



저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

Master's Thesis of International Cooperation

The Nexus between Green ODA
and Development Effectiveness
– Findings from the Republic of Korea –

녹색 ODA와 개발 효과성의 연계에 관한 연구:
한국 사례를 중심으로

August 2022

Graduate School of International Studies
Seoul National University
International Cooperation Major
Heewon Koo

The Nexus between Green ODA and Development Effectiveness

– Findings from the Republic of Korea –

Taekyoon Kim

Submitting a master's thesis of
International Cooperation

August 2022

Graduate School of International Studies
Seoul National University
International Cooperation Major

Heewon Koo

Confirming the master's thesis written by
Heewon Koo
August 2022

Chair	<u>Kim, Chong-Sup</u>	(Seal)
Vice Chair	<u>Kim, Booyuel</u>	(Seal)
Examiner	<u>Kim, Taekyoon</u>	(Seal)

Abstract

With the increased awareness of how climate change poses alarming threats to the international community, it is imperative for countries to contribute to additional finance and take concrete action. In this context, this paper posits that the role that green official development assistance (ODA) plays is significant, because it supports both donor countries to use it as a mechanism to fulfill their NDC commitments, while for recipient countries, it acts as the additional source of finance needed to support climate mitigation and adaptation. However, existing literature show that green ODA is portrayed a negative light because of its delivery modalities, as it falls short in promoting environmental sustainability as well as development. With regards to this, this paper seeks to address these literature gaps by conducting a case study on the Republic of Korea (ROK), as the ROK has showed its willingness to make significant improvements on its green ODA as well as development effectiveness. Noting this, this paper uses a qualitative methodology through a discourse analysis and semi-structured in-depth interviews to answer the research questions of this thesis to see whether the Korean green ODA will be delivered through less effective delivery modalities. Through this process, this paper will examine whether these results on the ROK' s green ODA can be applied to the broader context that donor countries pursue. Finally, this paper will provide the author' s own insights and implications on these results, and conclude with policy recommendations for donor countries to consider in terms of their delivery modalities of green ODA.

Keywords : Green ODA, development cooperation, climate finance, Republic of Korea, climate change

Student Number : 2020-24212

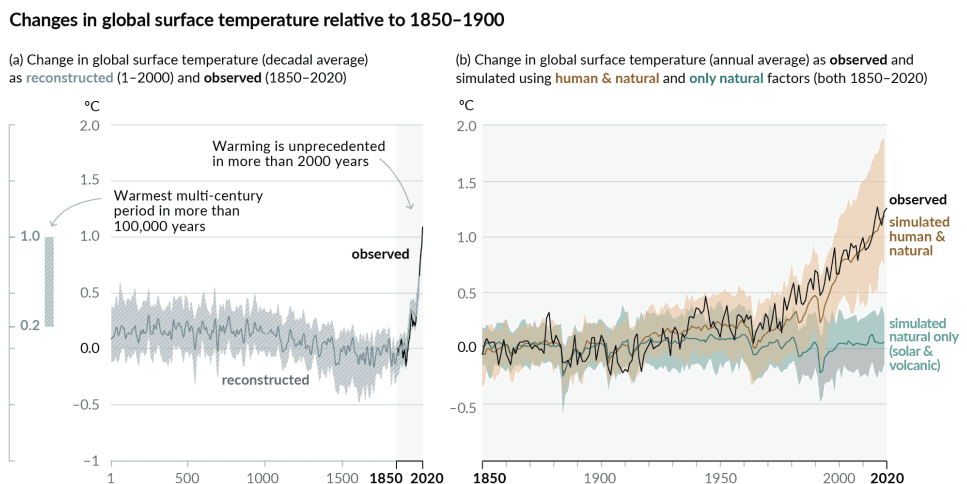
Table of Contents

Chapter 1. Introduction.....	1
Chapter 2. Literature Review.....	7
Chapter 3. Research Design.....	12
3.1. Research Methodology	12
3.2. Research Questions.....	18
Chapter 4. Critical Review	24
Chapter 5. Discussion.....	31
Chapter 6. Conclusion.....	35
Bibliography.....	38
Appendix	54
Abstract in Korean.....	55

Chapter 1. Introduction

With the devastating effects that COVID-19 has brought upon to humanity, there has been an increased awareness of how climate change poses similar, or even more alarming threats to the international community. Stated in the 6th Assessment Report produced by the Intergovernmental Panel on Climate Change (IPCC) in 2021 and 2022, empirical evidence has demonstrated that it is likely that human activities have contributed 100% toward climate change compared to the pre-industrial age, which can be seen in Figure 1 (IPCC, 2021). As such, it has been undisputed that the root cause of this unequivocal problem stems from the greenhouse-gas emissions and the exploitation of natural resources by humans (Carbon Brief, 2022).

Figure 1. Human Influence toward Global Temperature Changes
Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years



In light of this, the United Nations Framework Convention on Climate Change (UNFCCC) was ratified in the year 1992 by a total of 197 countries as a means to mitigate and adapt to the anthropogenic dangers of climate change (UNFCCC, 1992). To

explain, the UNFCCC initially provided a basic framework where member states create and commit to non-binding multilateral treaties. However, as member states gained mutual understanding on the need to take further action, this framework served as the basis for binding agreements and protocols that codify the means through which collective action could be facilitated (Kuh, 2018). These agreements are typically discussed at the annual meetings of the Conference of the Parties (COP), where member states could review the progress of national targets on climate change and remaining emission inventories (UNFCCC, 1996). Through the COPs, the two key climate agreements have been ratified hitherto; the Kyoto Protocol was adopted in 1997 and the Paris Agreement was ratified in 2015.

The two aforementioned agreements are significant, as the shift from the Kyoto Protocol to the Paris Agreement signified a milestone in climate action. This is because the Kyoto Protocol was initiated in a top-down approach, while the Paris Agreement symbolized a bottom-up approach. To be specific, the Kyoto Protocol focused on the efforts needed from developed countries and enabled them to set binding targets for the reduction of carbon emissions. This was done through the approach of “common but differentiated responsibility and respective capabilities” outlined in Article 10, which imposes a greater burden toward developed countries as their historical activities toward industrialization contributed more toward climate change. Hence, the Annex B of this protocol pinpoints a total of 37 industrialized countries and economies in transition to submit and comply with their targets for emission reduction (UNFCCC, 1998).

On the other hand, the Paris Agreement focused on the efforts from all countries around the world, enhancing the accountability of developing countries as well. This has been done by allowing more flexibility for each country to declare their own targets for greenhouse gas emission reductions by taking their respective

economic, technological, and social factors into consideration. Guided by the voluntary Long-Term Low Emission Development Strategies, such reductions have been coined by using the concept of nationally determined contributions (NDC), in which the Article 4 of the Paris Agreement stipulates that member countries are required to prepare and maintain the NDCs and to submit these goals at least every five years to the UNFCCC (UNFCCC, 2015a). By doing so, countries hoped to promote a culture of ‘soft-reciprocity’ in which countries will increase their national ambitions in accordance with those of comparable countries. Through this mechanism, a consensus was achieved to limit global warming to an increase of 2°C above pre-industrial levels, with a stretch objective of 1.5°C (UNFCCC, 2015b).

Although all member nations declare and submit NDCs, the problem lies in the fact that there is a difference between developed and developing countries. Even if leaders have a strong political will to act and make change, developing countries often have limited capacity and thus do not possess the financial resources to act upon these targets (OECD, 2019). To explain, various activities including the development of national strategies, implementation of projects and programs, as well as the development of bankable projects and blended finance mechanisms all call for increased climate financing from both domestic and international sources (NDC Partnership, 2020). Because of this, Article 9.1 of the Paris Agreement stipulates the need for developed countries to “provide financial resources to assist developing country parties”, with Article 9.3 calling for developed countries to “take the lead” in catalyzing various forms of finance to support the needs of developing countries (UNFCCC, 2015b). Thus, in order to undergo such a transition of achieving the targets set through the Paris Agreement, it has been recognized that climate finance is crucial.

In this regard, agreements were made during the 15th COP in 2009 for Annex I countries of the UNFCCC, namely the developed

countries, to provide \$100 billion a year by 2020 to fund the mitigation and adaptation efforts of developing countries that lack such finance (UNFCCC, 2009). To explain, IPCC defines mitigation efforts as lowering greenhouse gas emission rates, and adaptation efforts as adapting and adjusting to existing effects from climate change (IPCC, 2019). However, the recent climate talks from the COP26 have shown that the \$100 billion target towards such efforts has not been achieved, with commitments amounting to only 30% of the entire target in early 2020 (UN, 2021). Further, it has been stated that even this target is not sufficient, as the IPCC has estimated that more than an annual \$1.6 trillion will be needed to limit global warming below 1.5°C (Timperley, 2021), with an annual \$2.4 trillion only for the energy sector alone (IPCC, 2018).

In this context, this paper highlights that green official development assistance (ODA) is particularly important not only for developing countries to receive, but also for developed countries to provide as well. In the case of developing countries, this is a crucial source of income to supplement their limited financial capacity, as 79% of all climate finance is comprised of ODA (OECD, 2021a). Especially when the finance needed to actualize the Paris Agreement is far greater than the aggregate amount of development finance as of today, green ODA allows recipient governments to support the neglected needs and catalyze it to mobilize additional finance. This is because not only is green ODA provided with a specific and strategic purpose to carry out green initiatives, this additional source of finance acts as a catalyst to bring in other finance such as but not limited to greater taxation, investments from the private sector, as well as remittances (OECD, 2019). Such additional source of finance channeled through ODA is crucial as developing countries have been impacted the most by climate change, despite being the least responsible for such impacts (UNDP, 2019).

In the case of developed countries, the non-market mechanism of green ODA supports their promises and commitments to fulfill their

NDCs as per Article 6.8 of the Paris Agreement (UNFCCC, 2015a). While market mechanisms refer to mitigation efforts at low cost, which include the trading of CO₂ emissions between countries or companies, non-market mechanisms pertain to other non-market forms of cooperative initiatives (UNFCCC, n.d.). In this regard, non-market mechanisms allow governments to count ODA as method of fulfilling their own NDCs.

Understanding such needs, member countries of the OECD DAC declared the need to align ODA with the Paris Agreement on October 2021 (OECD, 2021d). Considering the fact that the SDGs are greatly interconnected with the climate needs stipulated in the Paris Agreement, it was mentioned that the purpose of ODA provision should be to support recipient countries in achieving a ‘just transition’ towards zero carbon emissions and to help improve their capacity towards climate change adaptation, with more focus on the least developed countries (LDCs) and small island developing states (SIDS). In addition, the DAC reaffirmed its goal of contributing an annual \$100 billion by utilizing various sources through means such as blended finance, and also declared that the DAC seeks to work with financial institutions so that developing countries can receive increased access to such forms of finance.

Based on this context, this paper puts emphasis on the need to consider that the recent 26th COP on November 2021, after the OECD DAC declaration was announced, was a milestone in being able to reach a consensus of the widely contested definition, measurement, and rules for how the non-market mechanism of NDCs would function (Di Leva & Vaughan, 2021). Hence, with Article 6.8 now being operational, the role that green ODA will play to further the NDC efforts for developed countries will be of greater importance in the coming years. Yet, the amount of green ODA that is currently being provided towards developing countries is insufficient. Thus, it is becoming increasingly important to increase its quality or ‘effectiveness’.

Against this backdrop, this paper seeks to provide the following contents. Chapter two will review the literature on ODA to highlight the significance of green ODA, so as to identify its limitations and discuss the contribution of this paper in that regard. Chapter three will provide the research design of this paper, which contains the justification for this paper's case selection, research methodology, and the research hypotheses. Chapter four will elaborate on the research design by conducting a case study on the Republic of Korea (ROK) to reveal how its green ODA has impacted its adherence to OECD DAC norms, as defined by the research questions that were posed in the previous chapter. Chapter five will discuss the implications of such findings in the broader context of development aid. Chapter six will conclude by providing a summary and policy recommendations.

Chapter 2. Literature Review

This section will first begin by comprehensively mapping the literature in accordance with common themes. Based on an exploratory analysis of selected literature, it seems that green ODA is often portrayed in a negative light because it has been provided in modalities that are less effective. In other words, for the delivery mechanism of green ODA to be classified as effective, it should be aligned with the SDGs and the Paris Agreement so that both climate change efforts and poverty reduction can be effectively targeted. This is because the purpose of green ODA is to fulfill the objectives of both development initiatives for ODA and environmental benefits for the green sector. However, it seems that green ODA has been deemed negative due to its inability to promote neither sustainability nor development after it has been provided. In this context, it is important to verify both the results of green ODA as well as the process of how it has been provided. Yet, this paper notes that there has been a greater focus to understand the results of after green ODA is provided, rather than the means of delivery.

First, green ODA has been criticized for being unable to promote environmental sustainability. For example, Li et al. (2020) analyze data on green ODA based on the Rio Markers, concluding that there is no direct correlation between green ODA and the reduction of carbon emissions. They, along with Buntaine and Parks (2013) argue that only an indirect correlation can be found when incorporating the mediating influence of ‘strong institutions.’ Going further, some studies find that aggregated ODA has no positive nor negative effect on pollution (Lim et al., 2015), while other studies claim that although aggregated green ODA have directly led to less carbon emissions, increase in per capita GDP through green ODA showed that it has indirectly led to increased carbon emissions (김옥란 et al., 2015; 강희찬 and 정지원 2016; Kablan and Chouard,

2022). Also, a study by Wu et al. (2021) show that climate aid has no great effect in reducing emissions for countries with high emission and low-income levels. Finally, even when environmental sustainability is acquired, Kalirajan et al. (2011) argue that such accomplishments are achieved through using the inherently hierarchal nature of development aid to push donor priorities onto recipient countries. That is, in the perspective of developed countries, carbon mitigation, which is in support of global public goods, results in lower climate change impacts, whereas poverty reduction does not directly benefit them.

Second, there is concern that green ODA is unable to promote development in the traditional socio-economic sense. Davies (1992) raises the concern that green development aid often siphons development finance away from more immediate needs such as food security. According to Szabó (2016), this is because the methodology behind measuring climate finance is not well-defined, enabling donors to use their development commitments to fulfill their climate ambitions. To exemplify, Michaelowa and Michaelowa (2007) state that carbon emission projects have been limited in promoting poverty reduction, and that previous projects implemented in developing countries through the Clean Development Mechanism have not been able to directly target the most vulnerable population struck by poverty. Going further, Dercon (2014) even argues that green ODA should not target least developed or low-income countries, as it has the possibility to weaken existing national poverty reduction initiatives.

With such significant shortcomings in mind, it is understood that such a focus on the results of green ODA has occupied the majority of deciding whether the aspects of sustainability and development have been positive or negative. However, the aforementioned literature, which affirms the negative aspects of green ODA, takes into account a wide array of factors including data from different periods of time, donors and recipient countries, and type of climate

aid. Without such an aligned standard, this leaves room for authors to select the independent variables that lead to the dependent variable of green ODA. However, it is also important to look at the aligned, objective information on the initial delivery modalities of donor countries to see why those results occur. Hence, as this merits further discussion, it is important to also understand the process behind the delivery of green ODA to verify whether its modalities have been effective or not.

In this regard, this paper notes that the analysis to determine development failures can be divided into three streams: Agenda, design, and implementation (Venugopal, 2018). To elaborate, the agenda aspect refers to the concealed self-interested motivations that drive development projects, the design issue looks at the practical analytics and available information that allows donors to design the project before its implementation, and the implementation stream considers how agencies carry out and manage the project. In this context, this paper focuses on the former two streams to understand the process behind the delivery of green ODA because the agenda and design can be controlled by the donor government, whereas the implementation is not only in the control of the implementing and executing agencies, but also is prone to being affected by various other variables such as uncertainty in the political and economic context of the recipient country. Hence, this paper seeks to review literature that analyzes the agenda and the design of green ODA. Concerning the former, theorists have analyzed that the agenda, or in other words, the motivation of donor countries behind providing green ODA has been viewed as a dichotomy between the recipient's needs and the donor's national interests.

On the one hand, previous literature notes that green and environmental aid is provided because the agenda of donor countries deems it as appropriate to assist the needs of the recipient country. To be specific, Kim (2009) notes that donors

began to undergo the greening process of their development aid due to the external oppression from civil society organizations and the internal need from themselves to examine their previous failures as a means to tailor their aid for recipient needs. Moreover, Park (2016) asserts that these motivations spur from ecological objectives toward the desire to protect the environment. On the other hand, the other stream of literature, as also noted by Park (2016), demonstrates that green ODA seeks to facilitate the neoliberal objectives to help improve economic development within the donor country. Lewis (2003) backs this with a study focused on the United States, by stating that the traditional objectives of economic, political, and national security related motives have greatly influenced its environmental aid provision. In addition, a study by Hicks et al. (2010) demonstrates that the recipient country's scale of trade, colonial experiences, GDP level, population size, and number of ratified environment-related agreements are the primary factors that donor countries consider when selecting whom to provide environment-related ODA.

In comparison to the analysis on the drivers of providing green ODA, there is a general lack of literature on understanding the underlying design of projects and programs, meaning that not much has touched upon the design of delivery modalities. In fact, the only mention of this topic can be found in Park (2016), which asserts that the means of providing green ODA leads to less effective modalities of development cooperation. However, this paper is limited in the fact that it only does so in an exploratory manner. In other words, there is no qualitative nor quantitative evidence provided to support its findings, as the paper is primarily based on the author's expert intuition. Moreover, the paper only mentions two limited aspects of a very comprehensive issue.

First, Park (2016) states that middle-income countries have been prioritized over low-income ones. This is because the environment sector is less likely to be viewed as an urgent area of investment

for donor countries. Further, the share of non-earmarked aid toward low-income countries has been declining, while earmarked aid has been prioritized toward upper middle-income economies. This is backed by Dercon (2014) as the author states that green aid is greatly dependent on capital-intensive technology rather than physical labor, thereby leading to a higher preference toward emerging economies.

Second, Park (2016) posits that green-labeled aid projects are often implemented through tied modalities. In other words, the funds provided through such interventions can only be used to procure goods and services from the donor country. This is induced by the neo-liberal, commercial interest driven aid practices that are prevalent in green aid projects. In other words, green ODA is increasingly being utilized to promote the private sector, particularly through creating a green market in the recipient countries and allowing such countries to participate more fully in the global market.

In this context, this paper seeks to address these two literature gaps. First, this paper will provide the evidence needed to elaborate on the practical delivery methods of green ODA. This will be done by analyzing the political economy of the Republic of Korea (ROK) to see how national green ODA commitments affect the development effectiveness of donor countries. Second, this paper will elaborate on the modalities through which green ODA is provided and explain the implications of such modalities. Through this, this paper seeks to contribute to the current literature of whether green ODA is delivered through less effective modalities.

Chapter 3. Research Design

3.1. Research Methodology

Against this backdrop, this paper will use a qualitative approach to achieve its research objectives. This is because the attributional aspects of political economy analyses can only be achieved through such methodological approach. At the same time, even if insights may be acquired through quantitative research, sufficient data does not yet exist to properly reflect neither green ODA nor development effectiveness. Regarding the former, green ODA is usually measured through the OECD's Rio Markers, which are consisted of markers for diversity, desertification, climate change mitigation and climate change adaptation (OECD, 2021e). However, this measurement is known to be limited in terms of quality as well as accuracy due to the lack of proper screening measures and the discretionary processes involved. First, the quality of reported data is debated, as the self-reporting system is liable to exaggerated estimations due to the pressure to report great amounts, along with miscalculations made by human error. Second, the lack of a rigorous screening and discretionary process allow one project to fall under multiple markers, making it prone to being double or even triple-counted (Weikmans & Roberts, 2019).

Pertaining to the latter, there is a lack of adequate quantitative data that can properly measure, compare, and analyze the concept of development effectiveness. While the criteria to assess development effectiveness has been set by the Global Partnership on Effective Development Cooperation (GPEDC) during the 2011 Busan High-Level Forum, which include ownership, focus on results, inclusive partnerships, along with transparency and mutual accountability, the methodology to monitor and assess these factors have been controversial (UNDP, n.d.). Hence, GPEDC, being the only organization to release data on the 'effectiveness' of

development cooperation, is currently undergoing a monitoring reform, so as to overcome the limitations of the existing methodology (GPEDC, 2021).

In this regard, this thesis selects the Republic of Korea (ROK) to conduct a case study so as to provide the missing evidence of the delivery mechanisms of green ODA, in which the reasons for selecting ROK is as follows. First, the ROK has expressed its willingness to further the contributions of green ODA, making it one of the very few countries that has recently declared to greatly increase the portion of green aid compared to other DAC countries as well as made significant contributions to relevant multilateral initiatives, deeming it as an appropriate example to verify the motivations, intent, and impact of the ODA.

To provide the background information on this, the ROK's response toward COVID-19 was the release of its first Korean New Deal in July 2020, which contained a green component. To be specific, this sought to promote the transition towards climate-friendly infrastructure, energy systems, and industries through initiatives such as the renovation of public buildings to be more energy efficient, construction of smart-grids for island regions, and the promotion of SMEs and research institutions in the environment sector (MOEF, 2020). Building on this, the second Korean New Deal was released in July of 2021, which differs from the first Korean New Deal because it provides additional details to align the national strategy with its international commitments on the NDCs (MOEF, 2021). These strategies have a strong outward-facing component, as affirmed in the ROK's Korean New Deal Globalization Strategy.

In this regard, this 2021 New Deal Strategy incorporates the Green New Deal ODA Promotion Strategy, which shows that one of the main methods for the country to implement this strategy is to be through green ODA (OECD, 2021a). The ROK's Green New Deal

Implementation Plan provides the strategy and details for this, which proposes that the country will expand the portion of green and environmental components in its ODA by approximately 1.5 times, thereby increasing its previous 19.6% to above the OECD DAC average of 28.1% by 2025 (MOE, 2021). This builds on previous initiatives to use its green growth experience to fuel its green ODA (Hong & Izmestiev, 2020).

In addition to this, former president Moon's speech highlighted that the country will make significant increases in the amount of green ODA during the P4G Seoul Summit of 2021, the first summit-level multilateral event co-hosted by the government of ROK along with the Green Climate Fund (P4G, 2021). Moreover, the government has proclaimed to provide \$300 million to the Green Climate Fund by the year 2027, along with additional efforts to create a Green New Deal Fund with the Global Green Growth Institute to support recipient countries in achieving green transformation (Kwon, 2022).

The reasons behind this commitment may be because of the unique situation that ROK is in to fulfill its NDC targets. To be specific, the Moon administration has chosen to increase its 2030 greenhouse gas (GHG) emission reduction NDCs from 26.3 percent to 40 percent in order to accelerate its carbon neutral effort under a vow to achieve zero net carbon emissions (Smith, 2021). These targets have been reflected onto the newly inaugurated Yoon administration as of March 2022, which explicitly indicate that the previous NDC targets will be integrated into each sector of the economy in a pragmatic manner (Choi, 2022).

However, as Korea uses the peak year 2018 of emissions as the benchmark year to choose its NDC targets, it is challenging to fulfill its NDCs two times the speed of other OECD countries, whose peak year for NDCs have been set far before (Office of the President, 2021). For example, by 2030, the European Union committed to reduce its GHG emissions by 55 percent compared to the peak year

of 1990, United Kingdom by 68% compared to its peak year of 1990, the United States by 50 to 52% compared to 2005, and Japan by 46% compared to 2013 (Office of the President, 2021). As such, with the peak year being relatively recent with already high carbon emission rates, it would be quite difficult for the ROK to contribute to the targets when comparing with other countries. Going further, ROK faces challenges as its industry heavily relies on steel, semi-conductors, and automobiles which are inherently carbon-intensive, while utilizing almost 70% of fossil fuels for its energy, which contrasts with other OECD countries, as they are less reliant on such sources (Stangarone, 2021).

Because of this reason, Korea has chosen to fulfill 8% of its 40% of NDC commitments through overseas sources, an increase from the previous 2.2%, as can be seen through the increase from 16.2 million ton reduction to 33.5 million ton reduction based on the peak year of 2018 (Climate Action Tracker, 2021). Among these overseas sources, the government has asserted the need to facilitate bilateral ODA and increase multilateral cooperation through international organizations (Carbon Neutrality and Green Growth Commission, 2021). As an example, the Korean Ministry of Trade, Industry, and Energy has recently shown its willingness to strengthen the connection between energy ODA projects with its NDC commitments to reduce the overseas GHG emissions of the Korean private sector (MOTIE, n.d.). In this context, these issues may have led the ROK to seek to fulfill its NDCs through the global cooperation mechanisms enshrined in Article 6 of the Paris Agreement, which includes non-market approaches such as development aid (UNFCCC, 2015a).

The second reason as to why this thesis chooses ROK for its case study is because the country seeks to be a leader in the development cooperation architecture, particularly in the context of development effectiveness. To illustrate, the most recent 2018 OECD DAC peer review states that Korea has been “leading by

example” and “plays a unique role on the global stage”, because not only does it possess the experience of being the only country that has rapidly transformed from being a recipient country to a DAC donor country, but also its leading role in both bilateral and multilateral cooperation has been commended by its partner countries (OECD, 2018).

This is particularly true as ROK has led successful facilitation of the 2011 Fourth High-Level Forum on Aid Effectiveness, which symbolized the transition from ‘aid’ to ‘development’ effectiveness (OECD, 2011). Moreover, the ROK has also led the follow-up programs to this initiative. To exemplify, the ROK has continued to yearly host the KOICA Learning and Accelerating Programme, a platform that provides workshops and training toward government officials from developing countries on issues related to development effectiveness (Coppard, 2020). Also, it has biannually hosted the Busan Global Partnership Forum, a platform that invites various stakeholders from national and international organizations, as well as the civil society and the private sector to evaluate the progress of the GEPDC’s implementation, identify issues, and facilitate information exchange with one another on similar issues (GPEDC, 2020).

Going further, the ROK has played a strong leader in broader GPEDC processes. This can be affirmed as it is currently a steering committee member in this area as well as in relevant organizations such as being the chair of the Multilateral Organisation Performance Assessment Network in 2015 and the co-chair of the OECD-DAC (ODA Korea, n.d.). In fact, the ROK is currently the vice-chair of the OECD-DAC’s subsidiary body called the ENVIRONET. As this group is mandated to enhance the effectiveness of green ODA, it is clear that the ROK’s ambitions in both the climate and development sphere are strongly overlapping. As such, this paper believes that the insights learned through this case study will be reflective of the processes occurring in other countries.

In this context, this paper seeks to answer four research questions to understand whether the delivery modalities of green ODA are effective or not. To do this, this paper will first conduct an analysis on the ODA delivery modalities of OECD DAC countries to understand what the standard of being effective is. Then, in order to answer these questions, this paper will look at the case of ROK by going through a discourse analysis of policy documents that relate to its Green New Deal, green ODA, as well as its country partnership strategies that include green components as the main areas of Korea's cooperation. Further, this paper will review press briefings and releases, as well as the project evaluation reports of short-term green ODA projects that have been completed. This is to provide the practical evidence of how the government of ROK seeks to fulfill its green commitments through green ODA.

After conducting a discourse analysis, this thesis will undergo semi-structured in-depth interviews with relevant experts in order to triangulate the direction of its findings. These experts will be selected based on non-probability sampling, meaning that a list of relevant organizations will be created which includes the academia, international organizations, as well as ODA implementing agencies. The potential interview targets for each organization will be selected through non-probability sampling methods based on convenience and snowballing. By doing so, this paper hopes to acquire a broader understanding of the political economy behind this nexus.

3.2. Research Questions

This paper proposes one main research question, which will be answered through four sub questions that refer to the relationship between the modality of green ODA provision and the ODA standards that OECD DAC donors are aligned with. These questions were derived by undergoing an analysis of OECD–DAC donor profiles from the OECD website, so as to identify the normative overlaps that are expected of members (OECD, 2021b). Subsequent to this, certain questions were removed due to their irrelevance to the issue of national interests. In this context, the questions are as follows.

Main question: Is green ODA provided through less effective modalities, and if so, why?

Research question 1. How does the ROK's green ODA affect its grant–loan ratio of ODA?

Research question 2. How does the ROK's green ODA affect its bilateral and multilateral allocation of ODA?

Research question 3. How does the ROK's green ODA affect its income–based allocation of ODA?

Research question 4. How does the ROK's green ODA affect its effective development cooperation performance principles, particularly that of tied–aid commitments?

To explain the rationale behind why these four research questions were selected to determine whether green ODA is provided through effective modalities or not, this paper will provide the reasoning for each research question. On this point, it is important to note that the

effectiveness of green ODA can be determined based on its contribution to the sustainability and development of the recipient country.

For the first research question on the grant to loan ratio for bilateral aid, this paper asserts that loans have the potential to be a less effective modality compared to grants. On the one hand, loans have been favored by donor agencies as it enables recipient countries to improve their fiscal efforts to repay the loans, which also helps to mobilize their domestic finance (Gupta et al., 2003; 2004; Odedokun, 2003). However, the concept of lending increases the amount of debt that recipient countries must pay back, which in turn, decreases the effectiveness of ODA that has been initially provided (Rogoff, 2003).

In addition, Radelet (2005) asserts that the most poverty-stricken countries will not be able to utilize the loans and will only be able to use the revenues generated from the loans to repaying them back, thereby stating that grants, rather than loans, should be provided to LDCs. Further, a study on 60 recipient countries from 1980 to 2015 by Kim and Lekhe (2019) show that although grants do lead to diminishing returns, it brings forth positive impact in every variable measured for economic growth, which include GDP growth per capital, growth for total factor productivity, and the growth rate for capital stock, while loans do not.

For the second research question on the bilateral to multilateral aid ratio, this paper argues that bilateral aid may be a less effective delivery modality when compared to multilateral aid. The primary reason for this is because bilateral aid is more prone to succumb to the political and strategic objectives of the donor country rather than the actual need of the recipient (Alesina and Dollar, 2000; Barder, 2012; Berthélemy, 2006; Burnside and Dollar, 2000; Nunnenkamp and Thiele, 2006; Sippel and Neuhoff, 2009; Verdier, 2008). Literature provides examples including the United States in

utilizing bilateral channels to impart democratic values, Taiwan to promote trade and secure itself as an actor in the international market, and Nordic countries to facilitate aid provision towards countries with similar history and institutions (Baccini and Urpelainen, 2012; Lee, 1993; Hansen et al, 2015).

On the other hand, multilateral aid has the potential to be more effective to increase the sustainable development of recipient countries, as it tends to be less politicized by excluding strategic desires of certain countries and be able to represent the recipient country's needs (Gulrajani, 2016). This can be supported by various survey results which demonstrate that government entities in recipient countries have preferred multilateral channels over bilateral ones due to reasons including being predictable, responsive, adjustable, and tailored to the countries' needs (Davies and Pickering, 2015; Custer et al., 2015).

For the third research question on the LDC to MIC ratio, this paper believes that when ODA is geared towards MICs, this may potentially be less effective when compared to aid towards LDCs. Although the initial purpose of ODA is to help countries target poverty and secure a sustainable form of development, empirical evidence shows that ODA has not been targeted to the most vulnerable LDCs (Dissanayake et al., 2020). Not only has ODA towards LDCs diminished from 32% in the year 2010 to 29% in the year 2019, but the COVID-19 crisis has overwhelmingly exacerbated the debt burden of LDCs (Development Initiatives, 2021). This is critical, as LDCs experience the most disproportionate impacts of poverty, while not being equipped with the capacity nor resources to first build the grounds for economic growth. Despite the status quo, donor countries have the tendency to prefer recipient countries in the middle-income group, because it provides higher returns and tangible economic benefits for donors (Dissanayake et al., 2020).

Lastly, this paper claims that when ODA is provided in tied modalities, it has the potential to be less effective compared to un-tied modalities. To look at the current status, donor countries tend to tie its aid with certain economic conditionalities such as the inclusion of its private sector in implementing aid projects within recipient countries. By doing this, the private sector of donor countries are able to reap the commercial benefits coming from higher prices in procurement of goods and services, which is possible due to the limited competition that is inherent in such modalities (Kim and Kim, 2016).

On this note, this may be the case because the pressure exerted from taxpayers and the private sector may greatly impact the decisions toward tied aid (Riddell, 2007). However, it must be noted that this approach diminishes the effectiveness of aid because it reduces the opportunity that recipient countries can use to procure local resources, the goods and services are likely to not be aligned with the local environment, and it increases unwanted transaction and shipping costs (Anders, 2018; Jepma, 1991; Meeks, 2017; OECD, 2014). This in turn increases the pervasive dependency relationship of recipient countries towards donor countries, further prohibiting the grounds to achieve ownership and development (Chung et al., 2016).

With this in mind, this paper notes that the study on the effectiveness of these four delivery modalities have been widely applied to various sectors within ODA, including education, health, gender, infrastructure, and more. With the most recent data from the OECD, Figure 1 shows that social and economic infrastructure, along with humanitarian assistance has been long prioritized for the allocation of ODA, with Figure 2 showing aid towards environment and climate change, categorized as multi-sector, now being on the rise (Wilcks and Bosch, 2021).

Figure 2. OECD DAC Bilateral ODA by sector (2019)

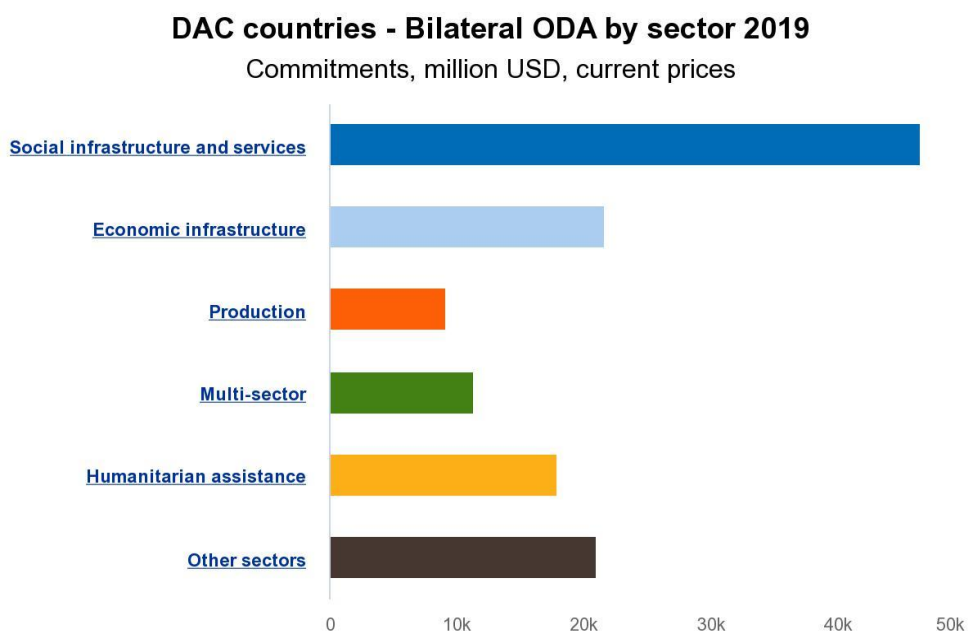
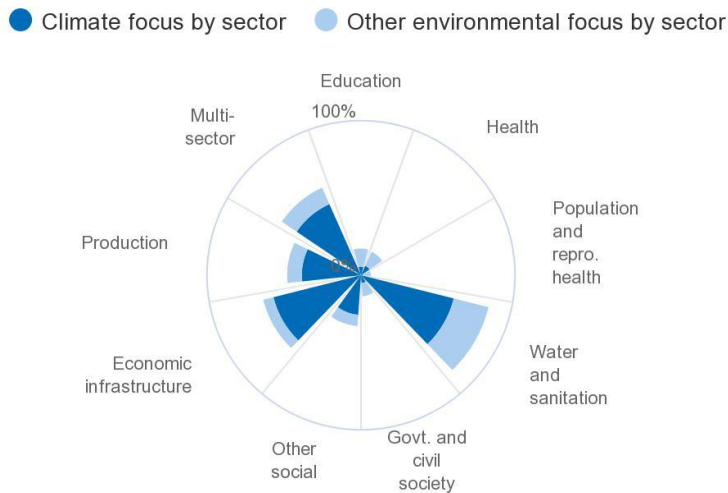


Figure 3. OECD DAC Climate and Environmental ODA (2019)

DAC countries - Climate and environmental focus by sector 2019

Bilateral allocable ODA, commitments, per cent



Based on this, this paper asserts that that the answers to the four questions above will result in an approach that promotes Korean national interests. This can be affirmed through the Overseas Development Institute’s Principled Aid Index (2020), which affirms that OECD DAC donors have generally used their development aid to promote national interests, often at the expense of development effectiveness (ODI, 2020). This holds true for the ROK because of both quantitative and qualitative reasons. Regarding the former, the ROK was ranked 16th of 28 OECD–DAC donors in the 2019 principled aid index. Pertaining to the latter, the ROK has placed this on the policy agenda of its most prominent development cooperation forums. For example, the ROK’s 11th Seoul ODA International Conference, which was hosted in 2019, clearly stated the importance of “co–prosperity” and “mutual benefits” of ODA (MOFA, 2019). In fact, the ROK’s foreign policy direction seeks to use international cooperation to promote national interests, as can be affirmed by key documents such as its New Southern and Northern Policy.

As such, this paper hypothesizes the following results. First, the

ROK's green ODA will affect its ODA grant–loan ratio, with loans having a greater proportion compared to grants, both through bilateral and multilateral cooperation modalities (i.e. more cooperation through MDBs, as opposed to IOs). Second, the ROK's green ODA will affect its bilateral and multilateral ratio to ODA by increasing the ratio towards bilateral ODA. Third, the ROK's green ODA will affect the income–based allocation of its ODA by prioritizing middle–income countries at the expense of low–income and least developed ones. Fourth, the ROK's green ODA will affect its effective development cooperation performance principles particularly that of tied–aid commitments by increasingly promoting tied–aid modalities. As such, this paper argues that ROK's green ODA will generally reduce the effectiveness of its approach to development cooperation.

Chapter 4. Critical Review

Based on the aforementioned hypotheses, this section will first provide an overview of the average means of delivery that OECD DAC member states comply with in order to answer what effective and less effective modalities of ODA are. This is because the Development Assistance Committee acts as the norm entrepreneur and watchdog of development cooperation by providing the standard framework, good practices, and optimal policies on development initiatives for countries to adhere to (von Engelhardt, 2018). To exemplify, the universal principles such as the definition of what comprises ODA, the updated list of recipient countries, and the primary standards that donor countries must abide by are established by the DAC. As such, this paper seeks to associate “effective” modalities as the average modality used by DAC donor countries to provide aid.

According to the most recent data reported by the OECD, the 2021 figures for DAC countries show that bilateral grants amounted to a total of \$108,190 million, while bilateral loans in grant equivalent terms amounted to a total of \$11,975 million, showing that the grant to loan ratio in 2021 was 90 to 10 (OECD, 2022a). Second, bilateral aid for 2021 amounted to a total of \$124,710 million, while multilateral aid was \$54,205 million. This shows that the ratio of bilateral to multilateral aid was approximately 70 to 30 (OECD, 2022b). Third, the most recent data for the year 2019 shows that a net amount of \$56,859 million was given towards least developed and low-income countries (LICs), \$43,950 million was towards low middle income countries (LMICs), and \$12,729 million was towards upper middle income countries (UMICs) (OECD, 2021e). When considering LDCs as the sum of LDCs and other LICs and MICs as the sum of LMICs and UMICs, the ratio provided towards LDCs to MICs was approximately 50 to 50. Lastly, the most recent figures for tied and untied aid can be shown through data on the year 2020, in which the OECD reports that a total of approximately \$10,785 million was provided through tied aid, while \$95,878 million was through untied aid (OECD, 2022b). This shows that the tied to untied aid ratio that DAC countries provided in 2020 was 10 to 90. Hence, these results show that although there is an effective modality of aid, it is inevitable for OECD DAC countries to provide its aid mainly through grants compared to loans, bilateral aid than multilateral aid, through a balance between LDCs and MICs, and through an untied manner.

To begin with the first question on the grant to loan ratio of aid, the ROK's 2022 Annual Implementation Plan for development cooperation indicates that the comprehensive grant and loan ratio will be 58.6 to 41.4 for the year 2022, which account to 18,865 million KRW and 13,334 million KRW respectively. Within these figures, the grant to loan ratio allocated towards the area of environmental protection has been set as 2.3% and 3% each, showing that a greater focus will be provided towards loans to

target climate change (ODA Korea, 2021a). To go further into detail, it is important to review three strategies that were established in 2021, which indicate the future modality of ROK's grants and loans for green ODA. Regarding grants, the Green New Deal Grants Strategy focuses on strengthening the structure of the Green New Deal ODA, discovering projects for each partner country, and to expand green ties as a means to increase the amount of grants, which include examples of expanding the financial commitment to the Green Climate Fund to \$300 million (OECD, 2021a). Regarding loans, the Green EDCF Strategy explicitly mentions that the scale of ODA loans towards green and environmental projects will be increased up to three times the current amount by the year 2025, and that all loans related to green projects will be increased up to two times by 2025 (OECD, 2021a).

Similarly, panel interviews also seem to indicate that green ODA prioritizes loans more than grants. To be specific, interviewees F and G stated that the ROK's focus towards loans has always been the norm and that this will not change in the coming years, with interviewee G mentioning that it holds recipient countries accountable for the impact and effectiveness of aid (personal communication, 2022). This was backed by interviewee C who mentioned that in the perspective of implementing agencies of Korea's green ODA, green projects call for large-scale infrastructure with a significant amount of budget, which enables agencies to prioritize EDCF's large scale loans rather than KOICA's grants (personal communication, 2022). Further, interviewee I noted that ROK's general objective has been focused on the mitigation area than the adaptation area, which allows increased opportunities for the private sector to engage and produce profit, thereby providing a segway for more non-grant projects to be implemented (personal communication, 2022).

Second, the 2022 Annual Implementation Plan states that a total of 32,199 million KRW is planned towards bilateral aid provision, while

a total of 8,226 million KRW is towards multilateral aid for the year 2022, showing a ratio of 80 to 20. This portion for bilateral aid is an increase from the year 2021, where bilateral to multilateral aid was approximately 78 to 22 (ODA Korea, 2021a). For bilateral aid, the Green New Deal component within the K–New Deal Globalization Strategy released in March 2021 states the government’s commitment to increase bilateral means of cooperation with developing countries. Examples of this include increasing new project opportunities by linking it with ODA for the New Southern and New Northern Policies, as well as expanding private sector partnerships with Latin American countries. For its multilateral means of cooperation, the Green New Deal Strategy focuses on initiatives geared toward public private partnerships, which include intergovernmental initiatives such as the International Partnership for Hydrogen and Fuel Cells in the Economy or international initiatives such as the Clean Energy Ministerial Hydrogen Initiative (Ministry of Science and ICT, 2021).

Based on the above, the in–depth interviews show mixed results on bilateral and multilateral modalities. To begin with, interviewee B, C, E, G, H, and K commented that bilateral modalities would be emphasized. In this regard, interviewee B stated that both ROK and its recipient countries generally tend to prefer bilateral modalities, as the ROK is influenced by its domestic private sector seeking to engage with the government for carbon credit while recipient countries are influenced by political and economic issues that hinder international organizations from increasing multilateral means of cooperation (personal communication, 2022). Furthermore, interviewee E noted that the government has explicitly mentioned its strategic objectives to generate new job opportunities and economic benefits from green ODA, while interviewee K noted that the ROK’s green ODA will continue to be implemented towards its priority partner countries, which may indicate that bilateral aid would be prioritized over multilateral aid (personal communication, 2022).

In contrast, interviewees D, F, I, and J provided their opinions on how multilateral modalities would be the focus of green ODA. Concerning this, interviewee I stated that multilateral modalities will increase because even with the focus towards bilateral aid, it has been evident that there are limited human capacity and resources within ROK's implementing agencies (personal communication, 2022). Because of this, interviewee I noted that even bilateral green ODA may be framed in the form of multi-bi aid through increased cooperation with international organizations, which can be seen in the examples of the to-be established Green New Deal Trust Fund, and the recently established UN Climate Technology Centre and Network (CTCN) Partnership and Liaison Office of the United Nations Environment Programme in 2021 (personal communication, 2022).

Third, for the income group of the ROK's green ODA, the K-New Deal Globalization Strategy mentions that the Green New Deal seeks to further its green ODA in a different manner with both LDCs and MICs. For LDCs and SIDS such as Myanmar, Mozambique, and Ethiopia, the government has declared that a focus towards projects in new and renewable energy would be the primary area of cooperation, whereas for middle income countries such as Nepal, Tajikistan, and Honduras, the main area would be technical areas of stabilizing power transmission and distribution (Ministry of Science and ICT, 2021). However, despite the strategy mentioning that green ODA will be provided by tailoring it to the needs of all recipient countries including different income levels, vulnerable areas, and the Country Partnership Strategy (CPS), the Green New Deal ODA Strategy seems to concentrate its projects on MICs. This is because the strategy explicitly mentions that it will concentrate on the ROK's key partner countries designated through the CPS (ODA Korea, 2021b). To be specific, the CPS for years 2021 to 2025 indicates that ROK will focus its ODA towards 27 countries, of which only 9 countries are categorized as LDCs while 18 are MICs.

Within these countries, the five newly added countries for 2022 which are India, Egypt, Ukraine, Kyrgyz Republic, and Tajikistan, are all categorized as MICs, showing the Korean government's continued intention to support MICs (ODA Korea, 2022).

The analysis above has been similar to the interviews, as the majority of interviewees asserted that MICs would benefit more. To be specific, interviewees G, H, J, and K stated that MICs will reap greater benefits because of the technical capacity that they are equipped with, coupled with the enabling environment that allow MICs to build upon and maximize the effectiveness of the aid (personal communication, 2022). In addition, interviewee C noted that recent green ODA projects have been geared towards utilizing smart technology and ICT, which imply that a greater focus will be given towards those that have the capacity to harness these tools (personal communication, 2022). Further, interviewee I mentioned that as long as the ROK continues to focus on climate mitigation projects than adaptation projects, MICs will be the main target of its green ODA provision because they currently contribute the most in greenhouse gas emissions (personal communication, 2022). Interviewee I also noted that especially when loans would be the main modality, implementing agencies will seek to cooperate with countries where the loans can be repaid and where Korean companies can be benefitted to enter in that country, such as those with higher living standards (personal communication, 2022).

Lastly, to understand the ratio of tied and untied aid, this can be determined by looking at key policy documents of the government and the strategic direction of Korea's ODA implementing agencies. In this regard, the government has asserted its willingness to expand the ripple effect of its ODA provision by increasing the implementation of follow-up projects. To explain, the K-New Deal Globalization Strategy mentions that the new ODA strategy seeks to promote overseas expansion for Korea's green companies by initiating projects that are packaged with development initiatives

and green energy (Ministry of Science and ICT, 2021). Further, the ROK's Green New Deal ODA Strategy notes that its vision is to fulfill "mutual interests" through cooperation and solidarity, in order to achieve the goal of "win-win" green recovery. To do this, the strategy provides three initiatives, of which the third initiative explicitly mentions that ROK will seek to expand the support towards mutually beneficial partnerships through follow-up projects and programs by allowing various relevant stakeholders to participate (ODA Korea, 2021b).

Moreover, when looking at the two main implementing agencies, it can be seen that both grants and loans under the sector of green ODA are focused on inducing and engaging the Korean private sector. To exemplify, KOICA's Climate Change Response Mid-Term Strategy for the years 2021 to 2025 pinpoint green partnerships as one of its three key strategies, focusing on promoting innovative technologies in the R&D sector and for small and medium enterprises (KOICA, 2021). This also goes for loans under green ODA, as the EDCF's Mid-Term Strategy for the years 2022 to 2024 focus on expanding business opportunities and making improvements on the preferential conditions for Korean companies and workers to have better access to recipient country markets in the green sector (Ministry of Economy and Finance, 2022).

However, panel interviews have provided mixed results, with five interviewees stating that green ODA will be tied while the other half stating that it will be untied. To provide the explanation on this, interviewees B and E commented that the Korean government underscored the willingness and necessity to engage the Korean companies and market when implementing its green ODA, such as strongly recommending the purchase of Korean products and services (personal communication, 2022). To back this, interviewee I indicated that unlike international organizations that go through a fair and competitive process in choosing the companies to work

with, the Korean implementing agencies tend to strategically select Korean companies to implement its projects and reap mutual benefits, which will be likely for the green ODA as well (personal communication, 2022). Additionally, interviewee C mentioned that it may even be beneficial to maintain the high tied aid ratio so that ROK can provide positive results towards its constituents from using their tax (personal communication, 2022).

To the contrary, the other five interviewees posited that untied modalities of green ODA will increase, with interviewee H mentioning that the government has indicated its affirmation to abide by the untying principles recommended by the OECD DAC (personal communication, 2022). Further, interviewees D, F, G, and J asserted that ROK will likely to carry out its projects in an untied manner because it will either be provided through multilateral modalities which prohibit tied aid, or because it will initially consider the recipient country's economic context, local human capacity, and technological development to implement its projects for the purpose of meeting the recipient needs (personal communication, 2022).

Chapter 5. Discussion

This section will provide the significance of the discourse analysis and interviews by offering the author's own insights on whether the results for the ROK's green ODA can be applied to the broader context of green ODA modalities that donor countries pursue. At the same time, this section will seek to provide potential implications of green ODA that are relevant to each research question.

To begin with the first research question, it has been observed that the ratio of loans will comprise a greater portion of the ROK's green ODA modalities compared to grants. In this regard, this paper

believes that there are important implications to consider, because loan-based projects call for a greater focus on climate mitigation projects. To explain, mitigation is a global public good that allows all individual to gain benefits when greenhouse gases are mitigated, whereas adaptation only provides benefits for the area in which the adaptation project is initiated. Because of these characteristics, mitigation projects provide a profit-making component for the private sector to gain commercial benefits and exchange them in international markets, while adaptation projects can only lead to non-commercial benefits (Hall, 2019). Because of this, there has been a prolonged imbalance where merely one-fifth of climate finance goes to adaptation while the rest goes to mitigation (Farand, 2020). In this context, projects that are implemented through loans must yield revenues to repay the original amount, thereby resulting in the potential tendency for the ROK to implement more climate mitigation projects. This is problematic because it has been reported that costs needed to target adaption will increase to approximately \$140 million to \$300 billion by the year 2030 (Bakarr, 2021). Hence, the potential focus on mitigation projects will further exacerbate the existing imbalance between the two areas.

Regarding the second research question, the interview results showed that there was a mix between the bilateral and multilateral modalities of the ROK's green ODA. However, it must be noted that the expected ROK's green ODA modalities cannot be generalized to the broader context of green ODA modalities. To explain the reasons behind this, this paper notes that donor countries are recommended and required to provide ODA by first recognizing their own comparative advantages to coordinate development aid with recipient countries' needs and national contexts, as well as to help reduce any unnecessary overlaps (OECD, 2009). Based on this, it may likely be the case where the ROK could be prone to use bilateral modalities merely because it has a clear comparative advantage in the green ODA sector. In other words, donor countries

without such advantages, or those without the financial capacity to support projects in the green sector may be prone to utilize multilateral means. To provide evidence, the OECD DAC reports that a number of DAC countries are expected to utilize multilateral modalities of providing green ODA particularly in the energy sector, because of the donor agencies' inherent issues of smaller scale and capacity restraints (OECD, 2021a). When this is the case, this paper asserts that multilateral modalities of aid are not bound by strategic mandates and tend to target recipients that are in the most poverty-stricken, vulnerable status. This implies that donor countries in need of finance from international organizations may strategically focus on the most vulnerable countries such as LDCs, SIDS, and fragile states to provide their green ODA. As such, although the intentions may be of strategic needs, the results may be positive in being able to utilize multilateral modalities to target those who need the most assistance.

Moving onto the third research question, it was analyzed that MICs will benefit the most from green ODA, which poses both negative and positive implications. For LDCs, it is problematic that they may further suffer from carbon lock-in as well as experience greater climate vulnerability. First, LDCs are not able to move away from their dependence on fossil fuels because of their limited capacity (Akiwumi, 2021). When the economy is unable to shift technologies, infrastructure, institutions, and norms in favor of fossil fuels towards low-carbon ones, this results in carbon lock-in, leading to a self-perpetuating loop of greater carbon emissions (Seto et al., 2016). Second, LDCs facing the most challenges in adapting and mitigating climate change, will experience greater vulnerabilities. Based on the IPCC's components of climate vulnerability of exposure, sensitivity, and adaptive capacity towards climate change, LDCs will face greater challenges in these three factors (IPCC, 2007). To explicate, the economy of low-income countries are focused on primary industries, especially the agricultural sector. This means that they will experience greater exposure to climate

hazards of temperature and precipitation changes, sensitivity in the living environments located in high-risk areas susceptible to rise in sea levels and intrusion of saltwater, and weak adaptive capacity in lack of information, finance, and technologies (Ludena et al., 2015).

On the other hand, when green ODA is focused towards MICs, this may actually produce positive outcomes because of two reasons. First, despite the fact that MICs have reported to contribute the most to GHG emissions, a majority of these countries have not been able to secure additional finance and go through a green transformation to mitigate these emissions. Because of this, this paper asserts that green ODA allows them to gain additional finance to make advancements in climate-friendly technologies and infrastructure, thereby allowing an opportunity to escape from its middle-income trap (Alonso et al., 2014). Second, it is worth noting that extreme poverty has now been shown to exist within MICs rather than LDCs, being recently coined as the “new poor”. Figures on this show that more than 80% of the individuals faced with extreme poverty are likely to be situated within MICs, especially because of the impacts of COVID-19 (Atanda & Cojocar, 2021; Worley, 2020). Hence, green ODA targeting MICs may actually be helpful to help support climate problems that are interconnected with poverty (Nishio, 2021).

Lastly for the fourth research question, it was concluded that tied modalities for green ODA would hinder the cost effectiveness of goods and services. Yet, this paper seeks to provide a different approach in viewing two positive aspects of tied aid. First, tied aid may be advantageous for recipient countries to obtain, compared to no aid at all. When donor countries undergo the initial project design and preparation stage, they are bound by the ODA principles such as the finance to be concessional and the purpose to improve upon the development of recipient countries. This in turn puts a clear focus towards recipient countries to accrue the main benefits while donor countries can gain supplementary benefits. Second, as tied

aid focus on procurement of goods and services from the donor country, this leads to opportunities for donor country companies and workers to enter into the recipient country. Through this, the recipient country market can accrue additional sources of capital and experience technological development, posing tied modalities as reasonable.

Chapter 6. Conclusion

There has been an overwhelming consensus for the international community to tackle climate change, calling for countries to contribute to additional finance and take concrete action. In this regard, this paper focused on the necessity to support countries that have contributed the least to climate change, who have faced the greatest threats from it. To support these needs, the role that green ODA plays is significant, because it supports both donor as

well as recipient countries. For donor countries, green ODA can be used as a mechanism to fulfill their NDC commitments, while for recipient countries, it acts as the additional source of finance needed to implement climate mitigation and adaptation projects. Yet, as green ODA has been low and insufficient, it has been understood that its effectiveness must be improved for recipient countries to receive the necessary assistance.

However, existing literature show that green ODA is portrayed a negative light because of its current modalities. This is because the delivery modalities fall short in promoting environmental sustainability as well as development. Yet, such literature show limitations in the fact that variables chosen to show its effectiveness have been chosen in a subjective manner, which calls for the need to look at the objective agenda and design of donor countries to understand whether aid modalities have been effective or not. In this regard, the very limited literature that does exist only does so without evidence to support its findings.

In this context, this paper sought to address these literature gaps by conducting a case study on the Republic of Korea (ROK), because the ROK showed its willingness to make significant improvements on its green ODA as well as development effectiveness. Noting this, this paper used a qualitative methodology through a discourse analysis and semi-structured in-depth interviews to answer the four research questions to see whether the Korean green ODA will be delivered through less effective delivery modalities. Through this, this paper found that a greater focus towards loans, bilateral channels, toward middle income countries, and through tied aid will take the form of the Korean green ODA, which differs from the effective modalities of grants, bilateral channels, a balance between middle income and least developed countries, and through untied aid, which DAC countries comply with.

Noting the above, this paper provided the author's own insights on the ROK's green ODA to examine whether these results on the ROK's green ODA can be applied to the broader context of green ODA modalities that donor countries pursue. First, the concentration towards loans than grants calls for careful consideration because it may potentially exacerbate the already existing imbalance towards climate mitigation projects compared to adaptation projects. Second, the bilateral modalities of green ODA cannot be generalized to the wider architecture of donors, as the ROK may likely to have a comparative advantage toward the green sector while other donors may not. Third, green ODA may lead to least developed countries suffering from carbon lock-in and climate vulnerability, but simultaneously benefit middle income countries by providing the additional finance needed to escape from its middle-income trap and to target the ever-increasing extreme poverty levels situated within them. Fourth, tied aid modalities may actually generate positive results for at least providing some form of support, and for potential opportunities to catalyze the recipient country's economy.

As such, these findings seek to highlight four policy recommendations for donor countries. First, there is a purpose-driven need for donors to increase the climate adaptation component in its green ODA projects, because a greater partiality will be on mitigation projects when using loans. Second, donors that do not have a comparative advantage in the environmental sector should seek to increase their commitments toward multilateral contributions. For those who do have a comparative advantage in this sector, it is important to utilize bilateral modalities in a form that prioritizes recipient's needs rather than the donor's national interests. Third, this paper notes that green ODA toward middle income countries should focus on technologies and infrastructure that allow them to undergo a green structural transformation and to tackle their increasing levels of extreme poverty. For least developed and low income countries, donors need to focus on

projects that assist them to move away from fossil fuel dependency as a means to escape from carbon lock-in issues, as well as those that reduce their exposure and sensitivity but increase adaptive capacity toward climate change impacts. Lastly, this paper asserts that when tied modalities are used, donors must provide them in a new and additional manner rather than relabeling it with existing contributions. By doing so, this paper hopes that when such policy advice is reflected onto the policies of donor countries, the modalities that are used to provide green ODA can create positive benefits for recipient countries, thereby allowing them to reap the benefits of both environmental sustainability as well as development effectiveness.

Bibliography

Alesina, A. and D. Dollar. 2000. Who Gives Foreign Aid to Whom and Why? Accessed 12 May. *Journal of Economic Growth* 5 (2000):33–63.

Alonso, J. A., Glennie, J., and Sumner, A. 2014. Recipients and Contributors: Middle income countries and the future of development cooperation. DESA Working Paper No. 135 ST/ESA/2014/DWP/135

Akiwumi, P. 2021. “Least developed countries cannot afford to strand their assets, given their development challenges.” Accessed 10 April. <https://unctad.org/news/least-developed-countries-cannot-afford-strand-their-assets-given-their-development-challenges>

Anders, M. 2018. “Donors claim they are untying more aid, but critics call for broader definition.” Accessed 2 May. <https://www.devex.com/news/donors-claim-they-are-untying-more-aid-but-critics-call-for-broader-definition-92964>

Atanda, K., and Cojocar, A. 2021. “Shocks and vulnerability to poverty in middle-income countries.” Accessed 11 April. <https://blogs.worldbank.org/developmenttalk/shocks-and-vulnerability-poverty-middle-income-countries>

Baccini, L. and Urpelainen, J. 2012. Strategic Side Payments: Preferential Trading Agreements, Economic Reform, and Foreign Aid, *The Journal of Politics* 74(4): 932–949. Accessed 13 May. <http://doi.org/10.1017/s0022381612000485>

Bakarr, M. 2021. “Climate finance and the urgency for adaptation in the developing world.” Accessed 1 May. <https://www.thegef.org/newsroom/blog/climate-finance-and-urgency-adaptation-developing-world>

Barder, O. 2012. “Is Multilateral Aid Better,” Accessed 4 May. <http://www.owen.org/blog/6128>.

Berthélemy, J. C., 2006. Bilateral Donors’ Interest vs Recipients’

Development Motives in Aid Allocation: Do All Donors Behave the same? *Review of Development Economics* 10 (2006):179–94.

Buntaine, M. T., and Parks, B. C. 2013. When Do Environmentally Focused Assistance Projects Achieve Their Objectives? Evidence from World Bank Post Project Evaluations. *Global Environmental Politics* 13 (2): 65–88.

Burnside, C. and D. Dollar. 2020. Aid, Policies, and Growth. *American Economic Review* 90 (2000):847–68.

Carbon Brief. 2022. “In-depth Q&A: The IPCC’s sixth assessment on how climate change impacts the world.” Accessed 12 May. <https://www.carbonbrief.org/in-depth-qa-the-ipccs-sixth-assessment-on-how-climate-change-impacts-the-world>

Carbon Neutrality and Green Growth Commission. 2021. “2030 국가 온실가스 감축목표(NDC) 상향안.” Accessed 10 May. https://www.2050cnc.go.kr/flexer/view/BOARD_ATTACH?storageNo=174

Choi, B. 2022. “尹 110대 국정과제, "원전중심 탄소중립." Accessed 10 May. <http://www.kharn.kr/news/article.html?no=19281>

Chung S., Eom Y.H., and Jung H.J. Why Untie Aid? An Empirical Analysis of the Determinants of South Korea’s Untied Aid from 2010 to 2013. *Journal of International Development* 28, 552–568 (2016)

Climate Action Tracker. 2021. “Country Summary.” Accessed 1 May. <https://climateactiontracker.org/countries/south-korea/>

Coppard, Dan. 2020. “KOICA Learning and Acceleration Programme provides peer learning opportunity for developing countries.” Accessed 12 April.

<https://www.effectivecooperation.org/content/koica-learning-and-acceleration-programme-provides-peer-learning-opportunity-developing>

Custer, S., Rice, Z., Masake, T., Latourell, R. and Parks, B. 2015. Listening to Leaders: Which Development Partners do they Prefer and Why? http://docs.aiddata.org/ad4/pdfs/publication_full_2.pdf

Davies, S. 1992. Green conditionality and food security: Winners and losers from the greening of aid. *Journal of International Development*, 4(2), 151–165. <https://doi.org/10.1002/jid.3380040205>

Davies, R. and Pickering, J. 2015. Making Development Cooperation Fit for the Future A Survey of Partner Countries. OECD Development Cooperation Working Paper 20. <https://www.oecd-ilibrary.org/docserver/5js6b25hzv7h-en.pdf?expires=1652763363&id=id&accname=guest&checksum=3B1BF57A27FF4B3880299CDD0741E9B3>

Dercon, S. 2014. Climate change, green growth, and aid allocation to poor countries. *Oxford Review of Economic Policy*, 30(3), 531–549. <http://www.jstor.org/stable/43664662>

Development Initiatives. 2021. “Reversing the trends that leave LDCs behind.” Accessed 1 May. https://www.un.org/ldc5/sites/www.un.org.ldc5/files/reversing_the_trends_that_leave_ldcs_behind_-_daniel_coppard.pdf

Dissanayake, R., Kenny, C., and Plant, M. 2020. What Is the Role of Aid in Middle-Income Countries? CGD Policy Paper 201, December 2020. <https://www.cgdev.org/publication/what-role-aid-middle-income-countries>

Di Leva, C. and Vaughan, S. 2021. “The Paris Agreement’s New Article 6 Rules.” Accessed 19 April. <https://www.iisd.org/articles/paris-agreement-article-6-rules>

Farand, C. 2020. “OECD: One-fifth of climate finance goes to adaptation as share of loans grows.” Accessed 1 May. <https://www.climatechangenews.com/2020/11/06/oecd-one-fifth-climate-finance-goes-adaptation-share-loans-grows/>

GPEDC. 2020. “Korea’s 2018 GPEDC Learning and Accelerating Programme.” Accessed 12 April. <https://www.effectivecooperation.org/event/koreas-2018-gpedc-learning-and-accelerating-programme>

GPEDC. 2021. “Global Partnership Monitoring Reform: Towards new evidence, better accountability and more relevance.” Accessed 12 May. https://www.effectivecooperation.org/system/files/2021-06/SCM21_session4_monitoring%20doc_countours_EN.pdf

Gulrajani, N. 2016. “Bilateral versus multilateral aid channels.” Accessed 14 May. <https://cdn.odi.org/media/documents/10492.pdf>

Gupta, S., B. Clements, A. Pivovarsky, and E. R. Tiongso. 2003. Foreign Aid and Revenue Response: Does the Composition of Aid Matter? Accessed 15 May. <https://www.imf.org/external/pubs/ft/wp/2003/wp03176.pdf>

Gupta, S., B. Clements, E. Baldacci, and C. Mulas-Granados. 2004. The Persistence of Fiscal Adjustments in Developing Countries. *Applied Economics Letters* 11: 209–212

Hall, T. 2019. “How to make the Green Climate Fund a better force for change.” Accessed 10 May. <https://www.climatechangenews.com/2019/10/28/make-green-climate-fund-better-force-change/>

Hansen, M. E., Gjeffsen, T., and Lie, K. K., eds. 2015. *The End of Nordic Exceptionalism?* Norwegian Church Aid, Finn Church Aid, DanChurchAid, and Church of Sweden.

Hicks, R. L., B. C. Parks, J. T. Roberts, and M. J. Tierney, 2010, *Greening aid?: Understanding the environmental impact of development assistance*. Oxford University Press: New York. DOI:10.1093/acprof:oso/9780199213948.001.0001

Hong, M., and Izmestiev, A. 2020. “The transformation of the Republic of Korea's development cooperation.” Accessed 12 April. https://www1.undp.org/content/seoul_policy_center/en/home/library/the-transformation-of-the-republic-of-korea-s-development-cooper.html

IPCC. 2007. *Climate Change 2007: Climate Change Impacts, Adaptation, and Vulnerability*. Cambridge University Press, Cambridge, 2007

IPCC. 2018. *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

IPCC. 2019. *Annex II: Glossary* [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the*

Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 117–130.

IPCC. 2021. Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. doi:10.1017/9781009157896.001.

Jepma, C. J. 1991. The Tying of Aid. OECD: Paris. <https://www.oecd.org/dev/pgd/29412505.pdf>

Kablan, S., and Chouard, V. Does climate aid matter for reducing CO2 emissions? The case of foreign aid for renewable energy, *Applied Economics*, DOI: 10.1080/00036846.2022.2044995

Kalirajan, K. P., Singh, K., Thangavelu, S. M., Anbumozhi, V., and Perera, K. 2011. Climate Change and Poverty Reduction — Where Does Official Development Assistance Money Go? Asian Development Bank Institute Working Paper Series. <https://doi.org/10.2139/ssrn.1955706>

Kim H. and Lekhe F.S. 2019. ODA and Economic Growth in Developing Countries: Grants vs. Loans. *Journal of International Trade & Commerce (J. Int. Trade Commer.)* Vol.15, No.6, December 2019 (pp.19–33) <http://dx.doi.org/10.16980/jitc.15.6>.

Kim S. 2009. Translating Sustainable Development: The Greening of Japan's Bilateral International Cooperation. *Global Environmental Politics* 9 (2): 24–51. <https://doi.org/10.1162/glep.2009.9.2.24>

Kim, S. H., and Kim, Y.H. 2016. Is tied aid bad for the recipient countries? *Economic Modelling* 53:289–301

DOI:10.1016/j.econmod.2015.11.025

KOICA. 2021. “KOICA 분야별 중기전략(2021-2025) 요약본 국, 영문 및 다국어(프랑스어, 스페인어, 아랍어, 러시아어) 버전.” Accessed 10 May. https://www.koica.go.kr/koica_kr/8131/subview.do?enc=Zm5jdDF8QEB8JTJGYmJzJTJGa29pY2Ffa3IIMkYyMDU4JTJGMzc4OTM1JTJGYXJ0Y2xWaWV3LmRvJTNGcGFnZSUzRDEIMjZzcmNoQ29sdW1uJTNEJTI2c3JjaFdyZCUzRCUyNmJic0NsU2VxJTNEJTI2YmJzT3Blbl dyZFNlcSUzRCUyNnJnc0JnbmRIU3RyJTNEJTI2cmdzRW5kZGVtdHIIM0QlMjZpc1ZpZXdNaW5lJTNEZmFsc2UIMjZwYXNzd29yZCUzRCUyNg%3D%3D#none

Kuh, K. F. 2018. The Law of Climate Change Mitigation: An Overview. *Encyclopedia of the Anthropocene*, 505-510. ISBN 9780128135761, <https://doi.org/10.1016/B978-0-12-809665-9.10027-8>.

Kwon, Y. 2022. Korea's Green ODA: Performance and Challenges, *KIEP Opinions Series* 239, 1-3. Accessed 14 June. https://www.kiep.go.kr/gallery.es?mid=a20308000000&bid=0008&list_no=10129&act=view

Lee, W.-C. 1993. Taiwan's Foreign Aid Policy. *Asian Affairs* 20(1): 43-62. Accessed 14 June. <http://doi.org/10.2307/30172174>

Lewis, T.L. 2003. Environmental Aid: Driven by Recipient Need or Donor Interests? *Southwestern Social Science Association*, vol. 84(1), pages 144-161, March. Accessed 14 June. DOI: 10.1111/1540-6237.8401009-i1

Li, D. D., Rishi, M., and Bae, J. H. 2020. Green official development aid and carbon emissions: Do institutions matter? *Environment and Development Economics*, 26(1), 88-107. Accessed 14 June. <https://doi.org/10.1017/s1355770x20000170>

Lim, S., Menaldo, V., and Prakash, A. 2015. Foreign aid, economic globalization, and pollution. *Policy Sciences*, 48(2):181–205.

Ludena, C., Yoon, S.W., Sanchez–Aragon, L., Miller, S., and Yu, B.K. 2015. Vulnerability indicators of adaptation to climate change and policy implications for investment projects. Technical Note N. 858. Accessed 1 May. https://www.unclearn.org/wp-content/uploads/library/idb01062016_vulnerability-indicators-of-adaptation-to-climate-change-and-policy-implications-for-investment-projects.pdf

Meeks, P. 2017. “Unravelling Tied Aid.” Accessed 7 May. <https://www.eurodad.org/tied-aid-briefing>

Michaelowa, A. and Michaelowa K. 2007. Climate or development: is ODA diverted from its original purpose? *Climatic Change* (2007) 84:5–21

DOI 10.1007/s10584-007-9270-3

Ministry of Economy and Finance. 2022. “2022~2024 EDCF 중기운용방향.” Accessed 10 May. https://www.moef.go.kr/com/synap/synapView.do?atchFileId=ATC_H_000000000019663&fileSn=5

Ministry of Science and ICT. 2021. “K-뉴딜 글로벌화 전략.” Accessed 10 May. <https://www.korea.kr/news/pressReleaseView.do?newsId=156431801>

MOE. 2021. “(Reference) The 2021 P4G Seoul Summit Results.” Accessed 20 May. <https://me.go.kr/eng/web/board/read.do;jsessionid=xj-FiBJVp5Gneu8s3F2m7-8i.mehome1?pagerOffset=20&maxPageItems=10&maxIndexPages>

=10&searchKey=&searchValue=&menuId=461&orgCd=&boardMasterId=522&boardCategoryId=&boardId=1462710&decorator=

MOEF. 2020. “Government Releases an English Booklet on the Korean New Deal.” Accessed 20 May. <https://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4948>

MOEF. 2021. “Government Announces Korean New Deal 2.0.” Accessed 20 May. <https://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=5173>

MOFA. 2019. “Welcoming Remarks by H.E. Amb. LEE Taeho, Vice Minister of Foreign Affairs, on the Occasion of the 13th Seoul ODA International Conference of September 19, 2019.” Accessed 12 May. https://www.mofa.go.kr/www/brd/m_20141/view.do?seq=302605&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=2

MOTIE. 2022. “에너지 공적개발원조(ODA) 사업과 온실가스 국제감축사업 연계 강화.” Accessed 2 May. http://motie.go.kr/motie/gov_info/gov_openinfo/sajun/bbs/bbsView.do?bbs_seq_n=165539&bbs_cd_n=81¤tPage=1&search_key_n=&cate_n=&dept_v=&search_val_v=

NDC Partnership. 2020. “Climate Finance: Enabling Ambitious Climate Action.” Accessed 10 May. <https://ndcpartnership.org/sites/default/files/Understanding%20NDC%20Financing%20Needs%20Insight%20Brief.pdf>

Nishio, A. 2021. “When poverty meets climate change: A critical challenge that demands cross-cutting solutions.” Accessed 1 May. <https://blogs.worldbank.org/climatechange/when-poverty-meets->

climate-change-critical-challenge-demands-cross-cutting-solutions

Nunnenkamp, P. and Thiele, R. 2006. Targeting Aid to the Needy and Deserving: Nothing But Promises?. TWEC World Economy 29(9): 1177-1201

ODA Korea. 2021a. “(제40-1호) 2022년 국제개발협력 종합시행계획(확정액 기준)(최종).” Accessed 10 April. <https://www.odakorea.go.kr/hz.blltn2.ODACmtRsltSIPL2.do>

ODA Korea. 2021b. “그린뉴딜 ODA 추진전략.” Accessed 10 April. <https://www.odakorea.go.kr/hz.blltn2.ODACmtRsltSIPL2.do>

ODA Korea. 2022. “11개 중점협력국 대상 국가협력전략.” Accessed 10 April. <https://www.odakorea.go.kr/hz.blltn2.ODACmtRsltSIPL2.do>

ODA Korea. n.d. “10th Anniversary of Korea’s Accession to the OECD DAC” > “Korea’s Enhanced Global Standing as a Middle-power Donor Country.” Accessed 30 April. https://www.odakorea.go.kr/ODAPage_2012/eng/cate02/L01_S01_01.jsp

Odedokun, M. 2003. Economics and Politics of Official Loans versus Grants. Panoramic Issues and Empirical Evidence. UNU/WIDER Discussion Paper 2003/04. United Nations University/World Institute for Development Economics Research, Helsinki.

ODI. 2020. “Principled Aid Index 2020.” Accessed 15 April. <https://odi.org/en/insights/multimedia/principled-aid-index-2020/>

OECD. 2009. “Managing Aid: Practices of DAC Member Countries.” Accessed 12 May. <https://www.oecd.org/dac/peer-reviews/42903202.pdf>

OECD. 2011. Busan Partnership for Effective Development Co-operation: Fourth High Level Forum on Aid Effectiveness, Busan, Republic of Korea, 29 November – 1 December 2011, OECD Publishing, Paris, Accessed 10 April. <https://doi.org/10.1787/54de7baa-en>.

OECD. 2014. Revised DAC Recommendation on Untying ODA to the Least Developed Countries and Heavily Indebted Poor Countries. Accessed 1 April. <https://www.oecd.org/dac/untied-aid/Revised%20DAC%20Recommendation%20on%20Untying%20Of%20ficial%20Development%20Assistance%20to%20the%20Least%20Developed.pdf>

OECD. 2018. OECD Development Co-operation Peer Reviews: Korea 2018, OECD Development Co-operation Peer Reviews, OECD Publishing, Paris, Accessed 29 June. <https://doi.org/10.1787/9789264288829-en>.

OECD. 2019. Aligning Development Co-operation and Climate Action: The Only Way Forward, The Development Dimension, OECD Publishing, Paris, Accessed 20 April. <https://doi.org/10.1787/5099ad91-en>.

OECD. 2021a. Integrating Environmental and Climate Action into Development Co-operation: Reporting on DAC Members' High-Level Meeting Commitments, OECD Publishing, Paris, Accessed 1 April. <https://doi.org/10.1787/285905b2-en>

OECD. 2021b. Development Co-operation Profiles, OECD Publishing, Paris, Accessed 1 April. <https://doi.org/10.1787/2dcf1367-en>.

OECD. 2021c. “2020 Report on the DAC Recommendation on Untying ODA.” Accessed 18 April.

[https://one.oecd.org/document/DCD/DAC\(2020\)54/FINAL/en/pdf](https://one.oecd.org/document/DCD/DAC(2020)54/FINAL/en/pdf)

OECD. 2021d. “OECD DAC Declaration on a new approach to align development co-operation with the goals of the Paris Agreement on Climate Change.” Accessed 12 May. <https://www.oecd.org/dac/development-assistance-committee/dac-declaration-climate-change-cop26.pdf>

OECD. 2021e. “OECD DAC Rio Markers for Climate Handbook.” Accessed 13 May. https://www.oecd.org/dac/environment-development/Revised%20climate%20marker%20handbook_FINAL.pdf

OECD. 2021e. “ODA Receipts and Selected Indicators for Developing Countries and Territories.” Accessed 10 May. <https://www.oecd.org/dac/financing-sustainable-development/development-finance-data/TAB25e.xls>

OECD. 2022a. “ODA in 2021 – preliminary data.” Accessed 1 May. <https://www.oecd.org/dac/financing-sustainable-development/development-finance-data/ODA-preliminary-data-2021.xlsx>

OECD. 2022b. “Aid (ODA) tying status [DAC7b].” Accessed 10 May. <https://stats.oecd.org/Index.aspx?DataSetCode=TABLE1>

Office of the President of Korea. 2021. “Remarks by H.E. President Moon Jae-in of the Republic of Korea at the Leaders Summit on Climate.” Accessed 12 May.

https://overseas.mofa.go.kr/hk-en/brd/m_1494/view.do?seq=756739&srchFr=&srchTo=&srchWord=&srchTp=&muxlti_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1

P4G. 2021. 67 World Leaders Call For Investing In Climate Solutions For Developing Countries At 2021 P4G Seoul Summit. Accessed 20 June. <https://p4gpartnerships.org/news-events/67-world-leaders-call-investing-climate-solutions-developing-countries-2021-p4g-seoul>

Park, J. B. 2016. Toward the Green Comfort Zone: Synergy in Environmental Official Development Assistance. *Global Environmental Politics*, MIT Press, 16(4), 1–11. Accessed 13 April. https://doi.org/10.1162/glep_a_00376

Rogoff, K. S. 2003. Unlocking Growth in Africa. *Finance and Development*, 40(2), 56–57. Accessed 17 June. https://scholar.harvard.edu/files/rogoff/files/unlocking_growth.pdf

Seto, K.C., Davis, S.J., Mitchell., Stokes, E.C., Unruh, G., and Urge-Vorsatz, D. 2016. Carbon Lock-In: Types, Causes, and Policy Implications. *Annual Review of Environment and Resources* Vol. 41:425–452 (2016). Accessed 12 April. <https://doi.org/10.1146/annurev-environ-110615-085934>

Sippel, M. and Neuhoff, K. 2009. A history of conditionality: lessons for international cooperation on climate policy, *Climate Policy* 9(5): 481–494, Accessed 12 May. <http://doi.org/10.3763/cpol.2009.0634>

Smith, Josh. 2021. “S.Korea to raise emissions reduction goal to 40% by 2030.” Accessed 12 April. <https://www.reuters.com/world/asia-pacific/skorea-raise-emissions-reduction-goal-40-by-2030-2021-10-08/>

Stangarone, Troy. 2021. “What Did South Korea Promise at COP26?” Accessed 12 April. <https://thediplomat.com/2021/11/what-did-south-korea-promise-at-cop26/>

Szabo, K. 2016. “Bilateral climate-related official development assistance practice of the OECD-DAC countries and its inherent obstacles. KKI Study Series.” Accessed 15 April. https://kki.hu/assets/upload/06_KKI-Studies_ODA_Szabe_20160725.pdf.

Timperley, Jocelyn. 2021. “The broken \$100-billion promise of climate finance — and how to fix it.” Accessed 18 April. <https://www.nature.com/articles/d41586-021-02846-3>

UN. 2021. “COP26: ‘Not blah blah blah’, UN Special Envoy Carney presents watershed private sector commitment for climate finance.” Accessed 12 April. <https://news.un.org/en/story/2021/11/1104812>

UNDP. 2019. “Vulnerable developing countries lead world on climate ambition: UN report.” Accessed 12 April. <https://www.undp.org/press-releases/vulnerable-developing-countries-lead-world-climate-ambition-un-report>

UNDP. n.d. “The Effectiveness Principles.” Accessed 10 April. <https://www.effectivecooperation.org/landing-page/effectiveness-principles>

UNFCCC. 1992. “United Nations Framework Convention on Climate Change.” Accessed 20 April. https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf

UNFCCC. 1996. “Organizational Matters Adoption of the Rules of Procedure.” Accessed 12 April. https://unfccc.int/sites/default/files/resource/02_0.pdf

UNFCCC. 1998. “Kyoto Protocol to the United Nations Framework Convention on Climate Change.” Accessed 15 April. <https://unfccc.int/resource/docs/convkp/kpeng.pdf>

UNFCCC. 2009. “Decision 2/CP.15 Copenhagen Accord.” Accessed 12 April. <https://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4>

UNFCCC. 2015a. “Synthesis report on the aggregate effect of the intended nationally determined contributions.” Accessed 23 April. <https://unfccc.int/resource/docs/2015/cop21/eng/07.pdf>

UNFCCC. 2015b. “Paris Agreement.” Accessed 12 April. https://unfccc.int/sites/default/files/english_paris_agreement.pdf

UNFCCC. n.d. “What are Market and Non-Market Mechanisms?” Accessed 12 April. <https://unfccc.int/topics/what-are-market-and-non-market-mechanisms>

Venugopal, R. 2018. Ineptitude, ignorance, or intent: The social construction of failure in development. *World Development* 106 (2018) 238–247. Accessed 12 June. <https://doi.org/10.1016/j.worlddev.2018.01.013>

Verdier, D. 2008. Multilateralism, Bilateralism, and Exclusion in the Nuclear Proliferation Regime. *International Organization* 62(3): 439–476. Accessed 12 June. <http://doi.org/10.2307/40071900>

von Engelhardt, M (2018) *International Development Organizations and Fragile States: Law and Disorder*. London: Palgrave Macmillan. Accessed 12 May. ISBN: 978-3-319-62695-6

Weikmans, R. and Roberts, T. 2019. The international climate finance accounting muddle: is there hope on the horizon? *Climate and Development*, 11:2, 97–111, Accessed 12 June. DOI: 10.1080/17565529.2017.1410087

Wilcks, J., N. Pelechà Aigües and E. Bosch. 2021. "Development co-operation funding: Highlights from the complete and final 2019 ODA statistics", in *Development Co-operation Profiles*, OECD Publishing, Paris, Accessed 13 June. DOI: 10.1787/401f9a42-en.

Workley, W. 2020. "Middle-income countries at risk of dramatic increases in poverty, report finds." Accessed 1 May. <https://www.devex.com/news/middle-income-countries-at-risk-of-dramatic-increases-in-poverty-report-finds-97449>

Wu, X., Pan, An., and Fei, R. 2021. Three-dimensional heterogeneity analysis of climate aid's carbon reduction effect. *Journal of Environmental Management*, Volume 289, 2021, 112524, ISSN 0301-4797, Accessed 12 May. <https://doi.org/10.1016/j.jenvman.2021.112524>.

강희찬 and 정지원. 2016, "기후 ODA와 개도국의 온실가스 감축: 파급효과 및 결정요인 분석", *환경정책*, vol.24, no.2 pp.59-83. Accessed 12 May. Doi: <http://dx.doi.org/10.15301/jepa.2016.24.2.59>

김옥란(패널), 지유리, Jeong Hwan Bae, 2015, 'Impacts of economic growth, corruption and green ODA on climate change', *한국환경경제학회 하계학술대회논문집*, vol. 2015, no. 0, pp. 1-39. Accessed 12 June.

Appendix: List of Interviewees

Interviewee	Field	Affiliation
A	Development cooperation	International organization
B	Green development	International organization
C	Development cooperation	Implementing agency
D	Green development	International organization
E	Green development	International organization
F	Green technology	Academia
G	Development cooperation	Academia
H	Green development	International organization
I	Development cooperation	International organization

J	Development cooperation	Academia
K	Green development	International organization

Abstract

기후변화의 심각성이 갈수록 증대해지는 가운데, 온실가스 배출의 감축과 기후변화 적응의 중요성은 국제사회의 핵심 논제로 부상하고 있다. 특히 기후변화에 취약한 개도국에게 선진국은 녹색 공적개발원조(ODA)를 제공하는데, 이는 개도국의 기후변화 대응을 위한 재정적, 기술적 지원을 해줄 뿐만 아니라 선진국의 탄소중립 및 자발적 탄소감축목표 달성을 달성하는데 쓰이기도 한다. 이와 관련하여 기존 문헌은 공여국이 녹색 ODA의 제공 방법이 OECD의 개발원조위원회 공여국이 활용하는 최선책이 아닌 차선책으로 제공됨에 따라 수원국의 환경 지속가능성 및 개발효과성에 최선의 영향을 미치지 못한다고 한다. 그러나, 이를 뒷받침하는 근거와 사례 연구가 이루어져 있지 않다. 따라서, 본 논문은 녹색 ODA의 제공 방법을 심층적으로 연구하기 위해 녹색ODA의 증대 및 개발협력의 강화에 대한 의지를 보인 한국을 사례로써 연구하고자 한다. 이를 위해 한국 정책 및 ODA 이행기관들의 담론 분석을 하는 동시에 반구조화된 심층 인터뷰를 진행하는 정성적 방법론을 활용하여 한국의 녹색 ODA 제공방법이 과연 최선이 아닌 차선책으로 전달되는지 네 개의 가설을 통해 분석하고 답하고자 한다. 이를 통해 본 논문은 한국의 녹색 ODA 제공방법이 전 공여국의 녹색 ODA 제공 방법에 적용될 수 있는지 살펴볼 것이며, 이에 따른 시사점을 제공하고자 한다. 마지막으로 공여국이 녹색 ODA를 제공할 때 고려해야 할 네 가지의 정책 제언

을 제공하며 마치고자 한다.