

The Limitations of Global Environment Facility as a Financial Mechanism of the UNFCCC and Suggestions for Institutional Reform

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Abstract

Under the United Nations Framework of Convention on Climate Change (UNFCCC), developed countries are not only responsible for mitigation and adaption but also for financing and technology transfer to developing countries. The provisions on financing and technology transfer were included mainly because of historical responsibility of developed countries and lack of capacity of developing countries. In the past Conference of the Parties (COP) meetings, climate finance has gradually been emerging as one of key agendas. The emergence of climate finance in COP meetings can be explained by inevitable scientific evidence that climate change is dangerous, significant financing needs to address climate change, and diminutive financial flows and investment compared to the required cost to limit global warming. This paper attempts to prove that the short-comings in climate finance are most likely contributed by an ineffective financial mechanism of the UNFCCC, the Global Environment Facility (GEF). After analyzing the limitations of the GEF, my paper makes suggestions for institutional reform of the mechanism since it is lacking its originally intended function. Recently, among all the proposals, which called for scaled-up climate finance, the Green Climate Fund (GCF) was selected to be launched at COP-17 held in Durban. Thus, this paper will give updates on the GCF and an analysis of the GCF in terms of its coexistence with the GEF.

Keywords:

climate finance, Global Environment Facility (GEF), Green Climate Fund (GCF)

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Introduction

As climate change poses threats to our environment, countries have negotiated to address the issue for the last several decades. After agreeing on the UNFCCC (also referred to as the Convention) in 1992, countries have made continuous commitments in mitigation and adaptation in order to stop adverse effects of climate change. The developing countries, although admitting the seriousness of global warming, were worried because they did not want to be burdened with emissions made by developed countries and they were faced with more imminent national agendas such as poverty and development. Because of historical responsibility of the developed countries and the lack of capacity of developing countries, Article 4 of the UNFCCC was agreed that developed countries fund developing countries' efforts in tackling climate change.

In order to tackle climate change as a global effort, financing is crucial. Impetus for climate finance is this inevitable scientific evidence that climate change is dangerous. Moreover, many studies direct to the fact that significant financing is needed to address climate change. However, the amount of climate financing accumulated is nowhere near enough to address climate change issues in developing countries.

This paper will make an attempt to prove that the short-comings in climate finance are most likely contributed by an ineffective financial mechanism of the UNFCCC. The GEF, which is the sole operating entity for the Convention's financial mechanism, is faced with criticisms of adequacy, predictability and accessibility of funds mainly raised by developing countries. Realizing limitations of the GEF, different countries and stakeholders have proposed for institutional reform of this financial mechanism. These proposals mostly emphasize and call for balanced representation of governance so that developing countries could make their voices heard in the process of the GEF. This paper argues for the importance of such reform because, so long as the GEF remains ineffective and inefficient, international climate finance will only become more complex and disintegrated resulting in even more ineffective system.

Impetus for Climate Finance

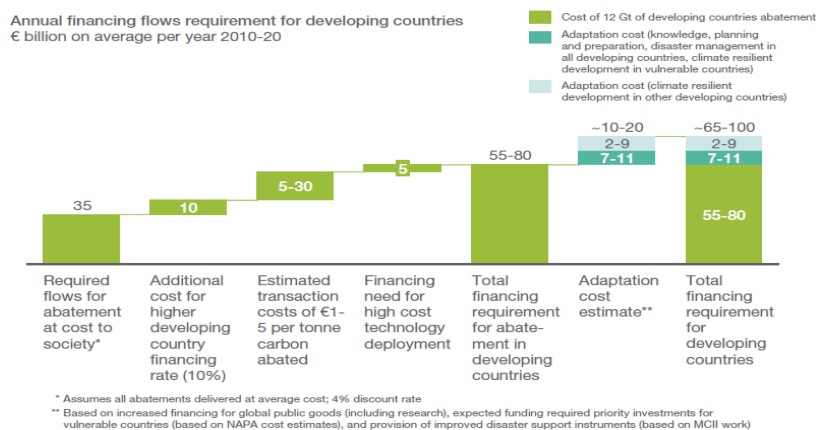
Estimations of total financial effort needed to address climate change

As finance is an important driving factor to tackle climate change both for developed and developing countries, there have been many studies attempting to estimate the total cost of addressing climate change issues. Although the methodologies are all different, which makes it hard to make comparisons, the studies all direct to the same conclusion: a substantial amount of investment is needed to address climate change issues and climate actions need to be addressed now to avoid higher costs.

The most recent and prevailing estimation of total cost to address climate change was made by McKinsey and Company by using bottom-up approach. McKinsey and Company (with the assumption of 450 parts per million (ppm) stabilization) estimated that annual incremental economic costs could be between €200 billion and €350 billion (USD 273 to 478 billion) by 2030 and this is less than 1 per cent of forecasted global GDP in 2030 (2009, 8). The total upfront investment in abatement measures needed would be €530 billion in 2020 per year or €810 billion per year in 2030 – incremental to business as usual (BAU) investments (McKinsey and Company 2009, 8).

McKinsey and Company also found that achieving 450 ppm stabilization translates into a global emissions reduction of 17 Gt CO₂ equivalent (CO₂e) compared to BAU by 2020 and 35 Gt CO₂e by 2030. Of the 17 Gt of required abatement globally, developing countries are accountable for 12 Gt while developed countries are responsible for 5 Gt. The Project Catalyst analyzed the financing needs identified for developing countries (see Figure 1). It estimated that the total financing requirement for developing countries will be €60 to €100 billion—this is further broken down into €55-80 billion for mitigation and €10-20 billion for adaptation.

Figure 1. Financing needs identified for developing countries



Source: McKinsey Global Greenhouse Gas Abatement Cost Curve v2.0; Bosetti; Carraro; Massetti; Tavoni; UNFCCC; Project Catalyst analysis; recited from Chung, Suh-Yong, Chang-In Yoon. 2009. *Asia and the Pacific Regional Round Table: Is Green Industry the Next Engine of the Growth for Asia and the Pacific*. Background Paper presented at Vienna, Austria on 8 December 2009.

Adaptation cost estimates also vary from the World Bank's estimate of USD 10 to 14 billion in 2020 to the United Nations Development Program (UNDP)'s estimate of annual adaptation investment of USD 86 billion per year in 2015 (Pendleton 2009, 13).

Overview of financial and investment flows to support climate action in developing countries

As financing issue gains more attention and concerns with the inevitable truth of the need for huge investment to tackle climate change, the global climate finance architecture has become much more complex from new actors/agents jumping in. However, the current level of financial and investment flows is nowhere near the estimated need as shown above. The World Bank defines climate finance as the resources to catalyze the climate-smart transformation of development trajectories

by covering the additional costs and risks of climate action, creating an enabling environment and building capacity in support of adaptation and mitigation as well as encouraging research, development, and deployment of new technologies (2010, 2). Funding for climate change today derives from three principal sources and levels: 1) the resources that flow through the UNFCCC and that are under the direct authority of the COP, 2) the many dedicated public-sector international funds that have been created but that are now outside of the authority or influence of the COP, and 3) the private-sector and carbon finance that now flows unregulated and often operates with little transparency, oversight, or guidance (Gomez-Echiverri 2009, 169-71).

In 2007, the UNFCCC published a technical background paper, *Investment and financial flows to address climate change*, to review existing and projected investment flows that will be necessary in 2030 to meet worldwide requirements for mitigating and adapting to climate change under difference scenarios of social and economic development (UNFCCC 2007, 5). (see Table 1, 2).

Table 1. Funding available under the Convention and its Kyoto Protocol
(millions of USD)

Sources	Amount	Timeframe	Notes
Mitigation Funds			
Pilot phase	280.6	1991–1993	
GEF 1	507.0	1994–1998	
GEF 2	667.2	1998–2002	
GEF 3	881.8	2002–2006	
GEF 4	1 030.0	2006–2010	
Already committed under GEF 4	352.0		
SCCF (Technology)	16.2	As at 7 November 2008	Total, includes pledges
Special programmes under GEF 4: Sustainable forest management/ LULUCF	154		
Investments			
CDM	8 400.0	During 2007	Market value of the expected emission reductions by CDM projects during 2007
JI	400.0	During 2007	Market value of the expected emission reductions by JI projects during 2007
Adaptation Funds			
SPA	50.0	GEF 3–GEF 4	Resources have been allocated
SCCF (Adaptation)	90.3	As at 7 November 2008	Total, includes pledges
LDCF	172.0	As at 7 November 2008	Total, includes pledges
Adaptation Fund	400 to 1 500.0	2008–2012	Estimated total
	91.3	As at 31 October 2008	Estimated current funding

Source: FCCC/CP/2006/3, FCCC/CP/2007/3, GEF 2008, *GEF Resource Allocation Framework: GEF-4 Indicative Resource Allocations for the Biodiversity and Climate Change Focal Areas Based on the Midterm Reallocation*, GEF, 2008. *Status Report on the Climate Change Funds*. GEF/LDCF/SCCF 5/Inf.2.
Abbreviations: CDM = clean development mechanism, GEF = Global Environment Facility, JI = joint implementation, LDCF = Least Developed Countries Fund, LULUCF = land use, land-use change and forestry, SCCF = Special Climate Change Fund, SPA = Strategic Priority on Adaptation under the GEF Trust Fund.
^a GEF 1 refers to the first replenishment period of the GEF Trust Fund, GEF 2 to the second replenishment period, and so on.

Source: UNFCCC. 2008. *Investment and financial flows to address climate change: an update*. UNFCCC Technical Paper.

The current funding available for mitigation under the UNFCCC is less than USD 1 billion per year, whereas almost USD 9 billion was generated by the CDM and JI in 2007 alone. The amount of funding for adaptation that will be available from current sources and the new initiatives is much smaller: less than USD 500 million per year, most of which will be provided through the Adaptation Fund (AF) (UNFCCC 2008, 92).

Table 2. Bilateral and multilateral climate-related funding initiatives (millions of USD)

Fund	Administered by	Purpose	Pledges	Deposited	Disbursed	Date operational
Bilateral						
Environmental Transformation Fund - International Window (ETF-IW)	The United Kingdom	Adaptation, Mitigation - general	1,182			2008
Hatoyama Initiative (HI)	Japan	Adaptation, Mitigation - general	15,000	5,320	5,319.89	2008
International Climate Initiative (ICI)	Germany	Adaptation, Mitigation - general, Mitigation - REDD	519.6	515.61	258.02	2008
International Forest Carbon Initiative (IFCI)	Australia	Mitigation - REDD	243.57	243.17	66.1	2007
TOTAL (Bilateral)			16,945	6,079	5,644	
Multilateral						
Amazon Fund (Fundo Amazonia) (FA)	Brazilian Development Bank (BNDES)	Adaptation, Mitigation - general, Mitigation - REDD	1,000	110	59.91	2009
Climate Investment Funds (CIF):	The World Bank		6,341			2009
Clean Technology Fund (CTF)	The World Bank	Mitigation - general	4,387.75	483.5	9.3	2008
Strategic Climate Fund (SCF)	The World Bank	Adaptation, Mitigation - general, Mitigation - REDD	2,006			2008
Forest Investment Programme (FIP)	The World Bank	Mitigation - REDD	562.1	33.9	2	2009
Scaling-Up Renewable Energy Program for Low Income Countries (SREP)	The World Bank	Mitigation - general	300.13	24	0	2009
Pilot Program for Climate Resilience (PPCR)	The World Bank	Adaptation	981.84	174.7	9.01	2008
Congo Basin Forest Fund (CBFF)	African Development Bank	Mitigation - REDD	165	165	17.42	2008
Forest Carbon Partnership Facility (FCPF)	The World Bank	Mitigation - REDD	221.24	174.44	4.41	2008
Global Climate Change Alliance (GCCA)	The European Commission	Adaptation, Mitigation - general, Mitigation - REDD	204.15	201.75	8.1	2008
Global Energy Efficiency and Renewable Energy Fund (GEEREF)	The European Commission	Mitigation - general	169.5	63.68	0	2008
MDG Achievement Fund - Environment and Climate Change thematic window (MDG)	UNDP	Adaptation, Mitigation - general	89.5	89.5	61.84	2007
UN - REDD	UNDP	Mitigation - REDD	87.1	87.1	38.19	2008
TOTAL (Multilateral)			8,277	1,608	210	
TOTAL			25,223	7,686	5,854	

Source: UNFCCC. 2008. *Investment and financial flows to address climate change: an update*. UNFCCC Technical Paper. & <http://www.climatefundsupdate.org>.

Table 2 shows that the total pledged climate funds up to current date is approximately USD 25 billion. This number is bigger than the funding from the UNFCCC (around USD 10.5 billion) but this is still only about 10 per cent of the required climate finance to tackle climate change. In Table 2, climate funds were categorized into bilateral and multilateral groups. It is worth to note that the United Kingdom, Germany, Australia and, in particular, Japan are committing significant amount of bilateral funding, which is almost half of the total multilateral funding pledged. Also, it is interesting to see while almost all climate funds began operation in 2007 and 2008, agents committed to bilateral funds have deposited and disbursed their pledged funding more quickly.

More recently, additional funding initiative was promised by the developed countries at the COP-15 in Copenhagen. In the Copenhagen Accord, there are some clear promises and numbers for both short- and long-term financial support by wealthier countries for developing countries, especially the most vulnerable, to deal with climate change (Schalatek et al. 2010, 1). The short-term finance called ‘fast-start’ financing pledging USD 10 billion per year from 2010-2012. In addition to fast start finance, the developed countries promised to jointly mobilize USD 100 billion per year by 2020. However, since the Accord is just a political statement, rather than a COP decision, there are no promises that the ‘fast-start’ finance will be able to fill the gap between the required incremental costs and current investment levels.

Limitations of the Global Environment Facility (GEF)

As the UNFCCC is the largest forum for global environment negotiations, it makes the most sense to operate a financial mechanism under the Convention for effective and efficient climate finance architecture. However, financing level to address climate change under the GEF is dismal compared to the total required costs. The limitations of the GEF can be explained by inefficiency of the UNFCCC negotiations. Also, there are internal and external reasons and factors that limit the GEF.

The Global Environment Facility (GEF)

The Global Environment Facility (GEF) was established in 1991 as a USD 1 billion pilot program in the World Bank to assist in the protection of the global environment and to promote environmental sustainable development (GEF 2010c). Then, in 1994, the GEF was restructured and moved out of the World Bank system to become an independent institution. However, the World Bank still serves as the trustee of the GEF Trust Fund and provides administrative services. The GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants (GEF 2010c).

Figure 2 shows the current institutional arrangements of the GEF. The GEF Council receives strategic guidance from the Conventions and the GEF Assembly. The GEF Council is the main governing body of the GEF, which functions as an independent board of directors, with primary responsibility for developing, adopting, and evaluating GEF programs. There are 32 constituencies (16 from developing countries, 14 from developed countries, and two from countries with transitional economies) and they meet twice each year.

Figure 2. GEF Structure and Stakeholders



Source: GEF. 2010. *GEF Structure and Stakeholders*. GEF.

The GEF operates the GEF Trust Fund, the Least Developed Countries Fund (LDCF), and the Special Climate Change Fund (SCCF). The GEF Trust Fund is the common funding resource of the GEF and climate change is one of the six focal areas supported by the GEF Trust Fund. This was created in with the establishment of the GEF in 1991 and its overall objective is to help developing countries' climate actions under the UNFCCC. At COP-7, which was held in Marrakesh in 2001, the GEF was requested to operate two new funds related to the UNFCCC and they are LDCF and SCCF. The LDCF addresses mainly adaptation issues faced by the 48 Least Developed Countries (LDCs), which are extremely vulnerable to climate change. It includes preparing and implementing National Adaptation Programmes of Action (NAPAs). The SCCF's objective is to implement long-term adaptation measures that increase the resilience of national development sectors to the impacts of climate change. (see Table 3)

Table 3. GEF Project Funding by Fund (in USD million)

FUND	PILOT PHASE	GEF-1	GEF-2	GEF-3	GEF-4	ALL PHASES
GEF Trust Fund	726	1,228	1,857	2,784	1,996	8,590
LDCF	0	0	0	6	88	95
SCCF	0	0	0	14	72	87
Total	726	1,228	1,857	2,804	2,156	8,772

Source: GEF. 2010a. *Fourth Overall Performance Study (OPS4)*. GEF.

It is evident that compared to the total amount of the GEF Trust Fund, which focuses mainly on mitigation activities, the amount of LDCF and SCCF, which addresses adaptation issues, are dismal.

Inefficiency of the UNFCCC negotiations: clear disparity between developed and developing countries

Historically, the international climate negotiations have seen endless conflicts among countries from South and North anxiously trying to safeguard what they defined

as their national interest (Watanabe et al. 2008, 139). This conflict has hampered progress on climate negotiations since the 1970s. In order to reduce the disparity between developed and developing countries, reaching into an agreement in terms of climate finance is crucial.

At Kyoto, in partial response to the observed shortcomings of the financial flows generated by the GEF, the Kyoto Protocol (KP) parties turned to market mechanisms as an additional source of money, incentives, and conditions (Werksman 2009, 193). Also, since the developed countries were burdened with legal requirement to mitigate a set amount of GHG by the Protocol, flexible mechanisms were supported strongly by the developed countries. The Kyoto flexible mechanisms include Joint Implementation (JI) defined by Article 6, the Clean Development Mechanism (CDM) for projects in non-Annex I countries established by Article 12, and emissions trading scheme (ETS) among Annex B countries under Article 17. These flexible mechanisms were to provide opportunities for Annex I parties to fulfill their commitments in a flexible, cost-effective way (Vlachou et al. 2010, 35). Because the flexibility allows for considerable degrees of freedom over compliance strategies and cost-efficiency relates to profits for polluting entities, flexible mechanisms have been advocated by large GHG emitters even before the Kyoto negotiations. The starting point of Kyoto flexible mechanisms is quite different from that of the GEF. Although they both are mechanisms under the provision of the COP, while the GEF was created by taking the developing countries' concern over equity and fairness issue into account, the Kyoto flexible mechanisms held the hand of developed countries that wanted to minimize their historical responsibility by considering pollution as economic property that can be allocated efficiently to maximize profits. In response to this, the AF was established under the KP, which funds adaptation projects in developing countries. Unlike the other funds, which rely exclusively on donor country pledges, the AF draws most of its revenue from a 2 per cent levy on CDM projects (Rastogi 2010, 2). Since the developing countries were extremely dissatisfied with the level of commitment made by the developed countries and significant governance and implementation problem of the GEF, they agreed on the institutional arrangements of the AF; they decided to establish the Adaptation Fund Board (AFB) as an operating entity, mainly comprised of developing countries.

The COP-15 in Copenhagen originally had a purpose of ultimately creating a comprehensive, legally-binding international treaty to replace the KP when it expires in 2012. However, this purpose was not achieved mainly because of the disparity between the developed and developing countries on the issues of climate finance, targets for emissions reduction, the threshold at which to limit average global temperature increase, and the introduction of a brand new treaty, or upgrade of the existing KP (Climatico 2010, 4). Developed countries were hesitant to take ambitious targets and promise sufficient public finance while developing countries were faced with internal disputes. This meeting could have collapsed completely if it was not for the Copenhagen Accord, which was drawn up at the last minute by a small group of 28 countries. The Accord promised fast start finance and long-term finance. Although this initiative could secure more fund, which could fill the gap between the current financing level and the total cost of climate actions, the role of the GEF will inevitably be reduced.

As shown in Figure 2, the GEF receives strategic guidance from the Conventions and the GEF Assembly. In other words, the Convention's inefficiency has strong influence on the operating body of the GEF.

Internal Problems of the GEF

The financial mechanism of the UNFCCC has limitations in that it failed to secure sufficient climate funds to address climate change. However, the debate over financial resources is not only about the amount of money, but also about the GEF, the mechanism itself (Hunter 2009, 262).

a. Thematic balance issue

The term 'thematic balance' was taken from Müller's study on the debate on institutional arrangements for climate finance. Climate finance involves a number of different themes (mitigation, adaptation, technology transfer, etc.), and the issue of 'thematic balance' relates to whether each of these themes receives an appropriate share of the revenue (Müller 2009, 2). The GEF, as shown in Table 3, financing contributed

to adaptation activities only account for 2.1 per cent of the total GEF funds with a focus on climate change. The imperative for developing countries to adapt (rather than mitigate) strengthens every day as efforts to mitigate by developed countries falter (Ghosh et al. 2009, 158-59). Moreover, without sufficient financing, any commitment to curb GHG emissions would limit the ability of developing countries to increase their energy supply, a central part of their efforts to reduce poverty (Ghosh et al. 2009, 158). Therefore, importance of financing for energy infrastructure to alleviate poverty is imminent. In other words, in order to accomplish this, financing substantial technology transfer needs to take place.

b. Governance issue

Just like in the AFB issue, clear disparity between developed and developing countries on the governance of climate finance exist. Currently, the GEF is the sole, primary financial mechanism under the UNFCCC but the question of whether it conducts fair governance is constantly raised by developing countries. The effectiveness of the GEF is also questioned by the World Bank actively taking part in climate finance as the largest public financiers of projects that contribute to climate change. Compared to the World Bank though, the GEF offers an arguably more democratic structure based on double-majority voting, but the GEF's effectiveness and independence in delivering aid has been questioned by developing countries (Hunter 2009, 262-63). While developed countries are satisfied by the GEF because it proved to work well in assisting developing countries to reduce ozone depleting substances under the Montreal Protocol, developing countries prefer the AFB model because of its balanced representation. Therefore, the creation of an independent financial mechanism with balanced representation may be the key comprise necessary to ensure fuller participation by developing countries (Hunter 2009, 263). This conflict between developed countries that are unwilling to give large sums of money to institutions over which they lack control and developing countries that want to avoid donor-controlled governance structure has even led to the World Bank's recent innovation—Climate Investment Funds (CIFs)—run by committees with balanced representation between recipient and donor countries. Moreover, new bilateral and multilateral funds

established outside of the governance of the UNFCCC involved potential recipient countries in their design phase.

c. Conditionality issue

Almost all financial transfers made to address climate change are attached with conditionalities imposed by contributor or lending institutions on recipient countries. Conditionalities are thought to be particularly important in the context of global environmental agreements, where scarce financial resources must promote global public goods—such as protecting biodiversity, the ozone layer, and the climate system—that may not be policy priorities for the recipient countries (Werksman 2009, 190). While conditioning access to funds is designed to ensure that the money buys results, it can lead to resentment and a lack of ownership by recipient countries (Werksman 2009, 190). The issue of conditionality becomes very sensitive in the climate negotiations because of historical responsibility, additionality, and common but differentiated responsibility principles. Especially, in terms of historical responsibility, climate finance, from the perspective of developing countries, could be seen as a form of compensation for the damage done to the climate by more than a century of developed country historical emissions (Werksman 2009, 190). However, developing countries are steadily contributing to the global warming from development as well, which implies that developing countries are and will also be accountable for climate change. Therefore, while the South can with some legitimacy demand financial support for reducing emissions, the North and the international community as a whole can legitimately demand a return on this investment (Werksman 2009, 190).

While the governance of the GEF becomes more donor-controlled, the conditionalities attached to climate funds cannot avoid strongly biased input from the developed countries with no consideration of recipient countries. However, such coercive conditionalities are profoundly disempowering for developing countries, as they are placed in the position of recipient required to perform against an imposed set of standards (Werksman 2009, 195). Realizing this, in a meeting held in June, 2010, the Council approved major reforms designed to give developing countries and stakeholders more control and access to funds. Among the reforms approved by

Council are: ¹⁾ direct access to GEF resources for recipient countries looking to meet various UN convention requirements; streamlined GEF project cycle and a move to a more refined and strategic programmatic investment approach; and reformed GEF's Country Support Program with \$26 million in funding (Climate Funds Update 2010a). It is important that the UNFCCC focus on promoting good governance within recipient countries by making agreed conditions for climate finance.

d. Complexity issue

Group of 77 (G77) and China expressed their concerns about a communication gap between the GEF and the parties, which prevented the GEF from grasping the needs of developing countries (Watanabe et al. 2008, 10). Moreover, G77 and China criticized the complexity resulting from the necessity of calculating “incremental cost”¹⁾ and claimed that it was an obstacle to timely access to GEF funds (Watanabe et al. 2008, 10). Responding to difficulties experienced by developing countries with the incremental cost principle, the GEF Council approved the “Operational guidelines for the application of the incremental cost principle”, which provide a simple five-step process for determining the incremental costs of a GEF project (UNFCCC 2008, 96). This somewhat solves the problem of methodological consensus but there still is a problem of political gaming. When incremental cost becomes a basis for transfer payments from one group to another, the technical challenges may become an occasion for political gaming (King 2006, 377). For example, one could be maximizing the likelihood of project selection by arguing that the project requires extra cost and thus warrants being considered for a transfer payment (King 2006, 378).

The overall length of the GEF project cycle is another issue that adds complexity and inefficiency to the operation of the GEF. In late 2006, an average length of a project cycle between entry of a concept into the pipeline and project initiation was 66 months. This is long enough for major changes to occur in the recipient country that could have a serious impact on the project's success (Porter et al. 2008, 18). Especially in LDCs

1) The GEF has defined incremental costs as the difference between the full costs of the measures taken and the sum of the costs of the least expensive way to deliver an equivalent economic benefit plus the short-term benefits to the local economy (baseline) that would result from the proposed measure. GEF, Implementing the FCCC, Incremental Costs and the Role of the GEF. Working Paper 4, 1993, p.31.

where economic and political environment is unstable, a long project cycle is unhelpful. In order to improve the length of the project cycle, the GEF Council approved a revised project cycle for implementation beginning in July of 2007. The GEF has established a target for elapsed time in the project cycle not to exceed 22 months by introducing expedited and simplified procedures. Furthermore, the number of work programs for Council approval has been increased from four to twelve annually to process more projects (Porter et al. 2008, 18). However, this is still considered as long in the perspective of the developing countries.

The GEF funds are allocated using different allocating frameworks. Allocation of adaptation funds under the SCCF takes geographical and sectoral balance into consideration whereas adaptation funds under the LDCF are allocated by aiming for equitable access of LDCs. In 2005, the GEF Council adopted the Resources Allocation Framework (RAF) for the provision of funding from the GEF Trust Fund. The RAF is a system for allocating GEF resources to recipient countries based on each country's capacity, policies and practices for successfully implementing GEF projects, as well as the particular project's potential to generate global environmental benefits (UNFCCC 2008, 96). This RAF was criticized by the developing countries because of its complex design and rules failing to make the RAF transparent or accessible. Further, unclear guidelines for the "group allocation system²⁾" limited access for countries with a group allocation in the first period of the RAF. As a response to this, the GEF Council agreed to reallocate unused funds for the remainder of GEF-4 and to improve RAF design and indices for GEF-5 (UNFCCC 2008, 96).

External factors that limit the GEF

The inadequacy of the current arrangements of the financial mechanism of the UNFCCC has given rise to a fragmented, complex, and inefficient system of finance for climate change and implementation of the Convention (Gomez-Echeverri 2009, 154). In other words, the current global climate finance architecture consists of many new actors that act as better public financiers than the GEF and that each have funds

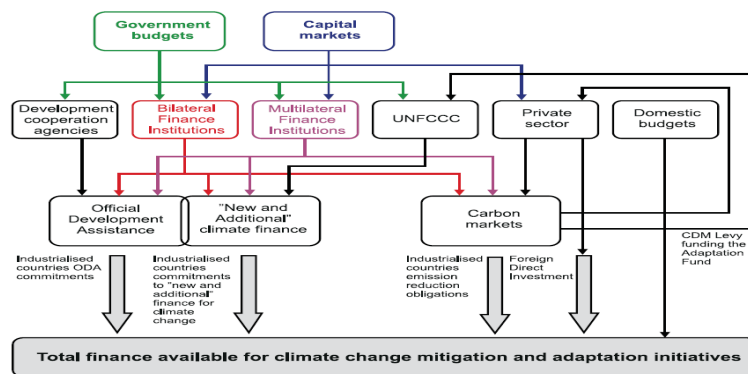
2) "Group allocation" refers to a pool of funds accessible by a group of countries with no fixed allocation per country.

with different conditionalities and governance. Although it could be considered as good by new and additional bilateral and multilateral funds being committed to address climate change, this kind of architecture not only creates problems for itself but also limits the function of the financial mechanism of the UNFCCC. As to the future of the GEF, much will depend on how it reacts to this new financial landscape (Porter et al. 2008, 9).

a. Multiplicity issue

Traditionally, much of financing to developing countries were in the form of official development assistance (ODA) administered by multilateral development institutions. However, as new players enter into climate finance, the types and sources of financial flows have become extremely broad and include both new instruments to address climate change as well as shifts in core development and investment finance toward low-carbon and climate-resilient solutions (World Bank 2010, 1).

Figure 3. Financial flows for climate change mitigation and adaptation in developing countries



Note: The UNFCCC mechanisms include the various funds under the Global Environment Facility as well as the Adaptation Fund.

Source: Atteridge et al. 2009. *Bilateral Finance Institutions and Climate Change: A Mapping of Climate Portfolios*. Stockholm: Stockholm Environment Institute.

Figure 3 shows the complexity of these flows highlighting the diversity of sources, channels, and types of flow. Two major sources of investment come from government budgets and capital markets. Government budgets are channeled through public and international entities and are contributed to climate change mitigation and adaptation initiatives mostly in the forms of ODA and “new and additional” climate finance. On the private sector side, most of investment from capital market gets contributed to carbon markets. It is interesting to see how this trend is changed by bilateral and multilateral finance institutions expanding their roles both at the receiving and distributing ends. They receive both public and private investment and make contribution all to ODA, “new and additional” climate finance and the market mechanism. Contrary to this phenomenon, the role of the UNFCCC seems limited from the figure. Although the financial mechanism of the UNFCCC was originally created to make developed countries to commit “new and additional” climate finance, its role is becoming more unclear as bilateral and multilateral finance institutions make parallel contributions to this “new and additional” climate finance. On the other hand, whether the pledged financial resources from bilateral and multilateral institutions will be additional to existing official development assistance (ODA) commitments is another issue. Currently, most climate funds in operation are classified as ODA effort except for Hatoyama Initiative.

Three new World Bank-managed funds—Clean Technology Fund (CTF), Strategic Climate Fund (SCF), and Forest Carbon Partnership Facility (FCPF)—initiated in 2008 mirror similar funding schemes managed by the GEF and therefore raise the prospect of duplication of effort (Porter et al. 2008, 8). The CTF overlaps with the GEF’s existing funding for the elimination of barriers to energy-efficient and renewable technologies. This kind of multiplicity results in inefficiency because there are two separate entities making efforts in the same focal area while one could be making efforts elsewhere. Thus, the role of the financial mechanism of the UNFCCC is limited from ever-increasing multiplicity issue.

b. Diversification issue

The new funding entrants will only intensify the lack of cohesion and dysfunction among the climate funding mechanisms. Policy coherence is badly needed among the new funds and between the globally agreed priorities on climate change and relevant national policy frameworks (Porter et al. 2008, 9). Also, the bilateral and multilateral institutions initiating the new funds act as independent implementing bodies for their funds. This implies that the financial mechanism under the UNFCCC gets to lose its power as the trusted entity to implement the Convention. Since there is limited amount of capital that can be invested in climate-resilient funds, more diversification of funds and actors means diversion of funds that could be controlled by the GEF.

c. Launch of the Green Climate Fund (GCF)

In order to fulfill the Copenhagen financial pledges, an agreement to establish the Green Climate Fund (GCF) was decided at COP-16 in Cancun. This issue has been dealt under the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA). After numerous inter-COP meetings, the GCF was officially launched at COP-17 in Durban. The GCF will act as an operating entity of the financial mechanism “under the guidance of” the UNFCCC. A similar model was applied to the structure of the GEF, which has its own Council and operating guidelines. Also, unlike much (close to 80%) of climate finance delivered not only by the GEF but also by the other multilateral banks is for mitigation, the GCF will have a balanced allocation between adaptation and mitigation funding, or even “disproportional allocation” favoring adaptation finance in the GCF. This implies that the GEF is exposed to the danger of being replaced by the GCF for the reasons of identity and the issue of thematic balance. In the U.S. Congressional Research paper, it is predicted that the GCF would complement, or perhaps replace, many of the existing multilateral climate change funds (e.g., the GEF, the CIFs, the AF), and become the official financial mechanism of the UNFCCC (Lattanzio. 2011, 1). According to the decision of the GCF, a significant share of any new multilateral funding for adaptation is to flow through the GCF. One study showed that once the GCF becomes operational, it will pose a significant threat to the continued existence of the GEF climate change focal

area due to competition for donor funding and overlap of activities (Cutter, 2011).

Under the Convention, the Standing Committee was formed to provide advice and recommendations to the COP on the functioning of the Convention's financial mechanism. One of their roles is to provide recommendations to the COP on the coherence, effectiveness, and efficiency of the GEF and the GCF, the two operating entities of the financial mechanism of the Convention. Whether the role of the Standing Committee will be carried out effectively is a question. If the GEF and GCF could coexist effectively, then this would also imply that a fragmented and disintegrated international climate finance architecture could be re-organized under the Convention. However, if not, then it would be just as if another instrument was added to an already disintegrated international climate finance architecture. Regardless of the successfulness of the two operating entities' coexistence under the Convention, it is almost certain that the GEF's role would be significantly minimized.

Suggestions for Institutional Reform of the GEF

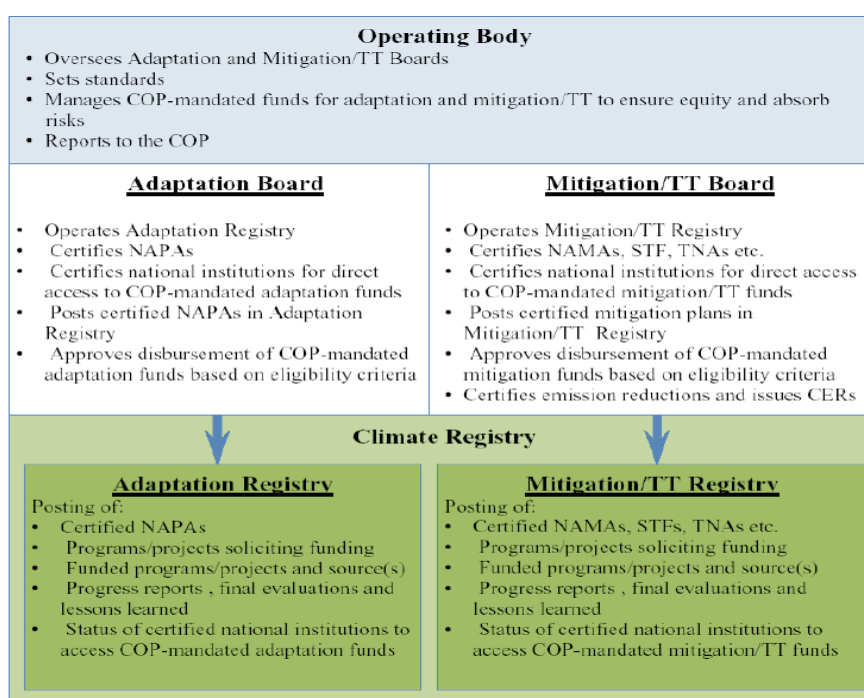
The complex issues of global climate finance cannot be resolved in a single agreement or a single forum; they will continue to demand fresh insights and creative approaches (Stewart et al. 2009, 3-4). Recognizing the limitations of the GEF as the financial mechanism of the UNFCCC, it is agreed both by the developed and developing countries that reform is necessary.

The current debate on climate finance on the issue of how institutional arrangements can be made is between the two camps: the coordination camp and the consolidation camp. The coordination camp, mainly supported by developed countries, believes that what is needed is enhanced coordination through existing institutions. On the other hand, the consolidation camp believe that coordination through existing institutions will not remedy current shortcomings, and that what is needed instead is a consolidation of funding under the UNFCCC financial mechanism, managed by a new operating entity. Most developing countries are part of the consolidation camp.

Japan belongs to coordination camp. In the United Nations Summit on Climate Change, the Japanese Prime Minister Yukio Hatoyama called for establishing "an

international system ... under the auspices of the UN climate change regime. This system should facilitate one-stop provision of information on and matching of available bilateral and multilateral financing, while securing transparency and effective utilization of assistance” (Müller 2010, 5). Hatoyama’s ‘one-stop information exchange and matchmaking’ system could be well explained by the study done by Reed and the others. The system is called the Climate Registry Model (Table 4).

Table 4. The Climate Registry Model



Source: Reed et al. 2009. The Institutional Architecture for Financing a Global Climate Deal: An Options Paper. US Climate Network. Available at www.usclimatenetwork.org/resource-database

Under an operating body, there are two boards, Adaptation Board and Mitigation/Technology Transfer (TT) Board. These two boards are responsible for operating the

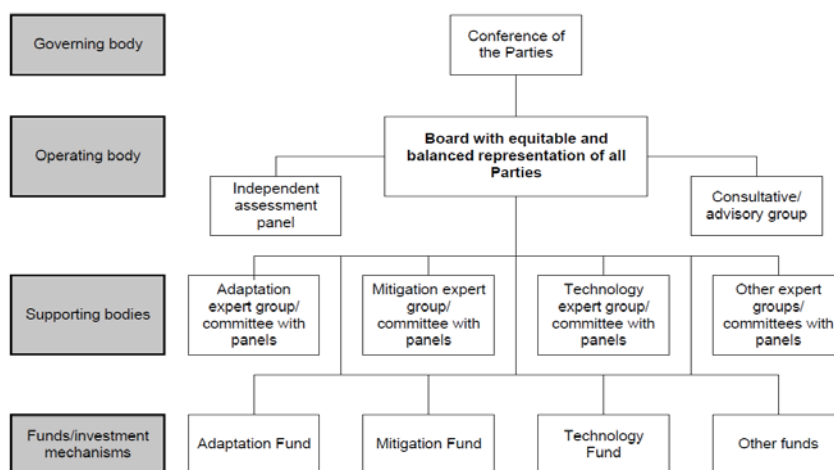
corresponding registries. This system is proposed to avoid a creation of new institutions and fully utilize the AFB, which is currently in operation. For Mitigation/TT Board, countries could either reform the CDM Executive Board and the GEF (Müller 2010, 6). This would allow for a balanced representation in the operating body of the Convention. Also, this kind of public pooling and sharing of information will increase transparency and access to funds. Further, thematic balance could be achieved because there is a whole separate Adaptation Board to allow the voices of developing countries heard.

However, the reality is that there are comparably more proposals and ideas from the consolidation camp rather than from coordination camp. There are proposals such as:

- G77 and China's proposal
- Mexico's Multilateral Climate Change Fund (MCCF)
- Switzerland's world carbon tax proposal
- Tuvalu's burden sharing mechanism on international air and maritime transport
- International Maritime Organization (IMO)'s International Maritime Emissions Reduction Scheme (IMERS)
- EU's Global Climate Financing Mechanism (GCFM)

These are all new institutional arrangements outside the governance of the Convention except for G77 and China's proposal. Proposals such as Switzerland's world carbon tax, Tuvalu's burden sharing mechanism on international air and maritime transport and IMO's IMERS are highly unlikely to be implemented because although they meet all six criteria mentioned above, they will be faced with strong objections from developed countries. The G77 and China has called for the operationalization of an effective financial mechanism that would be under the supreme authority and guidance of, and be fully accountable to, the COP (UNFCCC 2008, 100).

Figure 4. Institutional arrangements reflecting the Group of 77 and China proposal to provide overall financial resources under the Convention



Source: UNFCCC. 2008. *Investment and financial flows to address climate change: an update*. UNFCCC Technical Paper.

As shown in Figure 4, the G77 and China suggested for a board with equitable and balanced representation of all parties, just like the AFB. The G77 and China that are part of the consolidation group proposed a new financial mechanism under the UNFCCC. The consolidated, centralized, and retained system is evident in Figure 4 and this can be explained by the G77 and China puts lots of emphasis on the principle of equity and well-balanced thematic balance. In Bali, China states that “strategies and mechanisms for adapting to climate change shall be developed to support adoption actions in developing countries and associate financing, technology and capacity building shall be provided. ... Sufficient financing shall be provided by provided by developed countries to address climate change. In addition to existing ODA, developed countries shall annually provide financial support of no less than 0.5 per cent of their total GDP to support actions by developing countries to address climate change in developing countries (Müller 2008, 10).” This measure would produce annual revenues

of USD 185 billion, USD 46 billion of which could go for adaptation (Müller 2008, 10). Nevertheless, given that the majority of the developed countries have not yet come up with the UN-recommended contribution of 0.7 per cent of their GDP for ODA, it appears unlikely that this proposal will be adopted (Drouet 2009, 23).

More than anything, climate change funding for developing countries is fundamentally different from other type of development related funding (Müller 2008, 28). Because of historical responsibility, developing countries believe that they are entitled to costs of mitigation and adaptation, which are considered as debts by the developed countries for having largely created the problem in the first place (Müller 2008, 28). Since the GEF could not serve this role effectively due to its donor-dominant governance, developing countries created the AFB. And the governance of the AFB represents a milestone in the evolution of international funding mechanisms, as for the first time developing countries have taken genuine ownership of such an instrument (Müller 2008, 28). Reflecting from this, it would be better to abandon the GEF and choose the G77 and China proposal of institutional arrangement making equal and balanced representation of governance. However, since this proposal demands developed countries' national contribution, the G77 and China will have to face strong objections and stall in the process of implementation. Also, the GEF has been the sole, operating entity for the Convention for the last 16 years. Although it has significant flaws and limitations at the current stage, the GEF has gained learning experience from the operation with the COP and there will be no other institution that could replace it completely. Moreover, regarding climate finance, it is significant that the funds are in tandem with the decisions made in the COP. There are many project-based funds that are not in correspondence with the UNFCCC efforts. This will only bring more complexity in the international climate finance architecture. Therefore, the first option pushed by Japan that belongs in the coordination camp will be more feasible.

However, with the launch of the GCF, it could be concluded that the proposal of the G77 and China was mostly taken into account. First, governance issue has been accounted for because the 24-member GCF Board will have balanced representation from developing and developed countries. Also, representation from the LDCs and SIDS is required by the Cancun Agreements. Secondly, the G77 and China called

for an effective financial mechanism that would be under the supreme authority and guidance of, and be fully accountable to, the COP. The GCF is “under the guidance of” the UNFCCC. This is different from the AF, which is “under the authority of” the Convention. Since the GCF is in a loose relationship between the Convention, it could be criticized for its lack of accountability to the COP just like the GEF. However, having a balanced Board, this problem could be avoided. Lastly, the GCF will have thematic funding windows initially starting with mitigation and adaptation and adding capacity-building, technology development and etc. The GCF will balance the allocation of resources between adaptation and mitigation activities.

Conclusion

Climate change is not a myth anymore. As the world realizes this very fact, more pressure is given to the UNFCCC to address climate change. However, over the last four decades of international climate change negotiations, it was evident that the UNFCCC has become a highly politicized meeting where serious disparity between developed and developing countries was hindering any meaningful output. Of many topics that are being debated, negotiations on climate finance is at its deadlock because of the clear disparity. Because of historical responsibility, climate finance is thought of as sure entitlement of debts—for emissions that was caused by industrialized countries—for developing countries. However, climate finance is very crucial in addressing global warming because it gives incentives for developing countries to commit to climate actions, thus, being able to achieve a global collective action.

Amidst of all this, current level of financial flows and investment was found to be significantly small compared to the total estimated cost of addressing climate change. Especially, climate financing committed by the GEF was even more dismal compared to other financial mechanisms such as CDM, JI, ETS and other bilateral and multilateral funds. So, this paper examined the GEF and identified its limitations.

The GEF was and still is constantly being debated between the developed and developing countries mainly for the governance. Due to the disparity between developed and developing countries, when the GEF became donor-dominant,

developing countries rejected to this kind of governance system of the institution. They were primarily concerned with the fact that they were not well represented in the GEF while they were the recipient countries of the funds. Except for the AF, all three of GEF's funds were dedicated to mitigation efforts. Also, conditionalities attached to the funds were mostly fit to donors' preference rather than recipients' needs significantly limiting access to funds. Moreover, the operational inefficiencies of the GEF itself such as transparency, incremental cost calculation, and overall length of the GEF project cycle were highlight by developing countries. Frustrated with the GEF's limitations, the developing countries created the AFB, which has a balanced representation of governance. In the paper, it was also found that it was not just the GEF's governance issue that limited the GEF's role, but also the external factors that limit the GEF. As more actors and funds are entering the international climate finance landscape, the GEF is exposed to multiplicity and diversity problem.

Although the GEF contained a lot of deficiencies and limitations, this paper argued that it should not be completely replaced by a new institution. Assessing institutional arrangements proposed by different countries using these criteria, two could be highlighted: proposals from: Japan and G77 + China. This paper chose the proposal from Japan being a more realistic and feasible option while minimizing conflict between developed and developing countries at this stage.

However, the GCF mostly takes account of the proposal from the G77 and China. This could be explained that the voices of developing countries who are recipients of climate finance have been realized. In order to tackle climate change, it is important that both developed and developing countries cooperate and finance issue, which was at the core of divergence and conflict between developed and developing countries, has gained a positive momentum with the launch of the GCF. It is interesting that, despite the existence of the GEF, the GCF was established to coexist with the GEF. A further study on this could be enlightening.

In order to scale up climate finance, it is not just the GEF that needs to be reformed. There are flexible mechanisms such as CDM, JI and ETS, which could be fully exploited to raise more funds. Also, there are experienced multilateral financial institutions that are coming up with climate initiatives. Further, there is a

potentially huge capital that would want to invest in climate actions. All these sources and mechanisms should be tapped into and exploited. However, it is important to realize that climate finance is different from development projects. Unlike ODAs, climate finance corresponding to the efforts of the UNFCCC would have much more environmental impact in developing countries. Therefore, it is necessary to fix the mess within the UNFCCC before encouraging new entrants into the international climate finance architecture. In other words, the GEF should undertake institutional reform to be able to fully and positively contribute to the overall international climate financing efforts.

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