Relations Between International Organisations in Combating Climate Change

Katja Biedenkopf

1 INTRODUCTION

Inter-organisational interaction is of great importance in the area of climate change since it is one of the most complex policy problems of our times.[1] Coordination amongst and conflict between different organisations are crucial factors for the success and failure of global efforts to mitigate and adapt to climate change. For this reason, an extensive body of literature on climate regime complexes, fragmentation, climate policy integration, institutional interaction and interaction management has emerged in recent years (Biermann et al. 2009; Gehring and Faude 2013; Oberthür and Pozarowska 2013; van Asselt and Zelli 2014; Zelli and van Asselt 2013). While most of these studies focus on institutions, defined as relatively stable sets of rules and practices, this chapter applies their main concepts and findings to international organisations, the physical brick-and-mortar entities involved in global climate governance. It shows that an extensive web of interaction amongst various organisations has emerged. The depth and intensity of these inter-organisational relations however are relatively light and superficial. The system is loosely integrated, including unilateral climate activities, inter-organisational information exchange but also some closer cooperation in the form of joint programmes. The United Nations Framework Convention on Climate Change (UNFCCC) is the hub of this system.

Global climate governance is characterised by a proliferation of private and public–private initiatives in addition to the complex web of international organisations and institutions (Green 2013). While some organisations and initiatives include a large number of countries, various so-called minilateral

K. Biedenkopf (✉)
Leuven International and European Studies, KU Leuven, Leuven, Belgium

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R. Biermann, J.A. Koops (eds.), *Palgrave Handbook of Inter-Organizational Relations in World Politics*, DOI 10.1057/978-1-137-36039-7_31

forums or clubs that include only a smaller number of participants have emerged. This includes the Group of Eight (G8)/Group of Seven (G7) and the Asia-Pacific Partnership on Clean Development and Climate (Karlsson-Vinkhuyzen and McGee 2013; Keohane and Victor 2011, pp. 10–11). The latter has disappeared again. This chapter does not discuss private and minilateral organisations. It focuses on the main international organisations with broad global membership.

Organisations provide venues for negotiations. They can take decisions on commitments to addressing climate change, produce and disseminate information, and implement climate change adaptation and mitigation projects (Michonski and Levi 2010, p. 2). Numerous international organisations engage in climate change policy to various degrees of inter-organisational interaction.

1. Unilateral activity of international organisations implementing a climate change-related programme or activity
2. Unidirectional information provision of international organisations providing input into the UNFCCC process
3. Information sharing amongst two or more international organisations without joint activities
4. Implementation or execution of policy adopted by one international organisation by another international organisation
5. Joint programme adopted and implemented by two or more international organisations

This chapter first discusses the particularities of climate change as a global governance issue before providing a brief overview of the analytical approaches that have predominantly been used to analyse the climate organisational complex. The main section provides an empirical overview of the fragmentation characteristics and the inter-organisational interaction and interplay management that bind the numerous elements of the complex together. A brief conclusion situates the chapter in past and future research.

2   Climate Change as a Global Governance Issue

Climate change is probably one of the most complex policy issues in contemporary global governance, transcending most other policy areas (Hoffman 2011, pp. 10–12). It is a truly global problem. Addressing climate change in one location does not improve the situation for this particular location only, like would be the case for water pollution and similar problems. Hence, climate change mitigation also always has a global effect. Local action in only one location is not sufficient to address the problem. It does not matter whereabouts on the planet greenhouse gas (GHG) emissions are generated or absorbed; the action has an effect on the global climatic system. Climate change is associated with a classical collective action problem: Everyone

globally would benefit from mitigation action but the decision on who is to take what kind of action is highly politicised. International climate negotiations have progressed very slowly with contentious debates about how to apply the 'common but differentiated responsibility and respective capabilities' principle. The great divergence in interests and structural factors make it difficult if not impossible to address climate change through one comprehensive and integrated set of rules by one single organisation (Keohane and Victor 2011, p. 7).

Climate change cuts across a great number of other issue areas. It is far more than an environmental problem. The UNFCCC alone could not deal with all of its facets. Climate change affects many other policy fields that are addressed by other organisations (Michonski and Levi 2010, p. 1). Environmental problems such as the loss of biodiversity, forest degradation, desertification and water scarcity are directly affected by climate change and can contribute to its mitigation (Blanco et al. 2014). For example, deforestation and forest degradation account for about 20 per cent of global GHG emissions (IPCC 2014a, pp. 7–8). The same applies to social problems such as human health, migration and human rights as well as economic activities such as trade, mobility and development finance (IPCC 2014b). The security aspects of climate change have also gained increasing attention (Podesta and Ogden 2008). Activities in all of these areas need to include adaptation to and mitigation of climate change. This explains why inter-organisational interaction is of great importance but also highly complex in the area of climate change.

Global climate governance has increasingly been marked by a multitude of actors and policy approaches. It goes far beyond intergovernmental treaties and organisations. The slow progress of intergovernmental negotiations in the context of the UNFCCC has led to different additional trends. Non-state actors such as businesses and NGOs have increasingly become active by adopting their own private initiatives and by engaging in public–private partnerships of various kinds (Andonova, et al. 2009; Pattberg 2010). Different mechanisms and governance approaches have emerged such as networks, standard setting, market-based and voluntary approaches (Biermann 2010).

3   Inter-organisational Interaction

In the area of climate change, research and theoretical development has grown in the past two decades in the areas of regime complexes (Keohane and Victor 2011), institutional fragmentation (Biermann et al. 2009), climate policy integration (Octavio and Gomar 2014), institutional interaction (Gehring and Oberthür 2009) and interplay management (Oberthür 2009), which all are closely interrelated. Inter-organisational relations as a term and concept have not been used as widely as these other ones. The main reason for this is that research in climate governance focuses on institutions rather than organisations, which are a subset of the broader concept of institutions. Institutions are a relatively stable collection of rules and social practices

while organisations are entities with a physical location, staff and budgets.[2] This means that the rich body of literature on the institutional interaction and related concepts also applies to inter-organisational relations, which could be considered a subcategory that focuses mostly on formal institutions (e.g. brick-and-mortar intergovernmental organisations), including treaty secretariats. This section briefly provides an overview of the different concepts that are most widely used in the area of global climate governance and relates it to inter-organisational interaction.

Regime complexes are loosely connected sets of different regimes (Keohane and Victor 2011, p. 8). They are 'systems of functionally overlapping international institutions that continuously affect each other's operation' (Gehring and Faude 2013, p. 120). Affecting another institution does however not imply active coordination but, for an architecture to qualify as institutional complex, their interaction needs to be structural rather than ad hoc (Oberthür and Pozarowska 2013, p. 102). Regime complexes can emerge in different ways, in particular, when one existing organisation moves into the issue area covered by other organisations or by the creation of a new organisation (Gehring and Faude 2013, p. 123). The concept of regime complexes describes thus a certain structure and design of a governance system.

Literature on fragmentation (Biermann et al. 2009; Zelli 2011; Zelli and van Asselt 2013) is closely linked to the regime complex concept. It focuses on the outcomes of institutional interaction. These can be synergistic, cooperative or conflictive. Synergistic outcomes occur when a range of institutions are closely integrated with one core institution. The pursued goals and norms are highly integrated. Cooperative outcomes describe loosely integrated institutions with a core institution. Their objectives and norms are not conflicting but also not highly integrated. Conflictive outcomes emerge as a result of different, largely unrelated institutions, whose objectives and goals are conflictive (Biermann et al. 2009, pp. 19–21). A related research area is environmental and climate policy integration. The interaction between organisations raises questions about the integration of environmental and climate concerns in other policy areas. It also highlights aspects related to the appropriate balancing of different environmental, climate and other objectives (Octavio and Gomar 2014, pp. 2–3).

Institutional interaction studies investigate the mutual effects amongst different institutions. Its unit of analysis is thus the type and quality links between institutions. One institution can aid the activities of another, leading to positive spillovers, but an institution can also impede the activities of another, leading to negative spillovers. This depends on the compatibility of their objectives (Johnson and Urpelainen 2012). Organisations can engage in a division of labour, each addressing a different aspect or problem (Gehring and Faude 2014). Spillovers and division of labour can occur through and provide opportunities for forum-shopping strategies by members of the different organisations. The complexity of the issue of climate change leads to the large number of issue overlaps and creates numerous potential instances of overlap. Institutional interaction includes the exchange of knowledge and ideas

between organisation, the conditioning of actor's decisions in one organisation by their prior commitment in another, the influencing of the effectiveness of one organisation by an actor's commitment in another and the affecting of the impact of one organisation on the impact of another (Gehring and Oberthür 2009, pp. 132–144). Inter-organisational contacts can take the form of consultation and information sharing, the coordination of policies and joint projects (Biermann 2008, p. 165).

Institutional interaction studies bring actorness in the analysis. This links to questions about interplay management, which describes the conscious activities of actors to link different organisations (Oberthür and Pozarowska 2013, p. 103). Interplay management can take a hierarchical, horizontal and unilateral form. An overarching institutional framework such as the UN Environmental Programme (UNEP) or a potential World Environmental Organisation could manage institutional interaction in a hierarchical manner. Alternatively, horizontal coordination and cooperation amongst different organisations can manage interaction. Unilateral adjustment of behaviour based on another organisation's activities can also contribute to interplay management (Oberthür 2009, p. 376).

Coordination between different organisations requires actors to engage in these activities. The most important actors in this regard are the organisations' member states, their staff and sometimes also non-state actors. Actors take decisions in one organisation against the backdrop of their engagement in the other organisations. This can lead to coordination and compatibility but it can also lead to the weakening of a certain organisation if this is in the interest of an actor. Opportunities for strategic action increase with the complexity of a governance architecture. Actors can be important bridges and links between different institutions (forum-linking). They can also strategically select organisations (forum-shopping) or shift their activities from one to another organisation (forum-shifting) (Gehring and Faude 2013, pp. 120–122; Orsini 2013, pp. 38–42; Zelli and van Asselt 2013, p. 6).

Studies related to inter-organisational interaction in the area of climate change have investigated different aspects, most prominently characterizing its structure and degree of integration (regime complexes, institutional fragmentation, climate policy integration) and the processes and mechanisms of institutional interaction. The former type of studies analyse whether regimes are integrated, compatible or conflictive while the latter type investigates the kind, density and quality of the links between organisations. Especially, research on the processes and mechanisms of institutional interaction directly links to the literature on inter-organisational relations, which investigates the links and modes of interaction at the level of organisations and bureaucracies.

While interaction management requires purposeful action, the inter-organisational relations concept includes both unintended and purposeful effects amongst organisations. Intended relations can be institutionalised through formal channels or they can constitute informal connections between individuals (Koops 2012, p. 3).

4   The Climate Organisational Complex and Its Inter-organisational Interactions

This section sketches the organisational complex of global climate governance and highlights some of the inter-organisational interactions. Its aim is to provide a broad range of examples to illustrate the vast complexity and tremendous number and kinds of interaction in global climate governance. Given the tremendous complexity of the issue, it concentrates on the main intergovernmental organisations with a (nearly) global reach without claim to exhaustiveness. Regional, subnational and other organisations also make an important contribution to climate governance, and so do private and public–private programmes. Due to space limitations, they are however not included in this section.

Climate change transcends a large number of other policy areas. For this reason, almost all international organisations address the issue in one way or the other by focusing on the implications of climate change for their particular issue area. Their focus and principal objectives diverge and place emphasis on different aspects. A number of organisations collaborate but there is also some coexistence and competition. The different organisations and their climate-related activities have been incepted at different points in time. The complex inter-organisational landscape of climate governance has evolved and grown incrementally without a central actor concerting and planning its design in its entirety. The evolution of the climate organisational complex is rather marked by a process in which existing organisations moved into the area of climate change by starting to design and implement activities and projects that relate to climate change.

4.1   The Organisational Complex and Its Fragmentation

Global climate governance exposes synergistic, cooperative and conflictive characteristics but, to the largest extent, it resembles cooperative interaction (Biermann et al. 2009, pp. 21–24). Some organisations have close links but most are rather loosely coupled (Keohane and Victor 2011, pp. 8–12). Five different types of interaction can be distinguished:

1. Unilateral activity of international organisations implementing a climate change-related programme or activity;
2. Unidirectional information provision of international organisations providing input into the UNFCCC process;
3. Information sharing amongst two or more international organisations without joint activities;
4. Implementation or execution of policy adopted by one international organisation by another international organisation (vertical interaction);
5. Joint programme adopted and implemented by two or more international organisations (horizontal interaction).

Table 31.1 summarises different international organisations' climate-related activities and inter-organisational relations. It does not claim exhaustiveness but rather aims at providing a good understanding of the contours of the climate inter-organisational complex.

The climate inter-organisational architecture has cooperative traits to the extent that it has one organisation at its core with generally loosely integrated organisations around it. Mostly, their objectives and norms are not conflicting but also not highly integrated. Organisations place the emphasis on their respective core concern and the implications of climate change thereon.

The 1992 UNFCCC, which has an almost global membership (196 parties), addresses climate change as its central concern (van Asselt and Zelli 2014, pp. 139–143). It sets the goal of stabilizing GHG concentrations at levels that would prevent dangerous anthropogenic interference with the climate but does not include concrete commitments by the parties to the Convention. The 1997 Kyoto Protocol operationalised the UNFCCC goal by setting concrete GHG emissions reduction targets for 37 industrialised countries and the European Union (Oberthür and Ott 1999). It entered into force in 2005 and the first commitment period ran from 2008 to 2012. Fewer countries agreed to a second commitment period of additional GHG reductions from 2013 to 2020 than for the first commitment period (Lau et al. 2012). Current negotiations are expected to lead to a post-2020 agreement by the end of 2015.

Another organisation that solely addresses climate change is the Intergovernmental Panel on Climate Change (IPCC). The UNEP and the World Meteorological Organisation (WMO) established it in 1988 so as to develop and synthesise climate science. The IPCC is, however, not a coordinating organisation. It rather is closely linked to and feeds scientific information into the UNFCCC process. The interaction between these two organisations comes close to a synergistic one.

The UNFCCC touches upon other policy areas such as development and finance with, for example, the Green Climate Fund that was established to provide financial resources in support of low-carbon development pathways. Moreover, since the early 2000s, climate change concerns and considerations have increasingly been included in some of the activities of existing and newly established organisations whose core objectives lie in other policy areas such as health, labour, security and development. Such unilateral climate activities are numerous as demonstrated by the second column (unilateral activity) of Table 31.1 and the illustrative discussion below, which is mainly based on data collection from the respective organisations web pages, policy documents and reports.

In the field of environmental policy, the UNEP addresses climate change as one of its core policy areas. It has implemented a number of pertinent projects and initiatives in the areas of climate change adaptation, mitigation and finance. The UNEP hosts the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), which is not part of the UNFCCC process. It operates programmes in specific sectors such as its Bioenergy Programme, its Transport Programme and its Sustainable Buildings and Climate Initiative.

Table 31.1 International Organisations' Climate-related Activities and Inter-organisational Relations

	Unilateral activity	Unidirectional information provision[3]	Mutual information sharing	Implementing another organisation's policies (vertical interaction)	Joint activity (horizontal interaction)
UNFCCC (UN Framework Convention on Climate Change)	Climate change as central concern				
IPCC (Intergovernmental Panel on Climate Change)	Climate change as central concern		Provides & synthesises scientific information on climate change		
UNEP (UN Environmental Programme)	Projects on climate change adaptation, mitigation & finance	Input into UNFCCC process		UNEP & UNIDO host Climate Technology Centre and Network (CTCN), which was agreed at Cancun UNFCCC COP UNFCCC COP in Warsaw adopted a rulebook to facilitate REDD implementation (FAO, UNDP & UNEP run UN-REDD programme)	WMO, UNEP, FAO, UNESCO & WHO convened 1st World Climate Conference UNEP & WMO established IPCC UNHRC & OHCHR co-organised seminar with UNFCCC, UNEP & UNDP on climate change & human rights Global Green Growth Institute (GGGI), OECD, UNEP & World Bank established Green Growth Knowledge Platform (GGKP) WMO, UNESCO, UNEP & International Council for Science (ICSU) established Global Climate Observing System (GCOS) FAO, UNDP & UNEP run UN Collaborative Programme on REDD UNDP-UNEP Poverty-Environment Initiative OCHA & UNEP established Joint Environment Unit (JEU) IOM, UNEP, UNU, OCHA (with non-state actors) established Climate Change, Environment and Migration Alliance (CCEMA)

UNDP (UN Development Programme)	Projects on climate change adaptation & mitigation	Input into UNFCCC process	UNFCCC COP in Warsaw adopted a rulebook to facilitate REDD implementation (FAO, UNDP & UNEP run UN-REDD programme)	UNHRC & OHCHR co-organised seminar with UNFCCC, UNEP & UNDP on climate change & human rights; WHO & UNDP joint programme on climate & health adaptation; FAO, UNDP & UNEP run UN Collaborative Programme on REDD; UNDP-UNEP Poverty-Environment Initiative; UNDP, WMO & UNISDR established Inter-Agency Working Group on Climate Change and Disaster Risk Reduction
FAO (UN Food and Agricultural Organisation)	Projects on climate change adaptation & mitigation in agriculture	Input into UNFCCC process	UNFCCC COP in Warsaw adopted a rulebook to facilitate REDD implementation (FAO, UNDP & UNEP run UN-REDD programme)	WMO, UNEP, FAO, UNESCO & WHO convened 1st World Climate Conference; FAO, UNDP & UNEP run UN Collaborative Programme on REDD; UNCCD, WMO, FAO & UNW-DPC joint capacity building project to support national drought management policies
WFO (World Food Programme) IFAD (International Fund for Agricultural Development)	Finances projects on food security Finances climate change adaptation projects	Input into UNFCCC process		

(*Continued*)

Table 31.1 (Continued)

	Unilateral activity	Unidirectional information provision[3]	Mutual information sharing	Implementing another organisation's policies (vertical interaction)	Joint activity (horizontal interaction)
UNCCD (UN Convention to Combat Desertification)	Climate change as one of its core priorities	Input into UNFCCC process Convention text explicitly supports common activities with UNFCCC (article 4, paragraph 2a)			UNCCD, WMO, FAO & UNW-DPC joint capacity-building project to support national drought management policies
UNICEF (UN International Children's Fund)	Climate Ambassador Programme Projects in developing countries on climate change & children's living conditions				
World Bank	Invested in the Clean Development Mechanism & REDD+ Provides loans & grants for climate change adaptation and mitigation	Input into UNFCCC process			Global Green Growth Institute (GGGI), OECD, UNEP & World Bank established Green Growth Knowledge Platform (GGKP) UN Habitat & World Bank (with non-state actors) launched Cities Climate Finance Leadership Alliance

Organisation		Input into UNFCCC process		
IMF (International Monetary Fund)	Provides assistance on fiscal, financial & macroeconomic challenges of climate change			
WHO (World Health Organisation)	Aims at protecting human health from climate change induced risks & vulnerabilities	Input into UNFCCC process	WHO engages in the UNFCCC Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change	WMO, UNEP, FAO, UNESCO & WHO convened 1st World Climate Conference WHO & WMO established joint Climate and Health Office WHO & UNDP joint programme on climate & health adaptation
UN Habitat (UN Human Settlements Programme)	Seeks to enhance climate change preparedness of cities	Input into UNFCCC process		UN Habitat & World Bank (with non-state actors) launched Cities Climate Finance Leadership Alliance
UNHRC (UN Human Rights Council)	Recognised climate change impact on human rights	Input into UNFCCC process		
OHCHR (Office of the High Commissioner for Human Rights)		Input into UNFCCC process	OHCHR & the UNFCCC secretariat exchange information on human rights & climate change	UNHRC & OHCHR co-organised seminar with UNFCCC, UNEP & UNDP on climate change & human rights

(*Continued*)

Table 31.1 (Continued)

	Unilateral activity	Unidirectional information provision[3]	Mutual information sharing	Implementing another organisation's policies (vertical interaction)	Joint activity (horizontal interaction)
UNHCR (UN High Commissioner for Refugees)	Conferences & research on climate-induced migration	Input into UNFCCC process			
IOM (International Organisation for Migration)	Capacity building for anticipatory policy on climate-related migration	Input into UNFCCC process			IOM, UNEP, UNU, OCHA (with non-state actors) established Climate Change, Environment and Migration Alliance (CCEMA)
ILO (International Labour Organisation)	Aims at creating green jobs	Input into UNFCCC process			
UNCTAD (UN Conference on Trade and Development)	Supports developing countries on trade & development implications & opportunities related to climate change	Input into UNFCCC process		UNCTAD Climate Change Programme includes information exchanges, studies and expert meetings with the Kyoto Protocol's Clean Development Mechanism as one of its focal areas	

UNIDO (UN Industrial Development Organisation)	Promotes more efficient & cleaner use of energy & renewable energy	Input into UNFCCC process	UNEP & UNIDO host Climate Technology Centre and Network (CTCN), which was agreed at Cancun UNFCCC COP; GEF grants UNIDO direct access to GEF Trust Fund
World Tourism Organisation	2007 declaration on climate change & tourism	Called for incorporation of tourism into UNFCCC commitments	
ITU (International Telecommunications Union)	Awareness raising on role of ICTs in climate change monitoring, mitigation & adaptation	Input into UNFCCC process	
ICAO (International Civil Aviation Organisation)	Develops guidelines on emission trading in aviation	Input into UNFCCC process	
IMO (International Maritime Organisation)	Aims at minimizing emissions from ships	Input into UNFCCC process	
UNU (UN University)	Conducts climate change-related research	Input into UNFCCC process	IOM, UNEP, UNU, OCHA (with non-state actors) established Climate Change, Environment and Migration Alliance (CCEMA)

(*Continued*)

Table 31.1   (Continued)

	Unilateral activity	Unidirectional information provision[3]	Mutual information sharing	Implementing another organisation's policies (vertical interaction)	Joint activity (horizontal interaction)
UNITAR (UN Institute for Training and Research)	Climate-related training, capacity building & knowledge sharing in developing countries	Input into UNFCCC process		Capacity building in developing countries to implement the UNFCCC	Collaborates with numerous UN organisations on CC: Learn knowledge-sharing platform
WMO (World Meteorological Organisation)	Processes meteorological & climatological data & information exchange	Input into UNFCCC process			WMO & UNEP established IPCCC WMO, UNEP, FAO, UNESCO & WHO convened 1st World Climate Conference WMO, UNESCO, UNEP & International Council for Science (ICSU) established Global Climate Observing System (GCOS) WHO & WMO established joint Climate and Health Office UNCCD, WMO, FAO & UNW-DPC joint capacity building project to support national drought management policies UNDP, WMO & UNISDR established Inter-Agency Working Group on Climate Change and Disaster Risk Reduction
IEA (International Energy Agency)	Reports & data on climate & energy	Input into UNFCCC process			
UNISDR (UN Office for Disaster Risk Reduction)	Supports for integration of disaster reduction & climate change policy	Input into UNFCCC process			UNDP, WMO & UNISDR established Inter-Agency Working Group on Climate Change and Disaster Risk Reduction

Organisation		Input into UNFCCC process		
DESA (UN Department of Economic and Social Affairs)	Research on nexus between social, economic & climate change issues			
UNESCO (UN Educational, Scientific and Cultural Organisation)	Promotes climate change adaptation & mitigation through education & research	Input into UNFCCC process		WMO, UNEP, FAO, UNESCO & WHO convened 1st World Climate Conference; WMO, UNESCO, UNEP & International Council for Science (ICSU) established Global Climate Observing System (GCOS)
UN Security Council	Acknowledges importance of climate security			
OECD (Organisation for Economic Co-operation and Development)	*Support for transition to low-carbon and climate-resilient economies*	Input into UNFCCC process		Global Green Growth Institute (GGGI), OECD, UNEP & World Bank established Green Growth Knowledge Platform (GGKP)
GEF (Global Environment Facility)		Input into UNFCCC process	In charge of the financial mechanism under the UNFCCC; GEF grants UNIDO direct access to GEF Trust Fund	
OCHA (UN Office for Cooperation of Humanitarian Affairs)	Supports better disaster planning & preparedness to reduce effects of extreme weather	Input into UNFCCC process		OCHA & UNEP established Joint Environment Unit (JEU); IOM, UNEP, UNU, OCHA (with non-state actors) established Climate Change, Environment and Migration Alliance (CCEMA)

(Continued)

Table 31.1   (Continued)

	Unilateral activity	Unidirectional information provision[3]	Mutual information sharing	Implementing another organisation's policies (vertical interaction)	Joint activity (horizontal interaction)
Secretariat of the Convention on Biological Diversity (CBD)	Reference to UNFCCC included in voluntary guidelines on safeguards in biodiversity financing mechanisms	Input into UNFCCC process			
Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)		Input into UNFCCC process			

The UN Development Programme (UNDP) is the largest service provider in the UN system on climate change adaptation and mitigation. It funds pertinent projects in a large number of developing countries with the goal to ensure that climate change does not disrupt poverty reduction efforts and contributes to low-carbon climate-resilient development. The UNDP strives to integrate climate change into its activities so as to build resilience and sustainable development. In 2014, it had allocated about $390 million to 385 projects related to climate change adaptation, mitigation and sustainable energy, which amounts to 7 per cent of the overall UNDP project budget.

In the field of food and agriculture, the UN Food and Agricultural Organisation (FAO) is a driver of disseminating practices related to climate-smart agriculture. It runs, for example, the Economic and Policy Innovations for Climate-Smart Agriculture (EPIC) programme that implements projects aiming at transitioning to climate-smart agricultural practices through research, policies and investments. The FAO also runs projects on climate change adaptation and on the mitigation of climate change in agriculture. Given the tight interlinkage between agriculture and climate change, a large number of FAO's projects explicitly or implicitly relate to climate change adaptation or mitigation. The World Food Programme (WFO) funds projects on to prepare for climate-related disasters that endanger food security, including climate change adaptation, food security analysis and capacity building. Also, the International Fund for Agricultural Development (IFAD) finances climate change adaptation projects.[4]

Climate change is one of the thematic priorities of the UN Convention to Combat Desertification (UNCCD). The UNCCD explicitly supports common activities with the UNFCCC (article 4, paragraph 2a) and aims at ensuring that desertification is addressed in the climate negotiations. In 2011, the UNCCD adopted an advocacy policy framework on climate change that aims at mainstreaming desertification into the UNFCCC negotiations. It identified concrete operational linkages between the two organisations (International Convention to Combat Desertification, Committee for the Review of the Implementation of the Convention ICCD/CRIC (10)/19).

In the field of human rights, the UN Human Rights Council (UNHRC) has recognised that climate change can have impacts on the enjoyment of human rights in a 2008 resolution (Resolution 7/23). Climate change is likely to affect, in particular, already vulnerable parts of the population. Human rights such as the right to safe and adequate water and food, the right to health and the right to adequate housing are threatened by climate change. The UN International Children's Fund (UNICEF) actively advocates for the inclusion of children-centred efforts in global climate governance. It funds projects in developing countries on climate change and children's living conditions. These projects include the dissemination of more efficient, less polluting cookstoves and delivering safe water with solar-powered pipes.

The World Bank has integrated climate change in parts of its activities since the late 1990s when it included investments in the Clean Development Mechanism (CDM) that was established under the Kyoto Protocol. The World

Bank runs a programme on Reducing Emissions from Deforestation and Degradation and forest enhancement (REDD+) and GHG emissions trading. Under its Partnership for Market Readiness, the World Bank engages in capacity building and sharing lessons about market-based mechanisms for climate change mitigation. The World Bank's lending and granting activities include climate change. In 2013, the World Bank provided loans worth $6.5 billion for projects with mitigation co-benefits and $2.9 billion for projects with adaptation co-benefits. It also operates a climate change data portal providing climate-related data to policy-makers. The World Bank's Climate-Smart Planning Platform provides countries with information about climate-resilient and low-carbon development tools. The International Monetary Fund (IMF) provides assistance to address the fiscal, financial and macroeconomic challenges of climate change. It has developed different guidance documents, for example, on fiscal policy to mitigate climate change. The extent, however, to which climate is mainstreamed into IMF activities is limited.

The World Health Organisation (WHO) was requested by the 2008 World Health Assembly to develop a work plan on protecting human health from climate change, which was presented to and endorsed by the 2009 assembly (WHO A 62/11). The work plan includes support for developing countries on assessing and monitoring health vulnerabilities, risks and impacts resulting from climate change, and identifying strategies and actions to address the vulnerabilities and risks.

In the field of migration and settlements, the UN Human Settlements Programme (UN Habitat) focuses on the interaction between cities and climate change. It funds projects in developing countries to develop urban mitigation and adaptation strategies. The UN Habitat Cities and Climate Change Initiative (CCCI) seeks to enhance preparedness and mitigation of cities in developing countries. More than half of global GHG emissions come from urban areas. Tackling climate change often coincides with improving air quality, public transportation, and so on, which brings co-benefits to cities. The UN High Commissioner for Refugees (UNHCR) addresses human rights issues relating to displacement induced by climate change. It organises conferences and conducts research on climate-induced migration and conflicts. The International Organisation for Migration (IOM) engages in capacity building for anticipatory policy-making on climate-related migration. Climate change will affect people's livelihoods, which can lead to migratory movements.

In the area of labour and industrial development, the International Labour Organisation (ILO) focuses on so-called green jobs by promoting low-carbon labour markets. It funds a number of projects in developing and mid-income countries on this issue. The UN Conference on Trade and Development (UNCTAD) supports developing countries addressing the trade and development implications of climate change and seizing related opportunities. The UN Industrial Development Organisation (UNIDO) focuses on two strategic areas: The cleaner and more efficient use of energy in industrial operations and the use of renewable energy sources for production-related activities in rural areas. The World Tourism Organisation adopted a declaration on climate change and tourism in 2007. The International Telecommunications Union (ITU) raises

awareness of the key role information technology is playing in climate change monitoring, mitigation and adaptation and promotes transformative solutions.

In the transportation field, the International Civil Aviation Organisation (ICAO) addresses GHG emissions from international aviation. In 1996, it adopted a resolution on the use of emission-related levies and, in 2001, the ICAO Assembly requested its Council to develop guidance on market-based measures that aim at reducing GHG emissions from aircraft (Resolution A36-22). ICAO has published guidelines on the use of emissions trading and emission-related levies. In 2013, the Assembly agreed to develop a global market-based measure for the aviation sector by 2016 to take effect as from 2020 (Lindenthal 2014, pp. 1071–1075). GHG emissions from international shipping are anticipated to grow in the future. It is however also a sector that is neither directly regulated by an international agreement nor by the UNFCCC regime (Hackmann 2011). The International Maritime Organisation (IMO) adopted an annex to the International Convention for the Prevention of Pollution from Ships (MARPOL) that aims at minimising airborne emissions such as sulphur oxides (SO_X), nitrous oxides (NO_X) and ozone-depleting substances from ships but it does not include the other GHG emissions that are covered by the UNFCCC. A mandatory energy efficiency standard aims at reducing CO_2 emissions from maritime transport.

In the field of research and training, the UN University (UNU) conducts various research programmes related to climate change. The UN Institute for Training and Research (UNITAR) engages in capacity building in developing countries to implement the UNFCCC. It provides training including capacity building for education and training institutions, national learning strategies and knowledge sharing. It works together with numerous other UN organisations on the UN CC: Learn knowledge-sharing platform.

Various kinds of organisations generate data and conduct research related to climate change in combination with their respective focus. The WMO promotes cooperation for meteorological and climatological research, processes-related data and facilitates the exchange of information. The International Energy Agency (IEA) issues reports and data that support decision-making on climate change. The UN Office for Disaster Risk Reduction (UNISDR) develops guidance and supports governments in developing policies that integrate disaster reduction and climate change. The UN Department of Economic and Social Affairs (DESA) provides research on the nexus between social and economic issues and climate change. It assists governments build their capacity to adopt national sustainable development strategies and fosters the UN Partnerships for Sustainable Development, which includes climate change aspects. The UN Educational, Scientific and Cultural Organisation (UNESCO) has developed a strategy for action on climate change, which includes the building of a climate change knowledge base and the promotion of climate change mitigation and adaptation through education.

The UN Security Council held its first-ever debate on climate security in 2007. The debate was called by the UK and supported by a number of countries; yet some others such as China argued that the Security Council was not the appropriate venue for discussing climate change.

The overview of the various international organisations' unilateral activities addressing numerous aspects of climate change and its implications demonstrates

the vast complexity and also the largely synergetic nature of the complex. Most activities address different angles of the problem. The climate organisational complex bears however also some potential for conflictive fragmentation. One of them lies in the potentially conflictive nature between climate and development objectives in a situation of limited financial resources. With the increasing emphasis on climate financing, the additionality of such funds has become a controversial topic. When funding achieves both climate and development goals at the same time, there is no apparent problem but some criticise that financial resources are deviated from addressing pressing development needs to addressing climate objectives (Ayers and Huq 2009; Roberts et al. 2009). This area has not received much analytical attention yet. Whether and to which extent such shifts in financing occur requires further investigation.

Probably, the most visible tension between organisations could be between the World Trade Organisation (WTO) and climate-related organisations. The WTO sets barriers for compensatory measures at a country's borders when it plans to adopt ambitious domestic climate policy and wishes to level the playing field with competitors from international markets that have not adopted such policies (Michonski and Levi 2010, p. 4).

4.2   *Organisational Interaction*

The subsection above sketched the characteristics of the climate organisational complex as largely cooperative. As its scope demonstrates, there is a large number of unilateral activities by numerous international organisations integrating climate concerns in their policies and activities, most of which are synergetic. To form a complex, these organisations need some structural interaction. Indeed, many organisations are connected through various ties in the form of information sharing amongst two or more organisations, implementation of one organisation's policy by another organisation and joint activities of two or more organisations. This subsection provides illustrative examples for these structural interactions.

A large number of international organisations attend the UNFCCC Conferences of the Parties (COPs) and organise a number of side events. As shown in the third column (unidirectional information provision) of Table 31.1, most international organisations that have adopted a climate change-related programme or activity also have submitted input to UNFCCC negotiations. One example is the UNHRC, which decided at its tenth session in 2009 to submit a report of its workshop on human rights and climate change to the UNFCCC COP. The World Tourism Organisation, for instance, called for the incorporation of tourism into the existing UNFCCC commitments and urged governments and international organisation to provide financial and technical support to the tourism sector in developing countries.

An example of unilateral coordination can be found in the Convention on Biodiversity (CBD), which has highlighted the interrelation between climate change and biodiversity at various occasions (van Asselt 2012). In their 2014 COP Decision, a reference to the UNFCCC was included in the voluntary

guidelines on safeguards in biodiversity financing mechanisms and called upon the UNFCCC to consider biodiversity co-benefits in its funding mechanisms. Climate change is one of the drivers of biodiversity loss while conserving and restoring ecosystems contributes to adapting to climate change and to removing GHG emissions from the atmosphere through so-called carbon sinks. The interaction between the CBD and the UNFCCC is mainly unilateral through including climate considerations into biodiversity decisions.

Various incidents of horizontal information exchange between organisations can be observed. For example, the OHCHR and the UNFCCC secretariat exchange information on human rights and climate change. The UNHRC and the OHCHR co-organised a seminar together with the UNFCCC, the UNEP and the UNDP on climate change and human rights. WHO engages in the UNFCCC Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change, a mechanism to develop and disseminate information to support adaptation policies, so as to ensure appropriate inclusion of the health sector. It also includes coordination with other UN organisations to ensure appropriate representation of health issues on the climate agenda. The WMO, UNEP, FAO, UNESCO and WHO convened the first World Climate Conference in 1979. The purpose was to evaluate the state of knowledge on climate change and its effects on society. This led to the adoption of the World Climate Programme and the World Climate Research Programme. The Global Green Growth Institute (GGGI), the OECD, the UNEP and the World Bank jointly established the Green Growth Knowledge Platform (GGKP), a global network of international organisations and experts that aims at addressing knowledge gaps in green growth, including climate change. The Global Climate Observing System (GCOS) is a joint programme of the WMO, the Intergovernmental Oceanographic Commission (IOC) of the UNESCO, the UNEP and the International Council for Science (ICSU). It aims at monitoring the climate system, analysing climate change, its impacts and improve prediction of the climate system.

Incidents of vertical interaction in which the UNFCCC sets the parameters for the activities of other organisations that implement UNFCCC policy can also be observed. For example, the UNCTAD Climate Change Programme includes information exchanges, studies and expert meetings with the Kyoto Protocol's CDM as one of its focal areas and established a Global Policy Forum on Carbon Markets in 1997. The Global Environment Facility (GEF) is the largest provider of funds for environmental projects, including climate change. It is the financial mechanism of the UNFCCC and allocates funding to projects on energy efficiency, renewable energy, sustainable urban transportation, and sustainable land use and forestry management. The GEF also manages climate change adaptation funds under the UNFCCC.

Organisations can also endorse other organisation's activities like in the case of the UNICEF Climate Ambassador Programme, which creates a network of young climate activists and empowers and trains young people to engage in climate activities and debates. The UN Commission on Sustainable Development (UNCSD) recognises this programme as a critical approach.

A large number of various kinds of inter-organisational joint projects and initiatives have emerged. For example, in the food and health field, the WHO and the WMO established a joint Climate and Health Office under the auspices of the Global Framework for Climate Services (GFCS). It aims at improving and expanding meteorological services related to climate change and supports their uptake by the health, food security, water and disaster risk reduction sectors. Moreover, the WHO and the UNDP implement a joint programme on climate and health adaptation.

The FAO, UNDP and UNEP run together the UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD). At the UNFCCC COP in Warsaw, the REDD mechanism received strong support. A rulebook to facilitate REDD implementation was adopted. It is thus an incidence of both a collaborative project but also vertical interaction with the UNFCCC setting some parameters for the REDD programme. Another incidence of vertical impetus by the UNFCCC for inter-organisational collaboration is the Climate Technology Centre and Network (CTCN), which is hosted by the UNEP and UNIDO was agreed at the Cancun UNFCCC COP. The CTCN operationalises the UNFCCC Technology Mechanism, which is at the same time an example of how commitments in one organisation influence activities by another. The CTCN promotes the acceleration and upscaling of low-carbon technologies and innovations by stimulating technology cooperation and transfer. It is an example of integrated activity supported by different organisations.

In various aspects of climate policy, inter-organisational relations can be noted. The UNDP and the UNEP established the UNDP–UNEP Poverty–Environment Initiative, which supports country-level activities to mainstream objectives related to the nexus poverty–environment into national development planning. The UNCCD, the WMO, the FAO together with the UN Water Decade Programme on Capacity Development (UNW-DPC) launched a joint capacity-building project to support national drought management policies in 2013. At the 2014 UN Secretary-General's Climate Change Summit, various development and financial organisations, including UN Habitat and the World Bank, together with non-state actors launched the Cities Climate Finance Leadership Alliance. The goal is to accelerate investment in climate-smart urban infrastructure.

Joint programmes in the field of migration and disaster response it the UN Office for Cooperation of Humanitarian Affairs (OCHA) and the UNEP have established a Joint Environment Unit (JEU) for preparedness and response to environmental emergencies. This combines UNEP's technical expertise with OCHA's humanitarian response structure. An Inter-Agency Working Group on Climate Change and Disaster Risk Reduction was established in 2004 by UNDP, WMO and UNISDR. It gathers and shares good practices, provides policy guidance to the UNFCCC process and develops methods for GHG emissions reductions. The Inter-Agency Standing Group (IASG), which coordinates humanitarian assistance, also includes climate change in its activities.

The IASG produced a working paper on operational and analytical gaps in humanitarian response policies with regard to the impacts of climate change. This paper was also submitted to the UNFCCC. The IOM, UNEP, UNU, OCHA together with some non-state actors, established the Climate Change, Environment and Migration Alliance (CCEMA). CCEMA's main objective is to foster the mainstreaming of environmental and climate change considerations into migration policies and to bring migration concerns to the international climate negotiations.

An example of integrated structures is the case of the GEF granting the UNIDO direct access to resources from the GEF Trust Fund for projects related to climate change, amongst other issues. Another highly integrated structure is the GEF that is formally in charge of the financial mechanism under the UNFCCC.

The Montreal Protocol regulates ozone-depleting substances that also affect climate change. The success and effectiveness of this organisation has had positive influence on efforts to reduce GHG emissions. This is an example of one organisation influencing the effectiveness of another. Yet, the challenge of combating climate change is so enormous that the positive contribution is not sufficient to exert a decisive influence (Fig. 31.1).
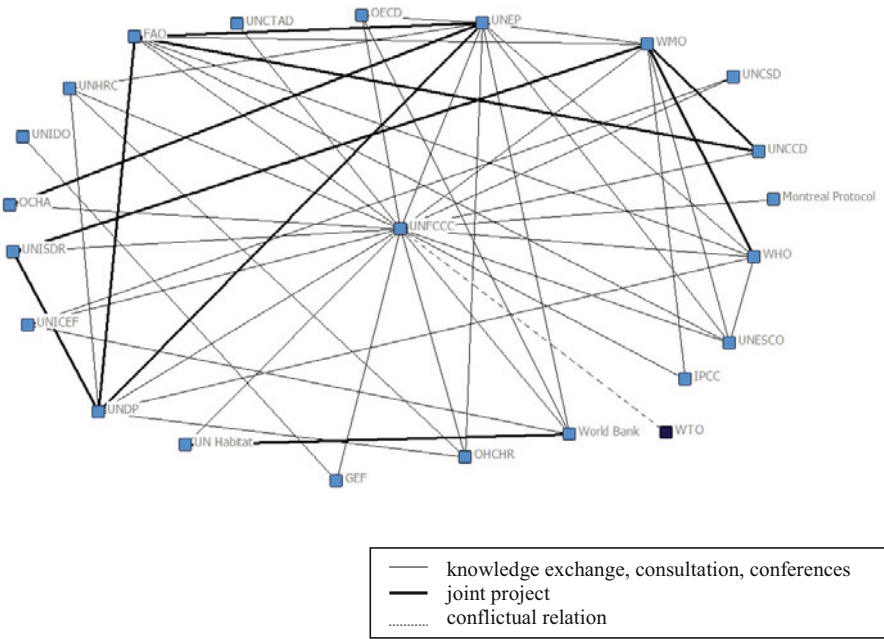

Fig. 31.1 Inter-organisational relations in combating climate change (non-exhaustive)

4.3   Interplay Management

While most of the joint initiatives outlined in the previous subsection are ways of horizontally integrating the different organisations' activities, there are also some hierarchical and unilateral incidents of interplay management. The main one is the UN System Chief Executives Board for Coordination (CEB), which is chaired by Secretary-General Ban Ki Moon and aims at strengthening coordination amongst UN organisations. It has a Working Group on Climate Change, established in 2007. Working Group members exchange information, coordinate activities of the UN system through joint programming and organise their contribution to the UNFCCC process. It works on strengthening the UN system's joint communication on the benefits of low-carbon growth and coordinates the participation of the UN system at the UNFCCC COPs. UN system-wide events were organised at the COP20 in Lima. The UN-wide Millennium Development Goal #7 aims at ensuring environmental sustainability, which includes climate change.

To provide top-level impetus and commitment, UN Secretary-General Ban Ki Moon organised a Climate Summit in September 2014 to which he invited heads of states and governments to garner high-level support for international climate negotiations. At this occasion, leaders pledged financial assistance for low-carbon growth. The Secretary-General also initiated the Sustainable Energy for All (SE4ALL), which promotes renewable and efficient energy use.

In 2009, the GFCS was established at the World Climate Conference-3. Spearheaded by the WMO, it aims at guiding the development and dissemination of science-based climate-related information to support decision-making. The sectors covered cut across the issue areas of many international organisations such as agriculture, food security, health, energy, transportation and megacities.

5   CONCLUSIONS

As the previous section has shown, inter-organisational interactions in the field of climate governance are vast and diverse. Compared to other policy areas, these relations are more dense and numerous, which becomes clear when comparing this to other chapters of this Handbook. This chapter does not explore the specific and detailed driving factors for the adoption of individual initiatives and joint projects. It can however be concluded that the characteristics of climate change make it an issue that is highly palatable to inter-organisational relations. The nature of the issue of climate change as a highly complex one that transcends most other policy areas seems to provide an explanation for this observation. Climate change affects and is affected by most other human and natural activities. Agricultural, economic, social, developmental, scientific and many other issues are affected by and contribute to climate change. They can contribute to climate change mitigation and adaptation. This issue

interlinkage lies at the source of the complex web of inter-organisational relations. The salience and urgency of the problem of climate change is a second contributing factor to explaining why a large number of international organisations engage in various related activities.

This chapter provided an overview of the complex landscape of climate inter-organisational interaction. It illustrated that the climate organisational complex is of largely collaborative nature with one core organisation, the UNFCCC, and a large number of other organisations that address different aspects of climate change that relate to their core objective such as health, human rights and migration. The largely collaborative fragmentation can be an opportunity but also a problem. While some authors consider regime complexity and fragmentation an opportunity because it provides for greater flexibility and adaptability (Keohane and Victor 2011), others take a more critical stance and consider fragmentation problematic. It can create opportunities for actors to engage in selective participation so as to avoid some provisions and foster their own interests (Gehring and Faude 2014, p. 476; Orsini 2013, p. 36; Van de Graaf 2013). Empirical evidence exists for both points of view and further research could contribute to generating more insights into this challenging puzzle.

While an extensive web of interaction amongst various organisations has emerged, the depth and intensity of these inter-organisational relations remain relatively light and superficial. The system is loosely integrated, including unilateral climate activities, inter-organisational information exchange but also some closer cooperation in the form of joint programmes. The UNFCCC is the hub of this system. Interplay management is also the objective of the UN System CEB, which has established a Working Group on Climate Change.

The inter-organisational interaction in global climate governance was only sketched by using exemplary evidence. This topic provides a vast field for further research inspired by network theories and methods. While there is a growing body of literature on the interplay between two or few institutions, analyses of the overarching climate architecture and its degree of inter-organisational relations and fragmentation have not been conducted so far (Zelli 2011, pp. 263–264), which bears some potential for future research.

Notes

1. The author would like to thank Marie Lorent for her excellent research support.
2. See Jönsson, this Handbook.
3. Mainly based on the list of official UNFCCC submissions by intergovernmental organisations: http://unfccc.int/parties_observers/igo/submissions/items/3714.php
4. For further details on these organizations, see also the chapter by Matias Margulis on Food Security and Global Governance in this Handbook.

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