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Thematic focus: Environmental governance, Climate change

The impact of corruption on climate change: threatening emissions trading mechanisms?

This bulletin provides an overview of recent discussions about the impact of corruption on environmental governance, with a focus on emissions trading. It reviews new definitions and the latest corruption assessment methodologies in order to emphasise the broader challenges faced by GHG trading mechanisms and climate finance.

Why is this issue important?

The trading of greenhouse gas (GHG) emissions has recently emerged as one of the most dynamic and promising areas of global environmental governance. According to the latest assessment by the International Panel on Climate Change (IPCC, 2007), global GHG emissions must peak, if not decline, by 2015 in order to limit global mean temperature increases to 2°C above pre-industrial levels. The Panel predicted that without a reduction of GHG emissions, the globe would experience an overall temperature rise of 6.4°C by the end of this century, which is a catastrophic scenario.

Emissions trading mechanisms are regulatory frameworks for the quantification and commoditisation of the greenhouse gas emissions allowing the exchange of those emissions among economic actors as financial instruments. Under these frameworks, emissions are converted into financial instruments which include, depending on the particularities of the system, tradable units, credits and certificates for the reduction of emissions. Conceived in the years preceding the signature of the Kyoto Protocol of 1997 as means to achieve the goals outlined in the United Nations Framework Convention on Climate Change of 1992 (UNFCCC), these markets currently mobilise approximately US$167 billion (Kossoy and Guignon, 2012). Emissions trading systems are often hailed as a powerful and cost-efficient approach to dealing with the multi-faceted challenges posed by climate change (Kossoy and Guignon, 2012). The UNFCCC estimates that these systems will contribute a significant portion of the funds necessary for climate change mitigation (UNFCCC, 2007). The Organization for Economic Co-operation and Development (OECD) member countries have already pledged up to US$100 billion by 2020 and agreed to contribute up to US$30 billion in 'fast-track finance' between 2010 and 2012 for the funding of adaptation and mitigation actions (UNEP, 2008; Nakhooda et al., 2012; UNFCCC,

2007). Much of these financial resources are expected to be mobilised through the implementation and expansion of emissions trading mechanisms.

Corruption impacts the success of emissions trading schemes by reducing the overall reliability and effectiveness of GHG markets. The implementation of cap-and-trade systems in both developed and developing countries has been recurrently tainted by cases of fraud and bribery, abuses of power, and other conventional forms of corruption. Corruption in this sector has also taken more original forms, such as the strategic exploitation of 'bad science' and scientific uncertainties for profit, the manipulation of GHG market prices, and anti-systemic speculation (Lohmann, 2007; TI, 2012a; Wara, 2007). The challenge that corruption poses to climate finance also contributes to broader debates about the impact of corruption in environmental governance. Over the past two decades, domestic and international anti-corruption initiatives have proliferated, with the process being largely driven by the increasing recognition of the impact of corruption on the quality of environmental governance.

For the first time, the participants in the 2012 United Nations Conference on Sustainable Development (or the Rio+20 Conference) explicitly recognised that corruption is an impediment to effective environmental stewardship: paragraph 266 of the Outcome Declaration – The Future We Want – proclaimed that corruption must be addressed for the successful allocation and effectiveness of international aid. In the document, governments stressed the links between transparency and accountability and the quality of governance, noting that 'corruption is a serious barrier to effective resource mobilisation and allocation and diverts resources away from activities that are vital for poverty eradication, the fight against hunger and sustainable development' (UN, 2012, pp.50). They also recognised the need to 'take urgent and decisive steps to continue to combat corruption in all its manifestations' (UN, 2012, pp.50). This attention to the issue of corruption in the Rio+20 Declaration echoes the debates that have taken place during the past decade in conferences and policy initiatives organised and implemented by the United Nations Office on Drugs and Crime (UNODC), the European Union, the Association of Southeast Asian Nations (ASEAN), the G20, and other multilateral organisations. In the face of challenges some critics have begun questioning the validity of the fundamental tenets of emissions trading schemes, but supporters of the approach have responded by beginning to mainstream anti-corruption strategies into their frameworks and paying more attention to the consequences of corruption on the overall efficiency of the system.

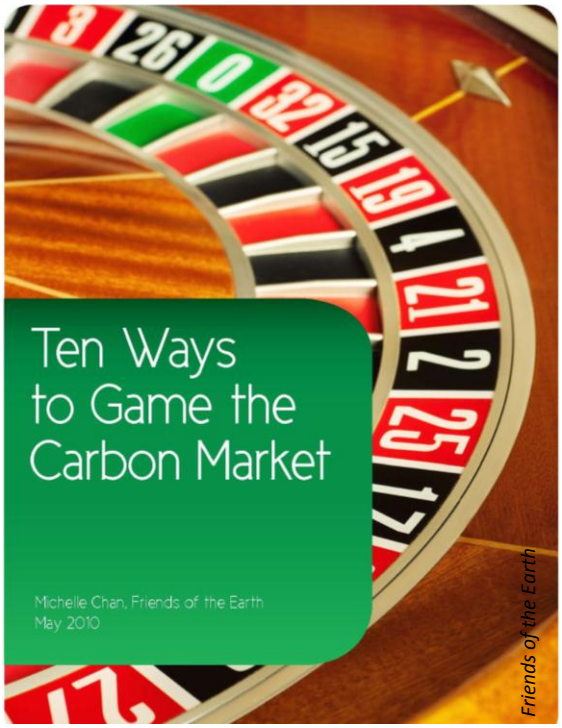
What are the findings?

Measurements of corruption are inevitably imperfect

The features of corrupt behaviour may seem intuitively straightforward. In practice, however, attempts to exhaustively define corruption invariably encounter legal, criminological, and, in many countries, political problems (Foster et al., 2012; Heinrich and Hodess, 2012; Sampford et al., 2006; Sequeira, 2011).

Over the past few decades, definitions of corruption have evolved from expressions of culture, which were prevalent until the late 1980s, to having been progressively replaced by others crafted to directly support the implementation of anti-corruption strategies. Today, corruption is generally understood as 'the abuse of public roles or resources for private benefit' (Johnston, 1997; Klitgaard, 1988); it denotes not just the actions of public officials, but also those of agents of non-government organizations and for-profit businesses. New formulations of the concept anchor it in a set of behaviours that erode economic, political, and institutional development, which include bribery, nepotism, cronyism, embezzlement, fraud, and the misappropriation of resources (UNODC, 2010 and 2012).[1]

Along with new definitions, several methodologies for the quantitative assessment of corruption have emerged over the past two decades. They include those employed by the World Bank's Worldwide Governance Indicators (WGI), Transparency International's (TI) Corruption Perceptions Index (CPI), and the Political Risk Services Group's (PRSG) International Corruption Risk Index (ICR), as well as a newer generation of measurements like the Ibrahim Index of African Governance, the Global Integrity Report and the Global Integrity Index. These measurements generally rely on three basic sources of information: 1) Surveys on the perception of corruption and the payment of bribes; 2) Institutional performance analyses, which examine the reach and effectiveness of administrative operations and management rules; and 3) Project audits, which analyse divergences between the expected results and the reported outcomes of specific projects and activities (Kaufmann et al., 2009; Urra, 2007). These measurements seek to specify the "quantity" of corruption, in order to increase awareness about the issue and monitor the success of anti-corruption initiatives.



While measures of corruption based on observed and reported acts of corruption inexorably tend to miss the actions of "successful" corrupt agents, assessments based on stakeholder perception provide information unfit for comparisons over time and across geographies (Urra, 2007; UNODC, 2010). In order to tackle the limitations of particular indicators, experts have developed aggregation methods through which it is possible to compensate for the biases, errors and limits of point-sources of information (Heinrich and Hodess, 2012; Sampford et al., 2006). Thus, the most widely employed measurements of corruption are composite indices, which provide country-level overviews that help raise awareness about the issue, encourage the entry of corruption topics into the political agenda and add legitimacy to anti-corruption initiatives (McDervitt, 2012; TI, 2012b). The aggregated approach is useful because composite indices convey information succinctly and communicate ideas more efficiently than multiple indicators. Critics note, however, that the selection of any discrete set of indicators for measuring governance quality and corruption levels is inevitably prone to biases – favouring particular ideological, cultural and normative ideals – which often breeds socio-political resistance to measurement initiatives and reduces the actionability of the information (Kotkin and Sajó, 2002; Sampford et al., 2006; Sik, 2002). Existing methodologies for the measurement of corruption are imperfect and, in spite of

[1] To illustrate the shortcomings of any one definition of corruption, the definition proposed here restricts the issue of corruption to the abuses of power or office for illegitimate private gain or to instances of illegal activity. This approach focuses on the corrupt agents, and not on the structural factors – the incentives embedded in institutional systems – that may likewise facilitate and often cause corrupt behaviours.

their constant improvement, are likely to remain so. This is basically because corrupt behaviours, by definition, tend to avoid scrutiny and prosecution. It is also due to the fact that corruption tends to both manifest itself in different forms and take on different meanings in different contexts. In other words, corruption reflects the particular declination of contextual and sectoral challenges (Campos and Pradhan, 2007; UNODC, 2010 and 2012).

Corruption reduces the Quality of Environmental Governance and the Effectiveness of Emissions Trading

Corruption induces socially sub-optimal environmental governance. It reduces environmental regulatory stringency and undermines the effectiveness of management systems (Aidt, 2003; Dinda, 2004); this is because corruption reduces the social and/or economic cost of breaking established rules. In a corrupt environment, actors prioritise private benefits at the expense of socially optimal outcomes (Fredriksson et al., 2004; Olken and Pande, 2012; Welsh, 2004). Conversely, lower corruption levels translate into stricter and more effectively enforced environmental policies (Pellegrini and Gerlagh, 2004; Rehman et al., 2012; Zugravu et al., 2008). This proposition is generally supported by empirical research that correlates corruption levels and deforestation (Kishor and Damania, 2007; Yilmaz and Koyuncu, 2009), air pollution levels (Leitão, 2010; Lopez and Mitra, 2000), access to safe drinking water (Stålgren, 2006) and biodiversity (Smith et al., 2003). Research highlights that dysfunctional environmental governance systems – due to corruption – generally contribute to the extinction of species, the over-exploitation of natural resources, the pollution and degradation of ecosystems and wildlife habitats, the spread of diseases and invasive species, and the deprivation of local stakeholders reliant on wildlife and plants for subsistence. Not unlike other sectors of environmental governance, mitigation and adaptation strategies necessary to offset the impact of climate change are also vulnerable to the actions of corrupt actors. In fact, as mitigation and adaptation actions become more pressing, the negative impact of corruption in the different industries and political actors is likely to increase. This is because the increasing economic value of climate governance decisions and initiatives simultaneously fosters the perverse economic incentives that drive corruption.

Known as cap-and-trade systems, emissions trading schemes seek to reduce the production of greenhouse gases (GHG) through economic incentives which progressively increases the cost of emitting these gases and fostering the economic competitiveness of low carbon footprint alternatives. At least in theory, these "market-based" instruments are more efficient than “command and control” approaches for the control of GHG emissions. Actors can deal with their unique emission abatement challenges with limited government intervention and minimal regulatory disruption.

There are two basic types of emissions trading: compliance schemes and voluntary programs. Markets in a compliance scheme are created and controlled by national, regional or international GHG reduction regulatory frameworks. They operate on the basis of pre-determined annual limits for the emissions of certain greenhouse gases, and they create economic constraints for the production of GHG by economic actors – i.e. factories, power-production facilities, and other installations. Depending on the volume of GHG emitted each year, actors obtain emission allowances that they can sell when they emit GHGs below the permitted “cap” or they can buy from other actors in the marketplace when they are in need. Each year, actors failing to surrender sufficient allowances to cover their emissions face fines, while those that reduce emissions can either keep spare allowances to cover future needs or profit from their sale to other actors that have exceeded their respective annual quotas. Conversely, actors operating in the context of voluntary programs deal outside compliance markets. Voluntary schemes enable businesses, governments, NGOs, and individuals to offset the GHG emissions to voluntary buyers – i.e. corporations, institutions and individuals. Voluntary

transactions are often employed to test new procedures, methodologies and technologies. They can be implemented with fewer transaction costs than those taking place in the context of mandatory markets.

The practical implementation of emissions trading schemes has produced promising, yet not entirely satisfactory results. Reports of widespread corruption in their implementation have raised concerns about the ability of these mechanisms to effectively and reliably ensure reductions in the emission of GHG. The Kyoto Protocol to the UNFCCC established a global GHG governance system that imposed caps on the emissions of the developed countries ratifying the Protocol. The framework assigned emissions targets and allowances. On average, the system sought the reduction of average GHG emissions by 5.2 per cent below their 1990 baseline between 2008 and 2012 (UNEP, 2008; Reyes and Gilbertson, 2009). Countries could meet their targets by reducing GHG emissions and/or by trading allowances with other countries.

Examples - EU emissions trading schemes, domestic cap-and-trade systems, and the REDD+ mechanism

Petr Kratochvil (currency); 4BlueEyes Pete Williamson
Flickr CC BY-NC-ND 2.0 (emission)

The 15 original member states of the European Union have created the EU Emissions Trading Scheme (EU ETS). The EU ETS came into force in 2005 and is the largest operational mandatory cap-and-trade scheme to date. Currently, the EU ETS sets a cap for GHG emissions and distributes "carbon credits" among more than 11,000 participating factories, power plants, and other such installations across 30 countries (comprising all 27 EU member states, as well as Iceland, Liechtenstein, and Norway). The EU ETS has not operated exactly as predicted. Although emissions in the EU ETS are slated to be 21 per cent lower by 2020 than they were in 2005, during the first phase of the program (2005-2007), emission permits were over-allocated, which resulted in a 2.1 per cent increase in emissions from levels existing before the scheme began (Elges, 2011; Reyes and Gilbertson, 2009). In addition to problems linked to the design of the system, the EU ETS has also suffered from the impact of corruption.

In the European Union's US$134 billion emissions trading scheme (Kossoy and Guignon, 2012), corruption has enabled and facilitated the re-sale and misreporting of used carbon offsets, sophisticated computer hacking schemes for the theft from national carbon emission registries, and continuing value-added tax fraud (Elges, 2011; Lohmann, 2007; TI, 2012b). In 2010, European authorities uncovered several cases of "carousel fraud" in the trading of emissions, which amounted to an estimated US$6.45 billion in lost revenues across at least 11 countries (Gilbertson, 2010). Carousel fraud is a form of missing trader fraud, wherein the trader facilitating the carbon credit exchange keeps the value-added tax (VAT), rather than paying it to the tax authorities and government treasuries. Made possible by cross-national trading not subject to VAT, emission credits were initially purchased without adding the VAT, but then sold with the VAT added. The discovery of fraudulent activities prompted the rapid introduction of changes to the tax law and improvements in the security of the trading system by the European Commission, but also led to the deflation of the European carbon market by approximately 90 per cent and forced the momentary suspensions of credit-trading activities (Corporate Watch, 2010; Kossoy and Guignon, 2012). In January 2011, lax security facilitated the theft of over US$3

million in carbon credits (about 2 billion are issued each year), valued at about US$62 million in the open market (The Economist, 2011); cases were reported in Austria, the Czech Republic, Germany, Greece, Italy, and Romania (Kossoy and Guignon, 2012). Together, these problems raised concerns about not only the fate of the EU ETS, but also the increasing number of domestic cap-and-trade systems being implemented across the globe.

In time, similar climate governance schemes operating at the regional and domestic level are expected to form the backbone of a global marketplace, which will facilitate the integration of adaptation and mitigation strategies. The integrity of these trading schemes will be crucial for the success of global climate governance. In 2012 alone, Australia approved the implementation of an emissions trading market, which is expected to cover approximately 60 per cent of the country's annual GHG emissions by 2015. Similar initiatives are slated to enter into effect in the state of California – covering 85 per cent of its GHG emissions by 2015 – as well as in the Canadian province of Québec, in Mexico, and in the Republic of Korea (Kossoy and Guignon, 2012).[2] Significantly, 2012 was also witness to the first GHG trades in China: four cement manufacturing companies in the southern industrial region of Guangdong province purchased several million dollars in carbon-pollution permits, needed to expand operations (Lo, 2012). The Guangdong scheme is expected to cover more than 800 companies emitting more than 20,000 tonnes of CO_2 a year across nine industries, including the energy-intensive steel and power sectors. The Guangdong carbon market will regulate approximately 277 million tonnes of CO_2 emissions by 2015, which is almost equal to Ukraine's total annual CO_2 emissions (Lo, 2012). China plans to open six further regional emissions trading schemes this year, in the province of Hubei and in the municipalities of Beijing, Tianjin, Shanghai, Chongqing and Shenzhen. These initiatives are expected to be integrated by the end of the decade and linked to international markets (Lo, 2012).

In addition to regional and domestic cap-and-trade systems, the success of global climate governance also depends on the fate of different mechanisms for the transfer of wealth and technology between developed and developing countries. One such mechanism is Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative. According to paragraph 70 in the Cancun Agreement, REDD+ encourages developing countries to contribute to mitigation actions in the forest sector by reducing emissions from deforestation and forest degradation, by conserving forest carbon stocks, sustainably managing forests and enhancing forest carbon stocks. Moreover, countries that successfully implement these measures are financially compensated for their efforts. Thus, this global framework facilitates the social recognition of the economic value of the carbon stored in forests and creates economic incentives for the protection of forested lands and investment in low-carbon economic development paths for developing countries. The attachment of economic value to forest ecosystems allows preservation and sustainable management activities to compete with alternate land uses that result in forest destruction (Oakes et al., 2012). In the context of the initiative, for example, a 5 per cent reduction in Indonesia's deforestation rate could generate annual REDD+ payments of US$765 million; a 30 per cent reduction could generate more than US$4.5 billion per year (Barr et al., 2010).

However, analysts warn that unless corruption is effectively addressed – along with other catalysts of illicit deforestation –REDD+ is unlikely to produce the expected outcomes (Dermawan et al., 2011; TI, 2012a). Emphasizing that corruption challenges are not exclusive to Indonesia, Transparency International (TI) proclaimed that "REDD+ will inherit many of the corruption risks that have long beset the forestry sector, but

[2] Cap-and-trade systems mechanisms have already been implemented or are in the process of becoming operational in Belarus, Brazil, Chile, China, Colombia, Costa Rica, India, Indonesia, Japan, Jordan, Kazakhstan, Morocco, New Zealand, Canada (Alberta and British Columbia), South Africa, Switzerland, Thailand, Turkey, Ukraine, and Viet Nam.

it also brings with it new ones" (TI, 2012b). To date, abuses in the implementation of REDD+ have included the falsification or exaggeration of carbon credits from projects, favoritism in the allocation of projects and permits, and land-grabbing and price manipulation through fraud (García, 2011; Living on Earth, 2010; Reyes and Gilbertson, 2009; Standing, 2012). Journalists have, for example, exposed the abuses by rogue businessmen – also known as "carbon cowboys" – who coerce and bribe local villagers into handing over the rights to the carbon in their forests (Cubby and Wilkinson, 2009; Lang, 2012; Lohmann, 2009; Martin, 2011). Abuses and corruption in the implementation of REDD+ reduce the effectiveness, efficiency, and equity expected of the approach, as well as creating barriers for the improved management and protection of forests, distorting the designed structure economic incentives, and leading to the unfair allocation of benefits derived from REDD+ payments. In addition to undermining social confidence in the usefulness of the approach, corruption can make REDD+ mechanism politically and economically unsustainable and subvert the effects of the initiative (UN-REDD, 2012a).

While still imperfect and vulnerable to the impact of corruption, the REDD+ initiative has significantly raised attention to the challenges and importance of forest management in the global political agenda. It has also helped to pave the way for other complementary initiatives, such as UN-REDD, which currently supports REDD+ readiness efforts in 46 countries, spanning Africa, Asia-Pacific, Latin America and the Caribbean. As of July 2012, UN-REDD had led to transfers of approximately US$117.6 million both for the domestic implementation of REDD+ strategies and for REDD+ readiness efforts, including the development of common approaches, analyses, methodologies, tools, data and best practices (UN-REDD, 2012b).

In face of the threats posed by corruption, a variety of international and national actors are currently working to reduce REDD+ corruption risks. For example, between 21 January and 15 February, 2013, UN-REDD and the United Nations Development Programme (UNDP) held online discussions with anti-corruption experts, local government officials and climate change experts to develop a common understanding of the nature and severity of potential REDD+ corruption risks and promising approaches to reduce and manage these risks. These initiatives have been accompanied by the development of several informational websites and information systems, such as the Climate Funds Update and the Voluntary REDD+ Database, which have emerged to track climate finance, enabling identification of any misuse of funds in ongoing and projected initiatives.

What are the implications for policy?

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In theory, the establishment of GHG emission caps and mandatory emissions trading markets can produce predictable environmental outcomes, as these mechanisms can help manipulate the economic incentives behind technological innovation and more environmentally-minded decisions. In practice, will emerging emission-valuation and trading schemes be able to effectively deal with the negative impact of corruption? Corruption can, for example, disrupt GHG market prices and facilitate fraudulent emissions reports, which reduces the overall effectiveness and reliability of these systems (Sweeney et al., 2011). Moreover, ongoing global discussions about how to meet environmental governance objectives are playing out against the backdrop of a protracted global financial crisis. In the context of spending cutbacks and the re-ordering of domestic priorities, international development aid expenditures are being scrutinised, and funding and support for the achievement of sustainable development targets is being conditioned on the demonstrable effectiveness of environmental governance initiatives. In view of the urgent need for mechanisms to develop and implement climate change mitigation and adaptation strategies, the fight against corruption must and undoubtedly will become a key issue in policy debates.

That said, positive steps are being taken by governments, inter-governmental organisations, non-governmental organisations and by businesses. In recent years, for example, most developed countries have ratified two significant international anti-corruption conventions: the United Nations Convention on Anti-Corruption (UNCAC) and the Organization for Economic Co-operation and Development´s Convention on Combating Bribery of Foreign Officials in International Business Transactions. While ratification of one or both of these conventions demonstrates the increasing interest in the fight against corruption, this interest extends to a new set of initiatives and regulatory systems aimed at fighting corruption at the domestic level. Across sectors of environmental governance, successful anti-corruption initiatives have resulted in the financial, practical and symbolic empowerment of enforcement agents, the reform of decision-making mechanisms for increased accountability and transparency, and new regulatory frameworks. Moreover, anti-corruption initiatives have not been restricted to the developing world. Although success stories are not abundant, such initiatives include the creation of anti-corruption agencies, such as Hong Kong's Independent Commission Against Corruption, Indonesia's Komisi Pemberantasan Korupsi (Corruption Eradication Commission), and the offices of the Ombudsman and Special Prosecutor in the Philippines. Anti-corruption initiatives have led to significant increases in the number of convictions on corruption charges, as well as the development of better anti-corruption methodologies – as highlighted in manuals such as the Consortium on Combating Wildlife Crime's (ICCW) Wildlife and Forest Crime Toolkit, the World Bank's Sourcebook for Deterring Corruption and Improving Governance in the Urban Water Supply and Sanitation Sector, and Transparency International anti-corruption toolkits – which have significantly improved the performance of development projects in different

sectors of natural resource governance. Globally, governments, experts and practitioners have explicitly recognised that tackling corruption is crucial to ensure the effectiveness of the systems devised to deal with environmental challenges.

In the case of climate governance, as the sector grows in size and complexity, the issue of corruption draws increasing attention. The issue is often employed to question the overall validity of emissions trading schemes. The most radical critics challenge the reliance of climate governance on market-driven solutions: "(widespread corruption) raises key questions about whether a market approach, in which relatively unregulated, complex and difficult to trace transactions are the bulk of activity, is really the best route to a solution to climate change" (Corporate Watch, 2010). They argue that the approach is an implicit validation of business-as-usual practices, to the detriment of alternative approaches to GHG emissions control (Gilbertson, 2010; Lohmann 2007 and 2009; Reyes and Gilbertson, 2009).

Cynicism about the potential of emissions trading is not entirely warranted. More constructive reviews emphasize the transformational power of GHG emissions trading and its potential for permanent improvement through reform and adjustments (Najam et al., 2006; Thorpe and Ogle, 2011; TI, 2012a; UNODC, 2012). Transparency International (TI), the global corruption watchdog, stresses that the mainstreaming of anti-corruption tools can help ensure the overall effectiveness of GHG emissions trading schemes (Sweeney et al., 2011; TI, 2012). These demands in favor of mainstreaming anti-corruption objectives into climate governance systems echo a second call made by the participants of the Rio+20 conference, which is the need to 'strengthen the science-policy interface' and 'enhance evidence-based decision-making at all levels and contribute to strengthening ongoing efforts of capacity-building for data collection and analysis in developing countries' (UN, 2012). Although reforms are unlikely to entirely suppress corruption in climate governance, reforms can nonetheless support the efforts of those dedicated to combating corruption's effects and improving the performance of environmental governance systems. Market regulators have started taking steps to eradicate weaknesses that criminal elements can exploit. European authorities, for example, have made significant changes aimed towards the improved transparency and integrity of trading operations. While it remains to be seen just how effective these new rules will be in securing the market, the overall position is likely to be much improved (Kossoy and Guignon, 2012).

The effects of climate change are already being felt all around the world; the poor, particularly in developing countries, are most vulnerable. Climate governance is one of the most complex, costly and urgent challenges in the global development arena. In this context, the lack of effective corruption monitoring and prevention is likely to significantly undermine climate change adaptation and mitigation initiatives, thwarting the Millennium Development Goals and sustainable development agendas. It is necessary for major environmental initiatives, including CDM, emissions trading, REDD+ and other future initiatives, to incorporate provisions to prevent corruption and close loopholes. Corruption in all its forms should be considered in protocols and conventions on climate governance at the international level. The recognition of the multi-faceted challenges posed by corruption is a necessary first step, but one that must be followed by concrete actions from governments, civil society and the private sector. Ultimately, the fight against corruption depends on concerted political action at the global level, as much as on new commitments in domestic arenas.

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Writer: Martin Walter[a]
Production and Outreach Team: Arshia Chander[b]*, Erick Litswa*[c]*, Kim Giese*[b]*, Lindsey Harriman* [b]*, Michelle Anthony*[b]*, Reza Hussain*[b]*, Theuri Mwangi*[c] *and Zinta Zommers*[c]

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([a] UNEP-RONA, Northwestern University and the Institut d'Etudes Politiques de Paris, [b] UNEP/GRID-Sioux Falls, [c] UNEP/DEWA/Nairobi, [d] UNEP-ROAP, [e] UNEP/GRID-Geneva, [f] UNEP-DTIE, [g] UNEP-DEPI)

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