

Paper

Governance of Climate Change Finance: Fragmentation and Institutional Complementarities

Author: Roman Vakulchuk

Content

Abstract.....	3
1. Introduction: Institutions and Climate Change.....	4-6
2. Definition of Institutional Complementarities.....	6-8
3. Theoretical Framework.....	8-10
3.1. Climate Change Governance and Institutions.....	8-9
3.2. Climate Change Finance.....	9-10
4. Institutional Complementarities in Climate Change Finance.....	11-17
4.1. Allocation of Funds in the Developing World.....	11-13
4.2. Institutional Fragmentation.....	13-16
4.3. Monitoring Problems in Climate Change Finance.....	16-17
5. Conclusion.....	17-18
List of References.....	19-21

Abstract

The emerging global environmental regime undergoes today significant transformation in terms of adaptation to the new 'rules of the game' set by the multitude of actors. The regime has to constantly adapt to environmental regulations and the needs of new climate change institutions. Along with institutions, environmental policies of various actors change too. Therefore, the transition character of global climate change regime allows arguing that until the transition comes to an end, there will hardly be high level of complementarities between climate change institutions.

Today the existing gaps in coordination and cooperation between various climate change institutions at different levels lead to higher institutional inefficiencies. For instance, the main problems which lead to low institutional complementarities of the global climate change finance are the collective action and the policy coordination problems. Moreover, climate change finance is very fragmented today. Even though, climate finance, due to the little progress made in Copenhagen in 2009, can be considered to be relatively more advanced than any other dimension of environmental governance, still the climate finance regime is very fragmented at the moment. First, there is a multitude of financial flows coming from public and private, international and domestic sources, which is hard to track and numerous overlapping initiatives to generate international public funding for climate change already exist. Secondly, information on underlying finance and foreign direct investment into climate change projects is not fully available as a separating line between climate- and development-related finance is often blurred. Thirdly, an extremely challenging issue is how to improve the monitoring procedure over financial flows at the global scale. Fourthly, the proposed trajectory of increase in international public finance poses a big challenge for the future as today it is not clear how it can be realized and how the pledged funds will be disbursed. Fifthly, it is very hard to control and coordinate the policies of climate change funds in a way which would lead to improved collective action to combat climate change at the global scale.

The paper explores different conceptions of how the abovementioned problems can be resolved and how an emerging climate change regime might evolve to increase efficiency of climate change finance institutions. In the paper institutions of climate change finance are scrutinized touching upon three levels of governance: global, regional and national. Based upon this analysis, recommendations to achieve higher complementarities between different climate change finance institutions at different levels are elaborated. These recommendations relate to the solution of collective action and policy coordination problems, which have so far 'contributed' to high fragmentation of global climate change governance, including the climate change finance regime.

“Until more is known and done about institutions, governance and service activity in relation to climate change, much of the remedial action taken in various arenas is likely to remain piecemeal and, thus, far short of the effective collective action so definitely and urgently required on a global scale.”
Ian Thynne, Charles Darwin University, Australia

1 Introduction: Institutions and Climate Change

Until today a number of attempts were made in order to attract attention by various epistemic communities to the issue of climate change. Economic, political, social, scientific consequences of climate change have been frequently debated and discussed at various levels. However, until now the role of institutions within the global climate change regime has attracted much less attention, which in many instances seems so vital for the development of effective global climate change governance. As rightly put by (Thynne 2008, 327) the science and economics of climate change have been examined extensively, but institutions and climate change governance have been less investigated. However, institutions should be considered the crucial elements for attaining effectively functioning climate change governance. Indeed, institutions are purposeful centrepieces of governance and they are responsible for governing, while themselves being governed - as elements of ‘governing as governance’ (Kooiman 2003; Thynne 2008, 328). No doubt institutions are important for global environmental governance. However, depending on the way institutions are governed two different outcomes can be expected. On the one hand, if institutions are governed poorly, they can impose constraints on effective governance and policy coordination of climate change actors. On the other hand, if governed successfully, institutions may instigate the emergence of effective governance at the global scale. Here, success, or the lack thereof, will largely depend on to what extent the problem of collective action is solved.

Today institutions within the emerging global climate change regime undergo significant transformation in terms of adaptation to the new ‘rules of the game’. Along with institutions, environmental policies of various actors change too. Therefore, the transition character of global climate change regime allows arguing that until the transition comes to an end, there will hardly be high level of complementarities, in other words efficiency, between climate change institutions. The answer is that institutional complementarity needs institutional stability which transition fails to provide. Under the conditions of transition the main problems which put an

obstacle for high institutional complementarities and effectively functioning global climate change regime are collective action problem and weak policy coordination at all levels of global governance. Indeed, climate change presents the greatest collective action problem the international community has yet confronted (Cole 2009; Sim 2010). Moreover, unresolved collective action problems explain the notorious flaws in the Kyoto Protocol, and continue to impede efforts to replace or improve the Protocol. Policy recommendations and negotiating strategies that ignore those collective action problems are likely to prove ineffective (Cole 2009). The possible solution to collective problem of climate change is seen in the form of collective democratic intervention (Cook 2004). Though, clear understanding of how to deal with the problem within non-democratic setting has been missing until today. It leads us to two considerations.

First, if we want to increase efficiency and effectiveness of climate change institutions, which would thus contribute to resolving the collective action problem at the global scale, we would need to make sure that democratic regimes are set across all the nations. However, at the same time, it is important to emphasize here that even democracies due to their structural conditions may also fail to tackle global collective action problems, including climate change. Short-termism, self-referring decision-making, interest group concentration, and weak multilateralism prevent contemporary democracies from effectively combating of climate change (Held and Hervey 2009, 5). Therefore, more coercive forms of government would better serve the goal (ibid). However, until today it is hard to say which form of democracy, be that less or more coercive, will be successful in tackling climate change. It may even also be that a new type of democracy is required for that purpose, but then no clear answer exists on how it should look like.

Second, institutions have to be modified and structured in a way as to be able to be universally applied to resolve collective action problem within the climate change regime. Universal institutions can hardly be created, and so, none of the approaches seems feasible in the short-run perspective. As for the first one, the idea to make all countries shift to democratic governance in the short-run is seen utopian. Regarding the second way, it is important to stress that climate change as a problem constantly undergoes change, and thus, it modifies its possible implications on different dimensions of global governance with unclear long-term consequences it may create. Institutions are thus ‘victims’ of the constantly changing environment, which often

sets different goals and incentives for them to follow. As a result, interaction between the climate change institutions is often flawed and leads to low complementarities at all levels of governance.

Today climate change institutions face many challenges. First, they have to constantly accommodate various stakeholders (Lane 2005; Thynne 2008, 330). Second, they have to respond currently to the various challenges the changing environment constantly poses. For instance, the Kyoto Protocol, along with other international protocols, conventions and treaties, as well as national legislation and policies, are framing responses by elaborating and setting various rules and standards. These responses are presented in the form of the enforcement of environmental regulations, the adoption of environmentally friendly production processes, the operation of emissions trading schemes based on allocated or purchased permits, and the trading in carbon reduction as well as many other measures (Thynne 2008, 330). Most of these responses need to be aimed at fostering effective collective action on a global scale.

Having numerous challenges climate change institutions face at the global level, it is necessary to try to measure how complementary they are to each other at the moment in order to see towards which direction institutions should move and how they should be reformed. This paper does a modest contribution to exploring institutional complementarities within global climate change governance. Institutions of climate change finance are analyzed, covering also various levels of governance. Recommendations to achieve higher complementarities between different climate change finance institutions at different levels of governance are provided. These recommendations relate to the solution of collective action and policy coordination problems.

2 Definition of Institutional Complementarities

There are reasons to expect interaction effects among institutions across spheres of the global climate change regime. Following the concept of complementarities of Hall and Soskice (2001) within the Varieties of Capitalism approach, complementarity means the situation when the presence (efficiency) of one institution increases efficiency of the other, and vice versa. In the concept, institutional complementarity principle implies that nations cluster into identifiable groups based on the extent to which firms rely on market or strategic modes of coordination and that complementarities can exist between the institutions in different spheres of the political economy (Hall and Gingerich 2001, 6). The key assumption of the theory is that the coordination

mechanism is crucial for understanding how efficiently different institutions govern and ‘being governed’. Applying it to new emerging institutions within the climate change regime, one can argue that existing gaps in coordination and cooperation between various institutions at different levels lead to higher inefficiencies of these institutions.

Until today attempts to measure institutional efficiency within climate change finance have been scarce. The WALFA project in Australia within the bounds of the carbon financing operations of the World Bank is one of the examples of institutional complementarity (World Bank 2008). The main target of the project is to mitigate the extent and severity of natural savannah blazes by deploying traditional indigenous fire management techniques. The project is expected initially to generate at least one million tonnes worth of carbon credit sales annually, creating over 200 new jobs in traditional Northern Australia Indigenous communities (Med News, 2009; UNU-IAS, 2009). On this example, we see that cooperation between climate change institutions can be successfully fostered by a third party facilitator. This example also demonstrates how important it is sometimes to combine formal institutional practices and rules (World Bank operations) with informal ones (traditional indigenous fire management techniques).

It is plausible to posit analogous complementarities among the institutions structuring global climate change and climate finance governance. An attempt to apply the new economics of organization to the climate change finance is done in the paper. Its underlying assumption, which implies that the analysis of the coordination mechanism is crucial for measuring institutional efficiency, can be used for the analysis of climate change institutions. It has a certain sense as the theory could at least partially help identify and structure the rules actors within the climate finance regime follow. ‘Institutions as rules’ should be regarded as essential part of the analysis of multi-level climate change governance, given the complexity of interactions between climate change institutions. In a broader sense, institutional complementarity in the context of climate change governance should be defined as institutional cooperation producing results that exceed the sum of individual contributions of state and private actors on the global scale. Moreover, complementarity should involve the harmonisation of objectives, strategies, approaches, commitments and efforts between all institutions. This definition of institutional complementarity is the analytical framework for measuring efficiency of climate change institutions within global governance.

It is very important to note that when we measure existing efficiencies or inefficiencies between different climate change institutions we have to always analyze the incentive structure institutions face over the course of their development. Today incentives are set within the ‘common but differentiated responsibilities’ framework which lays the ground for the unequal distribution of expected costs and benefits from climate change. Thus, it creates different incentives for different countries, which can be expected to bargain in their own perceived interests (Cole 2009). Therefore, incentives are key elements for understanding existing institutional complementarities and contradictions between climate change institutions. If institutions have mainly diverging incentives, then collective action problem would hardly be solved, whereas if common incentives prevail, this would certainly motivate institutions to tackle the collective action problem successfully.

3 Theoretical Framework

3.1 Climate Change Governance and Institutions

Most of the research concerning the governance of climate change has been devoted mainly to the study of the development of the international climate change regime (Yamin and Depledge 2004; Bodansky 1995; Fisher 2004; Okereke and Bulkeley 2007). The research has been focusing mainly on the state-centric regime approach, which serves a tool for analyzing the global climate regime and is directly related to the prevalence of a number of paradigmatic assumptions about the nature of international relations, including the form and functions of the state (Okereke and Bulkeley 2007, 1). Today however, not only states shape the regime, but also a huge number of private actors. Moreover, besides private, public and civil society actors, new types of actors such as transnational activist networks, private rule-making organizations, government agencies and public-private partnerships are engaged in the climate change discourse. However, increased involvement of various actors does not guarantee either effectiveness or equal access of diverse voice; rather it poses a problem of double representation through both states and private actors (Held and Hervey 2010, 10). Today the role of non-state agents in this process, resurrect critical questions about agency, authority and structure, which would seem to pose challenges to the basic assumptions of the analytical research agenda of the climate change regime (Okereke and Bulkeley 2007, 3). This point proves that climate change

regime is currently in transition. The major problem here is that the pace of institutional change is faster than the pace of institutional adaptation as climate change institutions lack capacity to immediately adjust to the changing environment. Therefore, this has a negative impact on institutional performance within global climate change governance.

At the present moment, climate change institutions are not only the product of state actors, but also of non-state agents. State and non-states actors often do not reinforce each other, but in many instance rather contradict, thus collective action problem remains. Institutions are thus compelled to serve as a bridge for different types of actors and ‘accommodate different stakeholders’. This is an extremely challenging task as in many instances we have duplication of functions and asymmetries of responsibility between and among institutions. Nevertheless, institutions remain essential not just for climate change initiatives, but for most other matters requiring policy responses in and beyond government. This is largely because the climate change problem is an extreme example of a problem, key solutions of which are beyond the reach and capacity of states, markets and civil societies. So it needs to be tackled through concerted collective action involving institutions and other actors on a global scale (Thynne 2008, 328). Though, at the same they should not become obstacles to it wherever collective action is justified in the national or global public interest (Thynne 2008, 330).

Today, when it comes to climate change governance it is necessary to highlight the major existing institutional problems which preclude the world community to successfully tackle the issue of climate change. First, within the global climate change regime institutional fragmentation and competition between states is a very acute problem. Second, lacking clear division of labour among the myriad of climate change institutions with overlapping functions, conflicting mandates and blurred objectives add to the problem. Third, at the moment global governance suffers from significant deficits of accountability and inclusion resulting in less economically powerful states and thus with their populations being excluded from decision-making process (Held and Hervey 2009, 9). Therefore, climate change finance institutions and interaction between them have to be analyzed within the context of these problems.

3.2 Climate Change Finance

Despite a number of various provisions in the UNFCCC, today there is no internationally agreed definition of the term “climate finance” (Buchner et al. 2011). Climate change finance is

defined by the World Bank (2010) 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.”* In its turn Corfee-Morlot et al. (2009 in: Buchner et al. 2011) argue that *“climate finance refers to capital flows that target low-carbon or climate resilient development”*. The key issue when it comes to a definition is that *“climate change finance has greenhouse gas mitigation or adaptation as an explicitly stated objective or as a main outcome”* (ibid).

Climate funding initiatives trace back to the Stockholm Declaration of 1972 when first pledges to support sustainable development in the form of financial assistance to developing nations were made (Stadelmann et al. 2010), which, however, have never been delivered by the developed world (Hicks 2008: in: Stadelmann et al. 2010). Today, climate finance can be mobilized through a range of instruments from a variety of sources, international and domestic, public and private, such as Clean Development Mechanism transactions, for instance. In that regard, for instance, the Global Environment Facility plays an important role as the organization provides grants in the form of multilateral concessional climate-change dedicated funding, and domestic resources that governments in developing countries are mobilizing, such as a daily tax on tourism in the Maldives, aimed at accumulating resources for mitigation of climate change (Huhtala and Curto 2010, 2).

As Bird (2010, a) argues, *“there has been little focus on bringing the principles of climate finance together in a governance framework. Yet this will help determine whether climate finance is effective, efficient and equitable.”* The finance dimension within climate change governance is indeed more or less homogenous compared to other dimensions. Institutions in global climate change finance can thus be considered to be relatively more advanced when compared to other institutions of climate change governance. This has to do with the fact that evaluating the results of the Copenhagen Conference in 2010, *“the issue of climate finance seemed, strangely enough, to have been one of the few areas where real progress was made”* (Bird 2010, b). Moreover, the Cancún Agreements put the collective financial commitment of developed nations into a formal framework (Buchner et al. 2011), what should pave the way for more transparency in climate change finance in the long-run.

4 Institutional Complementarities in Climate Change Finance

4.1 Allocation of Funds in the Developing World

Institutions created within the Kyoto Protocol bear large responsibilities for promotion solutions to climate change. Parties of the Protocol are *'to promote sustainable development'* by adopting appropriate *'policies and measures'* - and, in doing so, to *'cooperate with other such Parties to enhance the individual and combined effectiveness of their policies and measures'* by actively sharing knowledge and experience on them, including the need to reduce or remove *'market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors that run counter to the objective of the Convention and application of market instruments'* (Thynne 2008, 328). However, if we look at local governance structures within climate change financing, we can see that in developing countries, most of which run by authoritarian regimes, the implementation of the above mentioned principles is significantly flawed due to the fact that existing market imperfections, informal institutions, informal institutional codes of conduct and overall institutional ineffectiveness hamper effective climate change funds management, including mobilisation, administration and disbursement of funds. Moreover, the incentive structure in developing nations looks different when compared to the one in the developed world. This has to do with the fact that environmental interests are often trumped by economic development goals or even external security concerns in developing countries (Held and Hervey 2009, 6).

Today significant attention is being paid to estimating the costs of adaptation in developing countries, raising the funds to meet the costs, and designing international finance mechanisms to channel these funds to developing countries. However, *"the preoccupation with raising funds for adaptation at the international level assumes, however, that once funding is available, developing countries have enough 'absorptive capacity' to receive and spend this money in a cost effective manner in order to build the adaptive capacity of vulnerable communities on the ground"* (Akumu 2010). This is often not the case. Institutional complementarity at the national level of governance is missing in the first place as existing institutions in developing countries lack institutional capacity to effectively manage the 'climate change aid' coming from the developed world. Here, many developing countries consider climate change financing as entitlement rather than aid. According to them, it has to be

considered as an obligation for those who caused the emissions historically (Stadelmann et al. 2010) and should not be presented in the form of repayable loans (World Bank 2010). Such a perception decreases the responsibility of institutions in the developing world as they see fewer incentives to use funds in the most efficient way.

However, the major problem is that many most vulnerable developing countries, including Least Developed Countries, Small Island Developing States, and African nations do not have comprehensive climate change adaptation strategies, policies as well as institutions in place to deal with the receipt and disbursement of adaptation funds (Akumu 2010). Thus, more assistance from the developed world is needed. Institutions aimed at administration of funds have to be set by donors, who should thoroughly monitor the allocation of resources. But for that aim domestic as well as international institutions would require a significant degree of autonomy. This structure is currently not in place as non-democratic regimes in most cases fail to guarantee autonomy for institutions by intervening into their core activities. Besides, institutional ‘chaos’ within developing countries poses a little or even no obstacle for national actors, be that national public agencies or private companies, to misuse financial resources they receive from climate change funds.

Another problem when it comes to the allocation and use of financial resources is that according to the Bali Action Plan, financial support should be provided as a priority to particularly vulnerable countries directly affected by climate disasters (UNFCCC 2008). In fact, the Bali Action Plan (ibid) states that “*risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance*” should be a means to address loss and damage in developing countries vulnerable to climate change. The problem is, however, that sufficient clarification for the level of vulnerability is still required. The uncertainty in defining which country is more prone to climate disasters may lead to dubious interpretations, which different states might sometimes try to use in their own interests while receiving funds. Here, more concrete rules are required to be adopted. This would facilitate activities of climate change institutions, responsible for allocation of climate funds.

Therefore, emphasis in improving institutional settings in the developing nations should be placed not only on more effective allocation of financial resources, but also on the elimination of barriers for institutional development and fostering effective governance. These principles

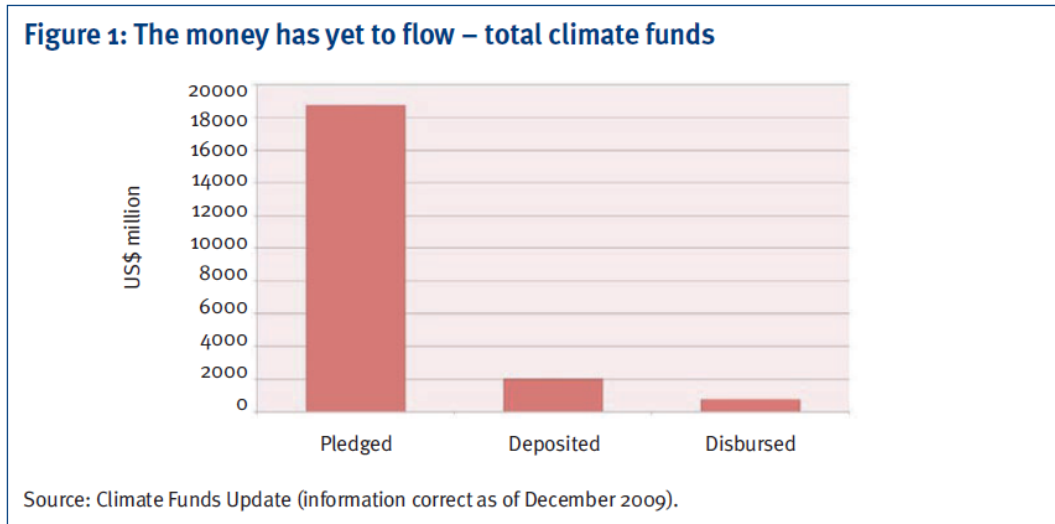
should be reinforcing each other. Here, industrialized states will have to bear a significant part of the cost of the transformation in developing countries (Held and Hervey 2010, 11).

4.2 Institutional Fragmentation

As of now, *“there is a deep lack of trust between developing and developed countries on climate change issues, and particularly on climate finance”* (Stewart et al. 2009). The ground for mutual distrust was first laid when the first pledges to assist financially the developing world in order to protect the environment were made in the 1970s. Later the UN Framework Convention on Climate Change and the Kyoto Protocol reiterated the idea to provide new funds to meet the climate mitigation and adaptation needs of the developing world, but *“with this and other promises still unmet, trust between North and South has eroded”* (ibid). Even though, the Cancún Agreements formalised a commitment of developed countries to provide new and additional funding for fighting climate change in the developing countries both in the short- and long-term (Buchner et al. 2011), still many problems, besides mutual distrust, remain acute and no remedy to them has been available so far.

In fact, the Kyoto Protocol presents institutional complexity by prescribing a variety of institutions, programmes and activities to tackle climate change. Provision is made for ‘joint implementation’ schemes whereby countries listed in Annex 1 of the Protocol can, for financial gain and as emission offsets, exchange ‘emission reduction units’ acquired by way of emission reduction or adsorption projects - subject to stipulated conditions and the oversight of a supervisory committee. In return developing countries get financial resources from climate change for mitigating consequences of climate change. As mentioned above many developed countries also pledge to provide substantial financial assistance to the developing world. However, Overseas Development Institute (Bird 2010, b) estimates that as of today of the \$19 billion pledged to date, \$2 billion has been deposited into dedicated climate funds, with only \$700 million disbursed so far (Figure 1). The Copenhagen Accord also provides promises for both short- and long-term financial support by developed countries for the most vulnerable, to deal with climate change. \$10 billion were pledged per year from 2010-2012 with the promise to increase this to \$100 billion per year by 2020 (ibid). However, as the Accord is a non-binding political agreement, it raises many questions about how these commitments will be realized.

There are also “concerns that these political pledges will follow the same path as earlier promises over aid - and will remain unmet” (ibid).



Indeed, the proposed trajectory of increase in international public finance poses a big challenge for the future as today it is not clear how it can be realized and how the pledged funds will be disbursed. The successful implementation of the climate funding plans by 2020 is questionable as the line between ‘new and additional’ climate funding is significantly blurred. Contributor countries have no clear baseline against which ‘new and additional’ funding can be counted and they do not agree with the baseline proposals elaborated by developing countries (Stadelmann et al. 2010). Two solutions are seen viable when it comes to setting a baseline for climate finance according to the commitment plan, which ends in 2020. The first solution is to attach the level of ‘official development assistance’ of developed nations, including climate finance assistance, to the projection of their future GDP growth, calculated according to the growth rates in later years (ibid). This would enhance predictability of climate funds disbursement for both parties. The second solution is seen in presenting a baseline, which would count only new sources of funding – international air transport levies, currency trading levies or auctioning of emission allowances, which could be considered as ‘new and additional’ (ibid), thus facilitating the understanding of what are the ‘new and additional’ climate funds.¹

¹ This baseline can be put in place only after the 2010-2012 fast track financing period as contributors refused to accept it for this period.

Another challenge for the international community is institutional fragmentation of climate change finance. In fact, today numerous initiatives to generate international public funding for climate change already exist (Bird 2010, b). A multitude of overlapping arrangements have been set up over the last two years: at the last count 21 separate climate finance initiatives are currently in progress, leading to considerable fragmentation of effort as well as institutional fragmentation (ibid). Moreover, rather than to consolidate the funds, the list appears to be even longer (ibid). This leads to low complementarity as effort is fragmented and it is very hard to control and coordinate the policies of these funds in a way which would lead to improved collective action to combat climate change at the global scale. Institutional fragmentation also holds true for the situation with environmental agreements. Today over 200 international environmental agreements suffers from a problem of what might be called ‘anarchic inefficiency’, which implies that roles between various sets of institutions are highly uncoordinated among each other (Held and Hervey 2009, 10). The increasing number of diverging administrative and institutional arrangements on the allocation and use of financial resources as well largely disharmonised relations between donors, would inevitably lead to lower accountability both of private and public actors participating in climate change finance. Indeed, regarding climate change mitigation assistance *“little appears to have been learned from the experience of making development cooperation more effective through donor harmonisation”* (Bird 2010, b).

Institutional fragmentation poses also a problem of competition for resources which serves as an example of institutional inefficiency. Different recipients of climate change funds may easily seek to attract resources from different sources at the same time, thus laying the ground for fragmented action of donor organizations. It is difficult today to monitor the actions of recipients due to the absence of a unified system of financial flows control at the global level. Besides, institutional fragmentation might lead to the danger of duplication of functions between and among the institutions aimed at provision, allocation and disbursement of climate change funds. In the end, this chaos and fragmentation will inevitably lead to the reluctance of major donors to disburse funds what would mean that roughly only 5-10% of pledged funds would likely be provided (the same as today). Thus, the vicious circle will remain. In that regard, the way to grant developing countries direct access to funding (ODI 2010) could be regarded as an important step towards increasing institutional efficiency within climate change governance as

this would partially reduce a number of participating actors in climate change finance. But, here, setting an institutional framework for control over direct access to the use of financial resources has to be the responsibility of the donor-countries.

4.3 Monitoring Problems in Climate Change Finance

An extremely challenging issue which is now far from being clarified is how to improve the monitoring procedure over financial flows at the global scale. First of all, there is a multitude of financial flows coming from public and private, international and domestic sources. In many cases these flows are not separated from development-related projects. According to the Cancún provisions “...*funds provided to developing countries may come from a variety of sources, public and private, bilateral and multilateral, including alternative sources*” (Buchner et al. 2011). Therefore, having this complex landscape, conceiving all climate-related financial and investment flows is a challenge, given the possible inconsistencies across existing reporting systems and the complex web of flows as well as the possibility of double counting (World Bank 2010). Another issue is monitoring over domestic resources. In most of developing countries the information on budget spending is very scarce, often unreliable or even lacking (ibid). Moreover, the problem is exacerbated by multiple and confidential primary transactions which take place within international carbon markets. Thus, monitoring money flows in these transactions is still a challenge. Doubtlessly, having a full view of climate-specific and climate-related financial and investment flows would enhance trust and accountability, as recipient countries could monitor how assistance is delivered and whether it is done in line with commitments (ibid).

Two other financial sources are also important to analyze. First, it is philanthropy, which comes as a source for tackling climate change in many developing nations. Until today the scale of finance granted has hardly any systematic coverage on both sources and recipients (ibid). This adds to the problem as no information is available on how these resources are spent by the recipients as the information on granted amounts is missing in the first place. So, there is hardly a chance to assess effectiveness of the allocation and use of financial resources coming from philanthropy. At the same time philanthropy in the form of financial assistance from individuals, private foundations and NGOs “*is growing in size relative to official development assistance and can play an important role in improving climate-resilience in non-Annex I countries*” (AGF 2010, 32).

Second, information on underlying finance and foreign direct investment into climate change project is not fully available as a separating line between climate-related and development-related finance is often blurred. Separation between finance and leveraging underlying finance is crucial for evaluating “*which instruments may be appropriate to stimulate climate action*” (World Bank 2010). To overcome the problem more clarity on purposes of spending funds from donor-institutions is required in the first place. Moreover, for any type of financial sources, monitoring has to be built according to a dual-tracking way, which would include sources and endpoints of financial flows (ibid). This would increase complementarity of institutions involved as they could better coordinate financial operations between and among each other. In fact the Cancún Agreements call for “*strengthening national communications, increasing the frequency of reporting via biennial reports to be reported by developed and developing countries, and the creation of a registry to record developing countries’ mitigation action seeking international support and associated funding needs*” (Buchner et al. 2011), which also include elements of climate finance reporting (ibid). Implementation of these mechanisms would enable to exercise monitoring of financial resources in a more efficient way. Recording the use of financial resources in the national budget would ensure that the use of funds is subject to scrutiny by any accountability institution be that domestic or international one. This would allow to increase accountability of the whole process and complementarity potential of involved institutions. However, in order to make these mechanisms effective, climate change finance considerations have to be integrated into developing countries’ planning and budgeting systems, which is currently a huge problem as most of the governments of the developing nations are skeptical when it comes to the integration of climate change concerns into their budgets. Climate change finance is seen as a largely ‘unprofitable occupation’. Thus, more efforts and time are required to make climate change finance look economically profitable and attractive for the developing world.

5 Conclusion

Today to address the tremendous collective action problem of climate change, institutions must first of all achieve the following targets: a higher level of participation of various players; maintenance of a high level of the enforcement of international agreements aimed at mitigation

of climate change. In turn, in order to better coordinate the policies between various climate change institutions, communication and cooperation have to be strengthened at different policy levels. As we have seen, at the moment players and institutions within different dimensions of the climate change regime poorly coordinate their policies with each other. This has to do with uneven degree of participation and diverging incentives different institutions face.

All financial initiatives within climate change regime are dependent today on strong and effective institutional coordination. The major challenge in that regard is of course to encourage institutions in the developed and developing world to follow the same 'rules of the game' and carry equal responsibilities for mitigating climate change. For that aim institutions should have the same set of incentives.

When it comes to climate change finance, industrialised countries should be expected to assist where developing countries are unable to meet their financing needs. In that regard strengthening accountability and transparency mechanisms of mobilisation, administration and disbursement of climate change funds is seen of vital importance. Institutions should be regarded as key players for attaining this goal. However, evaluating interaction between institutions within climate change finance we see many issues remain unresolved. Ineffective allocation of funds coupled with weak institutions in developing countries, institutional fragmentation and the ineffective monitoring system of financial and investment flows at different levels of global governance lead to low complementarities between and among climate change institutions. Therefore, crafting effective institutions should be the foremost priority of policy-makers and international organizations on the global governance agenda in the next decade. At the same time, climate change institutions should also attract more attention in the academic world as today institutions are, unfortunately, assigned a minor role in the research of global climate change governance.

List of References

A Carbon Guide for Northern Indigenous Australians. 2009. United Nations University and Institute of Advanced Studies. UNU-AIS.

AGF (UN Secretary-General's High-level Advisory Group on Climate Change Financing). 2010. Work Stream 7 Paper: Public Interventions to Stimulate Private Investment in Adaptation and Mitigation, http://www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/Work_Stream_7%20_Public_Private.pdf

Akumu, Grace. 2010. Climate Change Funds: An Ideal Governance Structure. Climate Network Africa. At the AHSI/Hanns Seidel Seminar Governance of the Climate Change Fund: Who Will Give, Manage and Spend the Climate Change Fund? 15 April, in Addis Ababa, Ethiopia, <http://www.africanreview.org/>

Bird, Neil (a). 2010. A Transparency Agreement for International Climate Finance – Addressing the Trust Deficit. *Overseas Development Institute. Opinion*, www.odi.org.uk

Bird, Neil (b). 2010. Reforming Climate Change Finance. *Overseas Development Institute. Policy Brief*, www.odi.org.uk

Bodansky, Daniel M. 1995. The Emerging Climate Change Regime, *Annual Review of Energy and the Environment* 20: 425-461.

Buchner, Barbara, Brown, Jessica, and Corfee-Morlot, Jan. 2011. Monitoring and Tracking Long-term Finance to Support Climate Action. *Organisation for Economic Co-Operation and Development (OECD), International Energy Agency (IEA)*, May 27, <http://www.oecd.org/dataoecd/57/57/48073739.pdf>

Cole, Daniel. 2009. Climate Change and Collective Action. Indiana University School of Law - Indianapolis; Indiana University Bloomington. Workshop in Political Theory and Policy Analysis. Climate Change and Collective Action, *Current Legal Problems* 61: 229-264.

Corfee-Morlot, Jan, Guay, Bruno, and Larsen, Kate. 2009. Financing for Climate Change Mitigation: Towards a Framework for Measurement, Reporting and Verification, *Organisation for Economic Co-Operation and Development (OECD), International Energy Agency (IEA)*, Information Paper, November 4, <http://www.oecd.org/dataoecd/0/60/44019962.pdf>

Cook, Robin. 2004. Only collective action can overcome the climate crisis. *The Guardian*, December 10, Environment section, <http://www.guardian.co.uk/environment/2004/dec/10/greenpolitics.comment>

Fisher, Dana R. 2004. *National Governance and the Global Climate Change Regime*. Lanham, MD: Rowman & Littlefield Publishers, Inc.

Hall, Peter A., and Gingerich, Daniel W. 2001. Varieties of Capitalism and Institutional Complementarities in the Macroeconomy: An Empirical Analysis. Paper prepared for presentation to the Annual Meeting of the American Political Science Association, August 30, in San Francisco, USA.

Hall, Peter A., and David Soskice. 2001. *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.

Held, David, and Angus Fane Hervey. 2009. Democracy, Climate Change and Global Governance. *Policy Network*. Policy Network Paper. November 2009, www.policy-network.net

Hicks, Robert L., Parks, Bradley C., Timmons, Roberts J., and Tierney, Michael J. 2008. Greening Aid? Understanding the Environmental Impact of Development Assistance. *Oxford University Press*. Oxford.

Huhtala, Ari, and Stefano Curto. 2010. Monitoring Climate Finance and ODA. The World Bank. *The World Bank Group. Development, Climate and Finance*. Issues Brief no. 1.

Kooiman, Jan. 2003. *Governing as Governance*. Sage: London.

Lane, Jan-Erik. 2005. *Public Administration and Public Management: The Principal-Agent Perspective*. Routledge: London.

Okereke, Chukwumerije, and Harriet Bulkeley. 2007. Conceptualizing Climate Change Governance Beyond the International Regime. *Tyndall Centre for Climate Change*. Tyndall Centre Working Paper 112.

Sim, Philippe. 2010. Collective Action Problems in Environmentalism: The Great Stumbling Block in the Fight Against Climate Change. *Pollution Control*, March 9, <http://pollution-control.suite101.com/article.cfm/collective-action-problems-in-environmentalism#ixzz0xKJ5Vh9M>

Stadelmann, Martin, Timmons, Roberts, and Huq, Saleemul. 2010. Baseline for Trust: Defining 'New and Additional' Climate Funding. *The International Institute for Environment and Development (IIED)*, Briefing, June.

Stewart, Richard B., Kingsbury, Benedict, and Rudyk, Bryce. 2009. Climate Finance. Regulatory and Funding Strategies for Climate Change and Global Development. *A publication of the New York University and Abu Dhabi Institute*. New York University Press. New York and London.

Thynne, Ian. 2008. Climate Change, Governance and Environmental Services: Institutional Perspectives, Issues and Challenges. *Public Administration and Development*, Wiley InterScience Online Library, no. 28, issue 5 (November 27), 327–339, <http://onlinelibrary.wiley.com/doi/10.1002/pad.519/pdf>

UNFCCC (United Nations Framework Convention on Climate Change). 2008. Report of the Conference of the Parties on its Thirteenth Session, *Conference of the Parties, UNFCCC*. FCCC/CP/2007/6/Add.1, 14 March.

WALFA Project Demonstrates Alternative Way to Mitigate Climate Change. 2009. *The Medical News*, 30 November, Miscellaneous section.

World Bank. 2008. About World Bank Carbon Finance Unit (CFU). Carbon Finance at the World Bank: list of funds, <http://carbonfinance.org/>

Yamin, Farhana, and Joanna Depledge. 2004. *The International Climate Change Regime. A Guide to Rules, Institutions and Procedures*. Cambridge: Cambridge University Press.