

The Anthropocene: Politik–Economics–Society–Science

Zerrin Savaşan



Paris Climate Agreement: A Deal for Better Compliance?

Lessons Learned from the
Compliance Mechanisms of the Kyoto
and Montreal Protocols



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*To all those
who understand their responsibility
to the environment
and the future*

Preface

“However much you know, what you say is as much as what is understood of it.”

Mevlana Jalaluddin Rumi (1207–1273)

With the inspiration of Mevlana, the main aim of this book has been to make it as easy to understand as possible. Therefore, from the beginning, simplification and clarification have been the fundamental targets during the writing process. Yet, due to the fact that its main research subject, ‘compliance/compliance mechanisms’, with their increasing number of legal documents and institutions, has a very complicated structure, achieving these targets has not been easy in some phases. In fact, during the writing process, while trying, on the one hand, to simplify the issues in order to make every aspect of the book more understandable, I have tried, on the other hand, to avoid restricting its scope and meaning.

Despite the difficulties, undertaking detailed research on innovative compliance mechanisms (CMs) has enabled me to gain extensive knowledge of compliance issues in general and compliance mechanisms in particular, and also gain experience in researching this kind of highly complex issue. In addition, as the CMs have been created in very recent decades in most of the MEAs, and most of those are still in the process of being developed, but have not been completely developed yet, the book’s attempt to be one of the first to ask how to enhance compliance with CMs under MEAs, and to contribute to discussions on them and also to the recent debate on the options for an improved compliance system under the Paris Climate Agreement (PCA), has made both the research and the writing process more challenging but, at the same time, more exciting for me.

While coming to the end of this research adventure—full of challenges but also full of joy and motivation resulting from new avenues endowing the author with new areas for exploration—in line with Mevlana’s words, I just hope now that I have succeeded in explaining everything clearly enough to be understood correctly by the book’s readers.

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This work is based on my unpublished Ph.D. thesis (entitled ‘CMs under Multilateral Environmental Agreements (MEAs): A Comparative Analysis of CMs under Kyoto and Montreal Protocols’), which was submitted to the Graduate School of Social Sciences, Middle East Technical University (METU), on 10 May 2013. It was updated/revised in line with the recent developments, and its focus was shifted towards fostering discussion on whether the Paris Climate Agreement (PCA) is a deal for better compliance, what it promises for improving compliance and how to enhance compliance under the PCA.

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Acronyms and Abbreviations

AAUs	Assigned amount units
AF	Adaptation Fund
AG-13	Ad Hoc Group on article 13, UNFCCC
ARR	Annual report review
Art./Arts.	Article/Articles
CBDR	Common but differentiated responsibility
CBDR-RCs	Common but differentiated responsibility and respective capabilities
CDM	Clean development mechanism
CEIT	Countries with economies in transition
CERs	Certified emission reductions
CFI	Court of first instance
CH ₄	Methane
CISs	Commonwealth of Independent States
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CM	Compliance mechanism
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO ₂	Carbon dioxide
ComplCom	Compliance Committee
COP	Conference of the Parties
CSD	Commission on Sustainable Development
DSP	Dispute settlement procedure
DSU	Understanding on rules and procedures governing the settlement of disputes
EC	European Court of Justice
ECHR _s	European Convention on Human Rights
ECtHR _s	European Court of Human Rights
EEAP	Environmental Effects Assessment Panel
EEC Treaty	European Economic Community Treaty

EGTT	Expert Group on Technology Transfer
EMEP	Cooperative programme for the monitoring and evaluation of the long-range transmission of air pollution in Europe
ERR	Expedited review report
ERT	Expert review team
ERUs	Emission reduction units
ET	Emission trading
GC	Governing Council
GCF	Green Climate Fund
GEF	Global environment facility
GEG	Global environmental governance
GEOMAP	Global Environmental Observing, Monitoring and Assessment Programme
GHGs	Greenhouse gases
HFCs	Hydrofluorocarbons
IAEA	International Atomic Energy Agency
ICJ	International Court of Justice
IDR	In-depth review
IEL	International Environmental Law
IEP	International Environmental Politics
IET	International Emission Trading
IGOs	Intergovernmental organizations
IL	International Law
ILO	International Labour Organization
IMF	International Monetary Fund
ImplCom	Implementation Committee
INDCs	Intended nationally determined contributions
IO	International organization
IPCC	Intergovernmental Panel on Climate Change
IRs	International relations
IRD	International Regimes Database
IRR	Initial review report
ITLOS	International Tribunal on the Law of the Sea
ITPGRFA	International Treaty on Plant Genetic Resources
ITTA	International Tropical Timber Agreement
IUCN	International Union for the Conservation of Nature
JI	Joint implementation
JWG	Joint Working Group
KP	Kyoto Protocol
LDCF	Least Developed Countries Fund
LoA	Logic of appropriateness
LoC	Logic of consequences
LoTs	Law of Treaties
LRTAP	Convention on Long-range Transboundary Air Pollution
LULUCF	Land use, land-use change and forestry

MARPOL	International convention for the prevention of maritime pollution from ships
MCP	Multilateral consultative process
MEA	Multilateral Environmental Agreement
MF	Multilateral Fund
MOPs	Meeting of the Parties
MP	Montreal Protocol on substances that deplete the ozone layer
N ₂ O	Nitrous oxide
NAPAs	National Adaptation Programmes of Action
NCM	Non-compliance mechanism
NCP	Non-compliance procedure
NDC	Nationally determined contributions
NGOs	Non-governmental organizations
ODSs	Ozone-depleting substances
OECD	Organisation for Economic Co-operation and Development
OEWG	Open-ended Working Group
Para./Paras.	Paragraph/Paragraphs
PCA	Paris Climate Agreement
PCA-CPA	Permanent Court of Arbitration
PFCs	Perfluorocarbons
PPFC	Prototype Carbon Fund
PRTR	Protocol on Pollutant Release and Transfer Registers
QoI	Question of implementation
RoP	Rules of procedure
RUs	Removal Units
SAP	Scientific Assessment Panel
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCCF	Special Climate Change Fund
SF ₆	Sulphur hexafluoride
TEAP	Technology and Economic Assessment Panel
TF	Trust Fund
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	UN Conference on Trade and Development
UNDP	UN Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	UN Industrial Development Organization
UNITAR	UN Institute for Training and Research
VC	Vienna Convention for the Protection of the Ozone Layer
VCLT	Vienna Convention on the Law of Treaties
WCO	World Customs Organisation
WEC	World Environment Court

WG	Working Group
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

Chapter 1

Introduction



Intellectuals solve problems, geniuses prevent them.
Albert Einstein (1879–1955)

1.1 The Development of a Global Environmental Governance and the Problem of Effective Compliance with Multilateral Environmental Agreements

There have been always environmental problems in human history.¹ Of these, local and regional problems were first recognized as a major cause of concern. Global environmental problems, on the other hand, were recognized just four decades ago.

Indeed, human beings realized that environmental problems constituted a major cause of global concern in the late 1960s. In this period, it was realized that global environmental problems, like global economic politics, cut across state borders and give rise to troubles and conflicts arising from interdependence; and these troubles can only be dealt with through an internationally coordinated global environmental policy that can be achieved merely through effective international cooperation.

International cooperation has actually been taking place through participation in international organizations at global, regional and subregional levels since the early nineteenth century. To illustrate, the Congress of Vienna in 1815 and the series of conferences, such as the Hague Peace Conferences, which followed it, were the forerunners of the international cooperation that takes place today in the United Nations (UN).

When the UN was established in 1945, immediately after the Second World War (WW II), there were a large number of independent states participating in the

¹In the final analysis, environmental problems result not just in the destruction of nature, but also in the destruction of human nature and so in the loss of moral values as well (Kalpaklı 2017). As the positive sciences are not enough to raise environmental consciousness among ‘humans’, who are the primary cause of the destruction, social sciences emerge as fundamental tools for creating environmentally-friendly generations (Kalpaklı 2014).

international arena. Such a large number of states with diverse interests had made the task of achieving international cooperation complicated (Soroos/Marvin 1999: 27).

Despite this, the UN was able to promote, create and operate international cooperation over time. Particularly, with regard to addressing global environmental problems, it has played a fundamental role at the international level. Thus, greatly changing the existing system, it has become an important actor in the entire international legal order, and also in the development of globally coordinated environmental law and policy (Birnie/Boyle 1992: 33).

Indeed, the UN, with its crucial organs, significant conferences, specialized agencies and semi-autonomous bodies, has greatly contributed to the development of international environmental law and environmental policy-making.

The five global conferences, namely,

- The United Nations Conference on the Human Environment (UNCHE), commonly referred to as the Stockholm Conference convened in Stockholm, Sweden, in 1972
- The United Nations Conference on Environment and Development (UNCED), also known as the Rio Conference or the Earth Summit 1992, held at Rio de Janeiro, Brazil, in 1992
- The World Summit on Sustainable Development (WSSD), commonly referred to as the Rio+10 or the Earth Summit 2002, which took place in Johannesburg, South Africa, in 2002
- The United Nations Conference on Sustainable Development (UNCSD), also known as the Rio+20 or the Earth Summit 2012, convened in Rio de Janeiro, Brazil, in 2012
- The United Nations Sustainable Development Summit (UNSDS) held for the adoption of the post-2015 development agenda and convened in New York, United States of America (USA), in 2015

Have represented a massive effort to strengthen institution-building on environmental issues and to reduce various problems (Andresen 2007a: 318; Andresen 2007b: 457, 458; DeSombre 2006: 37).

It is here also necessary to mention the existence of numerous UN specialized agencies, such as the International Labour Organization (ILO), the World Health Organization (WHO), the International Monetary Fund (IMF), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and semi-autonomous bodies like the UN Development Programme (UNDP), the UN Institute for Training and Research (UNITAR), the UN Conference on Trade and Development (UNCTAD) and the UN Industrial Development Organization (UNIDO), which have greatly contributed to intergovernmental forums for different aspects of the global environmental agenda.

In brief, the UN system has mostly shaped and framed the environmental agenda to date. It has fostered the development of international environmental law and tried to cope with the challenges of global environmental problems which range from

climate change to pollution, from extinction of species to deforestation. However, at the same time, it has promoted the establishment of numerous structures, and thus the proliferation of international environmental institutions having mandate over different aspects of environmental problems. This is because, in the UN system, there has been no single institution which controls the management of global environmental issues. There have been a great number of other official and semi-official organizations and agencies also working in fields concerning global environmental protection (Hunter 2002: 217). So there have always been problems of coherence and compliance in the system, despite the strengthening – more or less – of the legal framework negotiated under the UN.

In addition to the continuing growth of the UN system, the number of MEAs has also rapidly increased, particularly in the period from Stockholm to Rio (Sand 2007), since the MEA, namely, the Convention on the Rhine, adopted in 1868 (Dodds 2001). This activity had led to almost 700 MEAs and 1,000 bilateral environmental agreements (BEAs) by the early twenty-first century (Mitchell 2003).² This increase in the number of MEAs, while creating ‘treaty congestion’ on the one hand, has also caused the decentralization of the institutional structure, on the other hand (Hunter et al. 2002; Sand 2007; Weiss 1995).³ This is because all MEAs have established their own institutional bodies, such as the Conference of the Parties (COPs) and Meeting of the Parties (MOPs), which provide their operation in practice.

In recent decades, the international system has also changed in many aspects. In fact, even though states have remained as the main actors of the system, particularly in some areas, like global environmental issues, non-state actors – such as inter-governmental organizations (IGOs), non-governmental organizations (NGOs) and transnational corporations – playing progressive roles that directly or indirectly affect the global environment policies have also begun to be effective in global environmental law and policy.

Overall, to date, a great number of massive efforts-agreements, organizations and mechanisms have been created and developed for international cooperation for global environmental protection. This proliferation of institutions, agreements and actors in environmental issues has led to a great number of growing challenges which wait to be resolved; suffice here to mention fragmentation of global environmental governance (GEG),⁴ lack of cooperation and coordination among

²It should be noted that as there is no consensus on their number among the researchers, it is possible to find different numbers in different researches. See also Kanie (2007: 68).

³Hunter et al. (2002: 455) also distinguish two categories of treaty congestion: substantive treaty congestion, implying the overlap of treaties’ requirements, and procedural treaty congestion, implying the over-extension of the limited time and resources necessary to ensure compliance and to negotiate new agreements.

⁴Biermann et al. (2009) argues that there have been various degrees of fragmentation and that three criteria can be employed to differentiate them: degree of institutional integration; degree of overlap between decision-making systems; existence and degree of norm conflicts and type of actor constellations. Based on these criteria, he proposes to differentiate between three types of

international organizations, and lack of implementation, enforcement, effectiveness and compliance (Andresen 2007a, b; Arts/Leroy 2006; Gupta 2002; Mehta et al. 2001; Najam et al. 2006).

This situation has also led to an immense debate among scholars on the possible need and potential directions of a reform in the GEG to deal with these challenges. Within this debate, many proposed schemes – ranging from the reform of UNEP (Meyer-Ohlendorf/Knigge 2007), or the UN (Chambers 2005) to the creation of a World or Global Environmental Organization (Biermann 2007; Charnovitz 2002, 2005; Montini 2011; Rechkemmer 2005; Simonis 2002a, b), or a sort of permanent G-20 meeting on environment and sustainable development, based on the present G-20 mode (Montini 2011), or a World Environment Court (Pauwelyn 2005; Rest 2000) – have been discussed among scholars to eliminate the weaknesses of the system.

Yet, despite efforts and attempts to strengthen and reform it, it seems that the immense growth of the system seems to continue making it increasingly more incoherent and less effective than it should be, with the problems that it has created. So, recently, in the Earth Summit 2012, it has been particularly stressed that a strengthened institutional framework, which can enhance coherence, coordination and cooperation, can reduce fragmentation, duplication and overlap, and can increase effectiveness, efficiency and transparency within the operation of the system (Rio+20 Report 2012: 14), is highly necessary for “respond[ing] coherently and effectively to current and future challenges and efficiently bridg[ing] gaps in the implementation of the sustainable development agenda” (Rio+20 Report 2012: 14).

Among those challenges associated with environmental issues, the need to strengthen ‘compliance’ as an escalating problem in GEG has been specifically stressed in Agenda 21 of the Earth Summit 1992, as a strategy for the effective governance of environmental problems.

In fact, Agenda 21 provides that:

[e]ach country should develop integrated strategies [including “mechanisms for promoting compliance”] to maximize compliance with its laws and regulations relating to sustainable development (section I, chapter 8, para. 21).

It is also explicitly underlined that:

[s]tates should further study and consider methods to broaden and make more effective the range of techniques available at present, [which] may include mechanisms and procedures for the exchange of data and information, notification and consultation regarding situations that might lead to disputes with other States in the field of sustainable development and for

fragmentation: (1) synergistic fragmentation, (2) co-operative fragmentation, and (3) conflictive fragmentation. He also reviews the claims in favour and against more integrated or more fragmented governance organized around the questions of (1) the relative speed of reaching agreements (2) the level of regulatory ambition that can be realized (3) the level of potential participation of actors and sectors and (4) the equity concerns involved. For details see, Biermann et al. (2009: 14–40).

effective peaceful means of dispute settlement in accordance with the Charter of the United Nations, including, where appropriate, recourse to the International Court of Justice, and their inclusion in treaties relating to sustainable development (Section IV, chapter 39, para. 9).

Although Agenda 21 is a soft-law document, when the efforts for creating an all-encompassing UN Treaty (such as, for instance, the ‘Draft International Covenant on Environment and Development’, which contains provisions for reporting, compliance mechanisms and dispute-settlement mechanisms) are taken into account, its soft-law recommendations become more important. This is particularly because the draft Covenant aims not only to consolidate existing legal principles related to the environment and development, but also to convert Agenda 21’s soft-law recommendations into legally binding hard international law (IUCN 2010).

Through Agenda 21, UNEP and other organizations have also been empowered to support compliance activities. The UNEP Special Session of the Governing Council (GC) held in 2000 also recognizes the central importance of environment, compliance, enforcement and liability as well as capacity-building. UNEP, particularly with the adoption of the ‘Programme for the Development and Periodic Review of Environmental Law for the First Decade of the 21st Century (Montivideo III Programme)’ in 2001, has started to make ‘compliance issue’ a core concern, stressing the ineffectiveness of environmental law (United Nations Environment Program Governing Council 2001).

As a result of these efforts, via the Earth Summit 2002, the need to promote compliance and so the establishment and operation of mechanisms that can improve and maintain compliance has emerged as a core theme of GEG. In the same year, UNEP adopted Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements (MEAs) whose Chapter I specifically addresses compliance with MEAs (UNEP 2006).

In the Earth Summit 2012, compliance issues were not specifically emphasized, most probably due to the fact that the Conference’s particular focus was on establishing the concept of green economy and building an institutional framework for materializing sustainable development goals. However, through the Conference’s non-binding document, ‘The Future We Want,’ it is also reaffirmed that:

the means of implementation identified in Agenda 21, the Programme for the Further Implementation of Agenda 21, the Johannesburg Plan of Implementation (...) are indispensable for achieving the full and effective translation of sustainable development commitments into tangible sustainable development outcomes (Rio+20 Report 2012: 48).

Thus, through this gradually growing recognition that ‘compliance should be taken as a priority in the coming near future,’ ‘compliance issue’ has turned out to be one of the major concerns for GEG in both IEL and IEP in the current decade. Indeed, it has recently been realized that, to cope successfully with environmental problems, it is not sufficient to adopt legally binding commitments on environmental issues; the adoption of environmental agreements is only the beginning of

the process. It is also vital to provide full compliance to ensure the effectiveness of both these agreements and environmental governance, due to the fact that:

[c]ompliance remains an important objective not only because it often correlates with better levels of environmental protection, but also because it improves environmental governance by maintaining the credibility of environmental regimes... (Stephens 2009: 63–64).

In fact, for effective global governance, besides the other areas of concern, it is also necessary to provide the complying actors with the agreements that they have participated. If all the actors adhere to their agreement commitments, even if the problem cannot be solved completely, it forms an important step towards incrementally better compliance, better governance and ultimately better sustainable development.

This awareness of the importance of compliance has led to a serious debate among IEP and IEL scholars, and there have begun to be discussions about which ways best enable states to meet their environmental agreement obligations.

Consequently, to improve compliance with MEAs, the search has begun to find new methods which will not merely solve the problems but prevent them before they occur, in accordance with Einstein's words at the start of this chapter. That is, these new methods should be based on a preventative approach to identify compliance problems and find solutions (through assistance or any other measures) before non-compliance actually occurs. They should also be complex, detailed and technical, but at the same time more flexible and dynamic so that they can adapt easily to the frequent changes in global environmental issues.

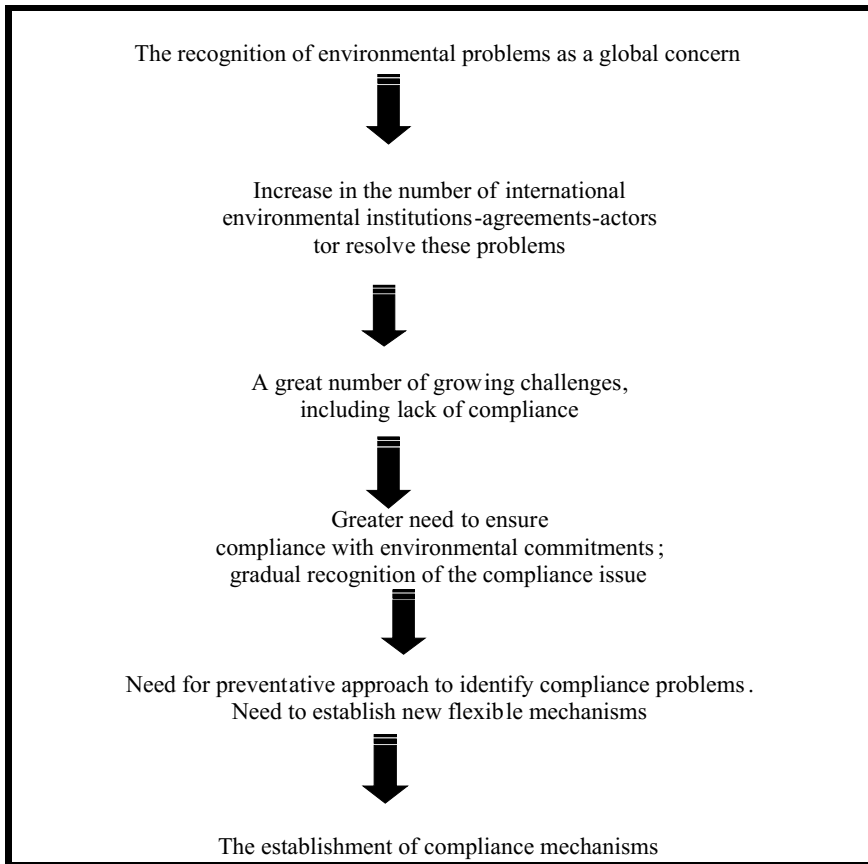
Thus, the gradually increased attention which is being given to the issue of compliance and intense studies by scholars have generated new procedures called 'compliance mechanisms' in the field of environmental protection which supplement the methods previously established under the rules of international law.

Currently, it is possible to see these new elaborated and flexible mechanisms – institutions and procedures – established within some MEAs, whose mandate would be to strengthen compliance with obligations deriving from related MEAs. Though the number of those that have already been developed is not high, and most of them are in the process of being developed, they are expected to strengthen compliance – and, as a consequence, environmental governance – or at least to play a significant role.

However, their effective operation and ability to induce better compliance remain important questions both in academic studies and in practice. This is because, even though they have characteristics which make them stronger than traditional mechanisms at dealing with the compliance issue more effectively (as highlighted particularly in Chap. 4), they also have some weaknesses that can undermine their effectiveness in the final analysis (Table 1.1).

In order to figure out these weaknesses and find ways to improve compliance under MEAs, it is necessary to examine their compliance mechanisms and discuss options for their improvement. Therefore, in the following chapters, the focus will be on methods of fostering compliance under MEAs, starting with an analysis of

Table 1.1 Development of compliance mechanisms as a matter of special concern



Source The author

practices in two specific environmental areas: ozone layer protection and climate change prevention.

In particular, the research is based on two cases, the CM of the Protocol to the 1985 Vienna Convention (VC) on Substances that Deplete the Ozone Layer (Montreal, Canada, 16 September 1987) and the CM of the Protocol to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) (Kyoto, Japan, 11 December 1997) and their outcomes in practice. Using the evidence from these case studies, it seeks to understand the possible advantages/disadvantages and strengths/weaknesses of different options and thus gauge the likely compliance status of the parties with regard to their commitments under the Climate Agreement recently adopted in COP 21, held in Paris from 30 November to 13 December 2015.

This Climate Agreement, known as the Paris Agreement on Climate Change (Paris, France, 12 December 2015), contains a specific provision on compliance,

Article 15, titled “Facilitating implementation and compliance.” However, it gives no details on the modalities and procedures for the effective operation of the compliance system under the Agreement and leaves elaboration on them to the Conference of the Parties (COP) serving as the meeting of the Parties (MOP) to the Paris Agreement at its first session (CMA1) (Art. 15.3, Paris Agreement; COP 21, Decision 1, para. 103). Nonetheless, there is still no tangible formulation to date on compliance issues or the Compliance Committee referred to under Art. 15, PCA. So there are several topics requiring further clarification in the next CMAs, and considering/illustrating possible options on these topics in advance, in the light of the experience gained from the compliance mechanisms of other MEAs to date, can be quite useful for designing an effective compliance mechanism under the PCA.

In this respect, before illustrating the CMs under the Kyoto and the Montreal Protocols (Chaps. 5 and 6), some more general issues will be investigated and discussed, e.g. the meaning of the concepts of compliance, CM and MEA (Chap. 2); the related theories and two basic explanatory models on compliance (Chap. 3); the development of CMs and the limitations of traditional means (Chap. 4). Based on the findings, a debate will be provided on the options for an improved compliance system under the Paris Climate Agreement (PCA) (Chap. 6).

1.2 The Purpose of the Book

As stated earlier, the focus of this study is to analyse the ways of improving compliance under MEAs, one of the areas which has become a central concern for global environmental governance in recent times.

Furthermore, in order to figure out the weaknesses of the current compliance mechanisms under MEAs and to discuss ways to create a better system for improving compliance under the PCA, the lessons learned by the CMs of the Montreal Protocol and the Kyoto Protocol will be taken into account.

The aim of the following chapters is not to question the effectiveness of these mechanisms – whether, how and under what conditions they are influential in altering the behaviours of actors, and gradually the compliance and environmental quality. The main intention is just to provide an in-depth understanding of the existing mechanisms and elaborate their present features on the basis of two case studies, which are generally considered to be the most successful ones.

This is because of the following reasons:

- It remains incredibly difficult to measure the direct effectiveness of CMs on compliance. Indeed, to analyse them and reach a certain judgement on their effectiveness, even their “likely effectiveness,” is a very complex issue because of various relevant processes and dynamics incorporated into the mechanisms that deserve attention to give a sufficient response to the question (Hovi et al. 2005: 4).

- Almost all mechanisms developed under different MEAs are still in the stage of establishment or development; therefore, their effectiveness cannot be regarded as fully tested. For instance, the CM developed under the Kyoto Protocol was adopted on the decision of the COP in 2001 (COP 7, Decision 24). Many issues necessary to bring the Protocol into operation – except the legal status of enforcement consequences – have been resolved in 2005 through the confirmation of COP 7, Decision 24 in MOP 1, Decision 27. Individual cases brought before the Committee, on the other hand, only began to be considered in 2006. In addition, the CM under the Montreal Protocol continues to develop and has not yet reached an end. It has been further improved through the adoption of a draft NCP in 1990 and the adoption of the current NCP in 1992. Finally, the modifications in 1998 have signalled the possibility of the need for further modifications in the future.
- Compliance is a very complex issue. A great range of factors can affect it, like the object and scope of MEA, the characteristics of the accord, the characteristics of the country, or party to the accord, and other factors in the international environment (the role of NGOs, actions of other states and the role of IGOs) (Jacobson/Weiss 2001). Therefore, it also requires a great number of efforts to be enhanced, like: strengthening its empirical and theoretical foundations, the role of civil society, the norms complementing and supporting compliance and rule of law; building capacity of regulators and those they regulate and political will; expanding funding, applying new analytical tools; diagnosing specific problems and understanding and empowering key actors (Zaelke et al. 2005).

In this respect, offering a starting point on which further research related to the compliance issue under the PCA and improving compliance under the PCA at first hand, and under MEAs in general, the main purpose of the present inquiry is:

- To lay out a research agenda on the compliance issue and CMs relying on three main components: gathering information, procedures/institutional structure, measures;
- To analyse the role of CMs in ensuring better compliance and the ways of enhancing compliance under the current systems of CMs, pursuing an approach which includes the lessons from two case studies;
- To question the options for an improved compliance system under the PCA;
- To foster discussion on whether the PCA is a deal for better compliance and what it promises for improving compliance with a greater focus among academics;
- To find out how the PCA contributes to the improvement of the compliance issue.

In brief, the present analysis intends to be one of the first attempts to ask how to enhance compliance under the PCA. At the very least, it is designed to contribute to the related discussion.

1.3 The Book's Structure

In order to figure out the weaknesses under the current systems of compliance mechanisms of MEAs and to search for ways to improve compliance under MEAs in general and under the PCA in particular, the following chapters seek responses to some basic questions:

1. *Drawing a conceptual framework for compliance and compliance mechanisms.* What do the concepts of compliance, CM and MEA mean? What does compliance mean? What are compliance's differences from related concepts such as implementation, effectiveness and enforcement? What should be understood from compliance mechanisms (CM) under multilateral environmental agreements (MEAs)? And what do the concepts of MEA and regime refer to? What do they mean in general, and in the context of this study in particular?
In this part, the main goals are to clarify what these concepts mean, and to constrain them to the frames of these definitions, thus, to enable their correct application in practice, to show the direction of the perspective pursued in the study and to facilitate the discussion on compliance and CMs in a more comprehensible manner.
2. *Drawing a theoretical framework for compliance and compliance mechanisms.* What are the competing theoretical perspectives from both international law and international relations on compliance debate? What are their main characteristics? What are the features distinguishing them from each other? What are the main theoretical models of compliance? To what extent and how do these models provide insights into the compliance debate? What are the main features of these models? What are the similarities and differences between them? Which one can be used as a theoretical framework in the context of the book itself to ensure better compliance?
Through all these questions, this part will try to give a theoretical explanation of these mechanisms and put forth their theoretical basis in order to make the way they function more understandable in practice.
3. *Development of CMs and their main components.* What are the reasons, the preparatory and triggering impacts behind their development? What are the limitations stemming from the traditional means of international law, i.e. law of treaties, responsibility of states, dispute settlement procedures (DSPs) , including diplomatic and judicial means? What are the features making CMs more attractive than these traditional means? What are the distinct characteristics between the CMs and DSPs? What are the institutions created under an MEA, and their functions? What are the main components of CMs? And what are the fundamental features of these components? What is the legal basis of the NCPs? What are the main powers and functions of the committees created under the NCPs? What are the procedural phases and safeguards in NCPs? How can the binding effect of the response measures be demonstrated?

The main objective here is to draw a general framework based on the main characteristics of CMs, and thus explain the current system briefly and plainly, without reference to its specific details, in order to provide background information on the system's general characteristics.

4. *Case study of the compliance mechanism regarding ozone depletion.* How does the CM function in the context of the Montreal Protocol? How did it develop? What are the basic characteristics of its components (gathering information, procedures/institutional structure, measures)? To what extent can its provisions on compliance mechanisms be materialized in practice? How well does it function in practice?
5. *Case study of the compliance mechanism regarding climate change.* While doing this analysis, there will be two main sections, one of which is on the CM of the Kyoto Protocol and the other on the Paris Climate Agreement (PCA).

In the first section, pursuing the same method followed in the previous section, the chief research question will be 'How does the CM function in the context of the Kyoto Protocol?' In this regard, the development of the CM up to the present will be studied and then the components of the mechanism (gathering information, procedures, institutional structure, measures) will be evaluated to provide a full understanding of the process. In order to illustrate and demonstrate the issues the study is concerned with, what actually happens, how well they function in practice, and to what extent their provisions manage to be influential in practice will also be explored.

Based on the analysis of the mechanisms, in both case studies – CMs under both the Montreal and the Kyoto Protocols – the lessons learned will also be discussed on the basis of the following questions: Are CMs capable of influencing compliance in ways that other traditional mechanisms cannot or in ways that are more effective? Are they capable of ensuring better compliance with the environmental commitments brought by MEAs? If they are not, what are their weaknesses, how can they be improved and can they be made more effective in shaping actors' behaviour? Can this improvement in CMs deliver better compliance? If not, which ways should also be considered to strengthen compliance? Also, what should be done in the short and long terms to strengthen compliance?

In the second section, the PCA will be illustrated in detail, and background information on the Agreement, involving both its pre-Paris period and the Paris negotiations period, will be provided. Thus, it seeks answers to the following questions: What are the implications of the PCA for compliance issues? What happens next? What are the future options for a compliance mechanism under the PCA? What is its potential for better compliance? Benefiting from the lessons learned by the CMs of the Montreal Protocol and Kyoto Protocol, the weaknesses of the current compliance mechanisms under MEAs are thereby figured out and the options and proposals for a better system for improving compliance under the PCA will be discussed.

As it would be an overly ambitious task to illustrate and analyse in detail all aspects of all CMs and compliance issues, the study will be restricted to the above-mentioned aspects which have been indentified as the major focus areas of the study.

Nevertheless, additional information will be provided on some relevant and interesting aspects which contribute to the study of compliance mechanisms and compliance issues under MEAs in general and under the PCA in particular. In order not to exceed the scope of the study, these will not be examined in detail, but will only be touched on slightly.

1.4 Methodology

The method adopted for assessing the implications of the PCA on compliance issues and discussing the ways for better compliance under both the PCA and MEAs in general consists of a comparative case analysis based on interdisciplinary research benefiting from the literatures of two disciplines, both international relations and international environmental law.

Therefore, this intensive research is based on a comprehensive literature review and data collection (from dozens of books, a variety of journals and official documents) conducted in the libraries of the following Universities: Middle East Technical University (METU); Institute for Environmental Studies (IVM), Vrije University (VU); Max Planck Institute For Comparative Public Law and International Law (MPI), University of Heidelberg; Washington College of Law, American University (AU) (from 2009 to 2012); Selçuk University; and the Institute for Transnational Legal Research (METRO), Faculty of Law, Maastricht University (from 2015 to 2016).

The book's structure has been drawn on the basis of a conceptual framework (involving clarifications of the concepts of compliance, MEAs and CMs) and a theoretical framework (involving the most prominent approaches – from both international law and international relations – to the compliance debate and basic explanatory models of compliance: the management vs. the enforcement model). To support this main structure, two cases in particular – the compliance mechanism under the Montreal Protocol relating to the 1985 Vienna Convention on Substances that Deplete the Ozone Layer and the compliance mechanism under the Kyoto Protocol relating to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) – have been selected to demonstrate and illustrate the issues with which the study is concerned.

Case Studies Selection: In this book the two mechanisms mentioned above are chosen as case studies, because:

- They are both established under globally-wide ratified MEAs, including “result-oriented obligation”⁵;
- They are the most developed ones, and so it is considered that a great number of examples of practice and beneficial lessons for the themes under discussion can be drawn from them;
- Lessons learnt from them can be integrated into the analysis of the book to map out the possible ways of enhancing compliance under the PCA.

In this case selection, the following parameters have been adopted:

- *Frame of Reference*: CMs created under global MEAs.
- *Grounds for Comparison*: Both Protocols of Kyoto and Montreal are within the same cluster, that is:
 - Each deals with atmospheric problems;
 - The ozone-depleting substances (ODSs) are also greenhouse gases (GHGs);
 - They are interrelated and affect each other. For example, ultraviolet radiation resulting from ozone depletion reduces the capacity of plants and marine species to sequester atmospheric carbon dioxide (CO₂) and can heighten climate change (Oberthür 2001); so, in fact, each contributes to the other’s success or failure.

With respect to the field study selection, the PCA was chosen because it provides a different system from the UNFCCC system, and it is necessary to discuss what kind of model should be adopted to enhance compliance under this new system. So, the question of how to ensure the compliance of the Agreement’s parties gives rise to the need for an examination of the Agreement in terms of its implications for compliance issues and compliance mechanisms.

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⁵There are two main categories of treaty obligations, namely the “result-oriented” obligations and the “action-oriented” ones. Action-oriented treaties, such as the CITES, Espoo Convention, the Basel Convention, the Biological Diversity Convention, the Cartagena Protocol on Biosafety, and the International Convention for the Regulation of Whaling, do not set concrete environmental objectives to be achieved within a precise time limit. On the other hand, result-oriented ones, such as the Montreal-Kyoto Protocols and the Stockholm Convention, set precisely defined objectives with time limits for the actions to be taken (Beyerlin, Stoll and Wolfrum 2006).

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