresponding Rio Convention(s). Activities are thus to be marked according to their stated objectives and purpose and not primarily in relation to their relevance or outcomes or possible positive side-effects, i.e., the methodology is purpose-based.

Weighting the climate relevance. If an activity is marked as principal for mitigation or adaptation, 100% of the support is considered and reported as climate finance. If an aid activity is marked as significant for mitigation or adaptation, then only 40% of the support is considered and reported as climate finance. To avoid double counting, any activity can only count as 100%, 40% or 0%. There is no separate category to mark projects, which are at the same time relevant to both mitigation and adaptation as "cross-cutting." If an activity has dual objectives and is marked for both mitigation and adaptation, in that case the estimated amount of climate finance is divided in half between mitigation and adaptation.

Despite the general approach of the Rio Markers, in practice there is arbitrary determination of weights. Thus, several methodological differences in the approaches used by EU Member States to produce their climate finance figures became obvious during the analysis of MMR data. Different coefficients are used for Rio Markers (counting of 100%, 20%, 40% or 50%) (European Commission, 2016). In our analysis, we implement the original approach of the methodology.

ANALYSIS OF INTERNATIONAL CLIMATE FINANCE FLOWS IN NORTH MACEDONIA BETWEEN 2018-2020

The analysis of the collected data for the received international financial support for financing the climate activities in North Macedonia was performed on two-year averages to smooth out annual fluctuations in data. Our analysis covers the period 2018 - 2020 for which data are collected on climate change projects that have been fully implemented or implementation has begun. We have registered a total of 61 projects that have been implemented or are in some stage of implementation, which are related to climate activities, and are funded by international sources for the entire three-year analysed period. In 2018/2019, we registered a total of 38 climate-related projects that are funded with international support, while in 2019/2020 their number is 23 projects. This drastic reduction is due to the negative impact of the global pandemic of Covid-19, the lock down of economic activity



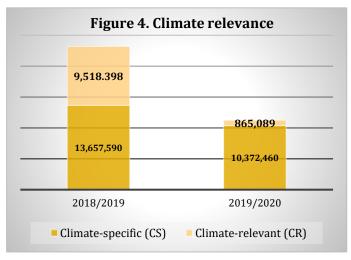
around the world and reduced support from international financiers because of the relocation of funds to support their own economies.

Given that the number of projects has declined, the aggregate total budget for all projects is almost identical in the two years, which can be seen in Table 1. The total inflow of international climate finance for the three-year period is USD 34.4 million. However, it is obvious that the international financial support received for financing climate projects in North Macedonia has declined by half. In 2018/2019, it amounts to USD 23.2 million, while in 2019/2020 it was USD 11.2 million. On the other hand, the domestic contribution for co-financing of these climate projects has increased seven times.

Table 1. International financial support in North Macedonia for climate actions between 2018 –2020, biannual averages (in USD)

	2018/2019	2019/2020	Total
International climate finance	23,175,988	11,237,550	34,413,538
Total domestic contribution	1,969,425	13,805,516	15,774,940
TOTAL BUDGET	25,145,413	25,043,065	50,188,478

Source: author's own presentation



Climate-specific (CS) are those projects that are fully climate-targeted, while climate-relevant (CR) are those that are not labelled as climate, but with their implementation have significant climate benefits either for mitigation or adaptation to climate change.

Source: author's own presentation

Financial support related to climate-specific projects is higher in both periods. Figure 4 shows that the financial support related to climate-specific projects is decreased by 24% on an annual basis, while the financial support related to climate-related projects is decreased by 91%.

The European Union and the Global Environment Facility (GEF) together provide 73% of the total international climate support in North Macedonia for the



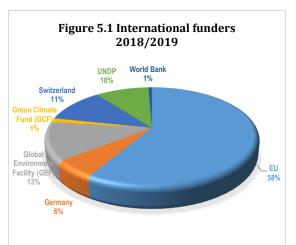
entire three-year period. Most of the international financial support inflows came from the European Union in the amount of USD 14.4 million which is 42% of the total support received. The second largest financier is the Global Environment Facility (GEF), which provides USD 10.5 million that is 30.6% of the total support received.

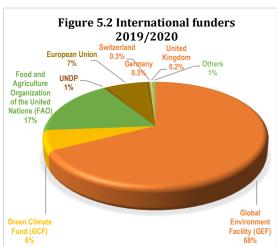
In 2018/2019, the largest funder is the European Union, which provided as much as 58% of the total inflows of international climate finance. Most of these funds are provided through IPA cross-border cooperation funds. But in 2019/2020 the funds received from the EU are drastically reduced. This is because of the Covid-19 pandemic when developed countries have reduced support for developing countries by relocating domestic funds to support their own economies. In Table 2, there is a drastic reduction of bilateral funds received from Germany and Switzerland.

Table 2. Funders of international financial support (in USD)

FUNDER	2018/2019	2019/2020	TOTAL
European Union	13,566,181	818,159	14,384,340
Global Environment Facility (GEF)	2,933,387	7,592,545	10,525,932
Switzerland	2,614,360	32,327	2,646,687
UNDP	2,258,990	33,072	2,292,062
Food and Agriculture Organization		1,939,000	1,939,000
of the United Nations (FAO)			
Germany	1,355,824	29,501	1,385,325
Green Climate Fund (GCF)	300,000	699,742	999,742
World Bank	147,245		147,245
Others		65,516	65,516
United Kingdom		27,688	27,688
TOTAL	23,175,988	11,237,550	34,413,538

Source: author's own presentation

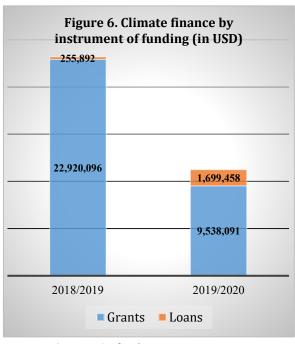




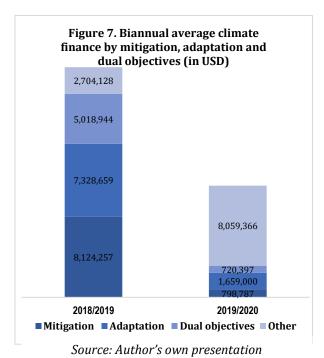
Source: author's own presentation



Global Environment Facility (GEF) was the second largest support provider in 2018/2019 with 13%, while becoming the largest provider of international financial support in the next year 2019/2020 with USD 7.6 million, which is 68% of the total received financial support. In this year, the second largest provider is the Food and Agriculture Organization of the United Nations (FAO) with the amount of USD 1.9 million or 17%. Most of the money received from FAO is aimed at adapting agriculture to the negative impact of climate change.



Source: Author's own presentation



Grants have become the dominant type of international financial support, which in 2018/2019 amounted to 98%, and in 2019/2020 to 85%. Here, we point out that the state-owned ISC Power Plants of North Macedonia has contracted two large loans with the German KfW Bank to finance two major energy projects that will greatly contribute to climate change mitigation: i) Project: District Heating of Bitola, Mogila and Novaci - first stage, total budget EUR 46.3 mil. (EUR 39 million from KfW and EUR 7.3 million own funds); and ii) Extension of the Wind Park - Bogdanci, stage II, with a total budget of EUR 21 million (EUR 18 million from KfW and EUR 3 million own funds). Despite the signed loan agreement, the projects have not yet started in the analysed period, and therefore have not been included. If we include this committed amount, it will unrealistically overestimate amount of support received, although



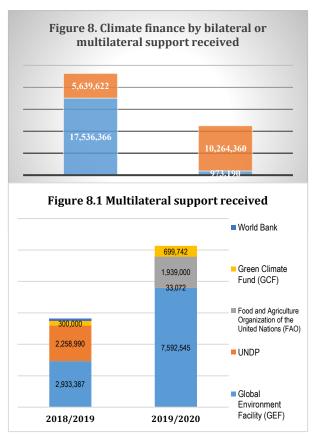
under the contract this amount will be relevant and if executed.

For the entire three-year period of 2018-2020, mitigation finance is equal to adaptation finance and amounts to USD 8.9 million.

In 2019/2020, mitigation finances have fallen sharply from USD 8.1m to USD 0.79 million, adaptation finances have shrunk from USD 7.3 million to USD 1.66 million, as well as those with cross cutting nature with dual objective falling from USD 5 million to USD 0.72 million.

There is a large increase in the received international financial support for financing projects that fall in the category with other objectives, which increased from USD 2.7 million to USD 8.1 million. This category includes projects whose main goal is capacity building, technical support, technology support, and general objective, but their implementation contributes to the fight against climate change.

The greatest part of international financial flow for the three-year analysed period of 2018-2020 came from bilateral support amounting to USD 18.5 million, while the multilateral support received amounts to USD 15.9 million. European Union provides 77.7% of the bilateral support, which at the same time is 41.7% of the total international financial support. The rest of the bilateral support is provided by Switzerland (14.3%), Germany (7.5%), Others (0.5%).



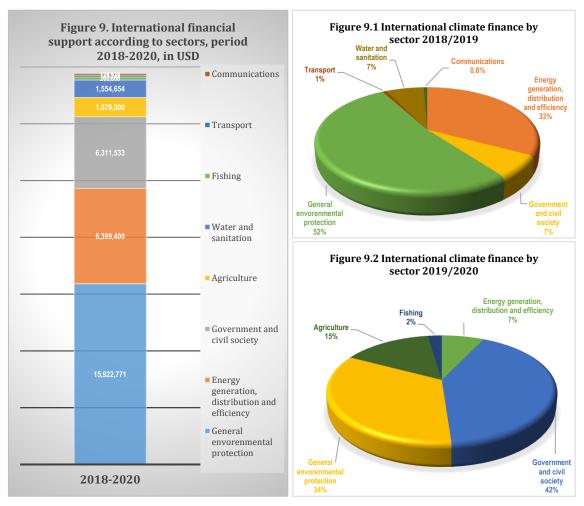
Multilateral financial institutions that are part of the financial mechanism of the Convention play a particularly important role in financing climate projects in North Macedonia. The role of the Global Environment Facility (GEF) is especially important, which for the three-year analysis period of 2018-2020 provided USD 10.5 million or 66.2% of the total multilateral support and 30.6% of the total international financial support received. The Green Climate Fund (GCF) in the entire period provided 6.3%, while FAO provided 12.4%.

Source: Author's own presentation



Finally, we analysed the structure of the distribution of the international financial support according to the sectors. The sector definition used in this analysis is according to the OECD DAC Rio Markers methodology (OECD, 2011).

Figure 9 shows the distribution of international climate finance by sectors for the entire three-year analysis period of 2018-2020. Most of the received international financial support belongs to projects from the General Environmental Protection sector, which is 46.3%. In the sector of Energy generation, distribution and efficiency it amounts to 24.4%, Government and civil society 18.3%, Agriculture 4.9%, Water and sanitation 4.5%, Fishing 0.8%, Transport 0.4%, and Communications 0.4%.



Source: Author's own presentation

CONCLUSION

Effective and efficient implementation of climate activities relies on providing climate finance on a consistent basis. This is a particular problem for developing countries facing other economic and social development priorities and a severe



shortage of climate finance. To meet the Paris Agreement's long-term goals, it is crucial that developed countries support developing countries in achieving their Nationally Determined Contributions (NDCs) and mobilizing the required climate finance.

COVID-19 pandemic had negative impact on climate finance in developing countries. Developing countries have struggled to implement their NDCs while facing a global pandemic that affected every country's health and economy in unprecedented ways. COVID-19 drastically slowed down economic activity, closed borders, and required countries to redirect budgets, increasing their debt in some cases, to address the financial needs created by the pandemic (UNDP, 2021). Climate finance was insufficient before the pandemic. The goal of mobilizing USD 100 billion annually by 2020 to address the needs of developing countries would not be met (IEGCF, 2020). The most recent report showed that total climate finance, which was provided and mobilized, reached USD 79.6 billion in 2019 (OECD, 2021a). During the pandemic, some countries announced ODA climate-related cuts that further reduced climate-finance flows.

The climate-finance needs of developing countries, based only on an assessment of the current NDCs' quantitative data communicated to the UNFCCC Secretariat, are estimated at USD 4.6 trillion for developing countries (Alayza and Caldwell, 2021). The Republic of North Macedonia is a small developing country with clear commitment to combating climate change. With its Enhanced Nationally Determined Contributions (ENDC) to reduce GHGs emissions by 51% by 2030, 63 mitigation policies and measures (PAMs) have been planned, which require green investments of EUR 25.03 billion. With an annual GDP of USD 12.1 bn, domestic financial and other capacities are far from needed to meet climate goals. Most of the required capital is planned to be provided from international sources, especially through the UNFCCC financial mechanism.

REFERENCES

- Alayza, N., & Caldwell, M. (2021). "Financing Climate Action and the COVID-19 Pandemic: An Analysis of 17 Developing Countries", Working Paper, Washington, DC: World Resources Institute. Available at doi.org/10.46830/wriwp.21.00039.
- Climate Change Secretariat of UNFCCC (2014). "2014 Biennial Assessment and Overview of Climate Finance Flows. Summary and recommendations by the Standing Committee on Finance

JOURNAL OF SUSTAINABLE DEVELOPMENT, VOL. 12, ISSUE 28 (2022), 17-37 UDK 551.58:339.727.22(497.7)

https://doi.org/10.54442/JSD221228017n

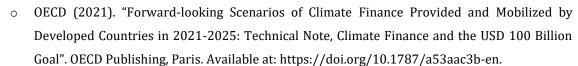


on the 2014 biennial assessment and overview of climate finance flows". Bon, Germany. Available

- $https://unfccc.int/sites/default/files/2014_ba_summary_and_recommendations_by_scf_on_th\\ e_2014_ba.pdf$
- CPI (Climate Policy Initiative) (2021). "Preview: Global Landscape of Climate Finance 2021".
 Available at: https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/
- DI (Development Initiatives) (2021). "Aid Data: 2019–2020: Analysis of Trends before and during COVID". Available at: https://devinit.org/resources/aid-data-2019-2020-analysis-trends-before-during-covid/#downloads. Accessed February 15, 2022.
- European Commission (2016). "Study on climate finance reporting, including methodological issues, producing overview information, and assessing emerging requirements". Available at: https://op.europa.eu/de/publication-detail/-/publication/5e52ad1d-aa54-11e6-aab7-01aa75ed71a1
- o FCO (Foreign and Commonwealth Office) (2020). "Official Development Assistance (0DA) Spending for 2020: First Secretary of State's Letter". London, UK: Foreign and Commonwealth Office. Available at: https://www.gov.uk/government/publications/official-development-assistance-oda-spending-for-2020-first-secretary-of-states-letter/official-development-assistance-oda-spendingfor-2020-first-secretary-of-states-letter. Accessed February 15, 2022.
- IDFC (International Development Finance Club) (2021). "IDFC Green Finance Mapping Report 2021". Available at: https://www.idfc.org/wp-content/uploads/2021/11/idfc-gfm2021-fullreport-final.pdf
- o IEGCF (Independent Expert Group on Climate Finance) (2020). "Delivering on the \$100 Billion Climate Finance Commitment and Transforming Climate Finance". Available at: https://www.un.org/sites/un2.un.org/files/100_billion_climate_finance_report.pdf.
- MASA (Macedonian Academy of Sciences and Arts) (2020). "Macedonian enhanced nationally determined contributions". Available at:
 https://api.klimatskipromeni.mk/data/rest/file/download/0495e6333b90a37d5dd3017455f
 322da0af629251aa19a8f408c148c5be1e2cd.pdf
- McClellan, K. (2021). "Financing Strategy for the Macedonian enhanced Nationally Determined Contributions to Climate Change". Available at: https://api.klimatskipromeni.mk/data/rest/file/download/da39fc5ee4edde466e63b7af6581 e8e0a1a015cc4458b15fb6484f6958b127eb.pdf
- Naumoski, A. & Angelova, B. (2022). "Climate finance: global and national perspectives in the context of Covid-19 pandemic impact". *Economic Development, Journal of the Institute of Economics-Skopje*, 24(1).
- OECD (2011). "OECD DAC Rio Markers for Climate Handbook, Development assistance committee". Available at: https://www.oecd.org/dac/environment-development/Revised%20climate%20marker%20handbook FINAL.pdf



https://doi.org/10.54442/ISD221228017n



INTEGRATED BUSINESS FACULTY - SKOPJE

- OECD (2021a). "Climate Finance Provided and Mobilized by Developed Countries: Aggregate Trends Updated with 2019 Data". OECD, Paris, France. Available at: https://www.oecdilibrary.org/docserver/03590fb7en.pdf?expires=1632166805&id=id&accname=guest&checksum=A7DD84D684A2B34C31FFD 63DF8B6D040.
- UNDP (United Nations Development Programme) (2021). "Sovereign Debt Vulnerabilities in Developing Economies: Which Countries Are Vulnerable and How Much Debt Is at Risk?" Working Paper. New York: UNDP. https://www.undp.org/publications/sovereign-debt-vulnerabilities-developingeconomies#modal-publication-download
- UNFCCC (2010). "Cancun Agreements". Available at: https://unfccc.int/process/conferences/pastconferences/cancun-climate-changeconference-november-2010/statements-and-resources/Agreements.
- UNFCCC (2014). "Decision 1/CP.19 Further advancing the Durban Platform". Available at: https://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf#page=3
- O United Nations (2015). "Paris Agreement". Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- Watson, C., Schalatek, L., & Evéquoz, A. (2022). "The Global Climate Finance Architecture:
 Climate funds update". Heinrich Boll Stiftung. Washington DC, USA