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Genesis of Institutional Fragmentation in Global Governance Architecture on Climate Change: Constructivist Approach to Asian Climate Change Institutions

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¹ Saramago, J. (1960/2011). Baltasar and Blimunda. A Harvest Book. See p. 78.

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LIST OF ABBREVIATION

ACCI ASEAN Climate Change Initiative

ACE ASEAN Center for Energy

ADB Ad Hoc Working Group on the Durban Platform (ADB)

A-FAB ASEAN for a Fair, Ambitious and Binding Global Climate Deal

AFCC Framework ASEAN Multi-Sectoral Framework on Climate Change: Agriculture, Fisheries

and Forestry Towards Food Security

AOSIS Alliance of Small Island States

APEC Asia-Pacific Economic Cooperation

APN Asia-Pacific Network for Global Change Research

APP Asia-Pacific Partnership on Clean Development and Climate

ARKN ASEAN Regional Knowledge Network

ASEAN Association of Southeast Asian Nations

ASOF ASEAN Senior Officials on Forestry

ATHP ASEAN Agreement on Trans-boundary Haze Pollution

AWGCC ASEAN Working Group on Climate Change

AWG-KP Ad Hoc Working Group on Further Commitments for Annex I Parties under the

Kyoto Protocol

AWG-LCA Ad Hoc Working Group on Long-term Cooperative Action under the

Convention

BOCM Bilateral Offset Credit Mechanism

CBDR Common but differentiated responsibility

CBDRRC Common but differentiated responsibilities and respective capabilities

CCPI Clean Coal Power Initiative

CDM Clean Development Mechanism

CMP Conference of the Parties serving as the Meeting of the Parties

COP Conference of the Parties

DG CLIMA Directorate-General for Climate Action

EAS East Asia Summit

EC European Commission

EMM Energy Ministers' Meeting

EMM Environment Ministers Meeting

EPA Energy Policy Act

ERIA Economic Research Institute for ASEAN and East Asia

ESIS Energy Standards Information System

ETS Emission Trading Scheme

EU European Union

EWG Energy Working Group

GDP Gross Domestic Product

EACP East Asia Climate Partnership

GGGI Global Green Growth Institute

GHG Greenhouse gas

GTCK Green Technology Center Korea

IEA International Energy Agency

INC/FCCC Intergovernmental Negotiating Committee for a Framework Convention on

Climate Change

IPCC Intergovernmental Panel on Climate Change

IRTs International relation theories

ISO International Organization for Standardization

JAIF Japan-ASEAN Integration Fund

JI Joint implementation

JICA Japan International Cooperation Agency

KP Kyoto Protocol

LCA Dialogue on long-term cooperation action to address climate change by

enhancing implementation of the convention

LCGP East Asia Low Carbon Growth Partnership

LCS-RNet International Research Network for Low Carbon Societies

LoCARNet Low Carbon Asia Research Network

MCED Ministerial Conference on Environment and Development

MEF Major Economies Forum

MEP Major Emitters and Energy Consumers Process

METI Ministry for Economy, Trade and Industry

MOEJ Minister of the Environment, Japan

MOFA Ministry of Foreign Affairs of Japan

MRV Measurable, Reportable and Verifiable

NAMA Nationally Appropriate Mitigation Action

NGO Non-Governmental Organization

ODA Official Development Assistance

OECD Organization for Economic Cooperation and Development

PCGG Presidential Committee on Climate Change

PIC Policy and Implementation Committee

QELROs Quantified emission limitation and reduction objectives

REDD Reduced Emission from Deforestation and Forest Degradation

RHAP Regional Haze Action Plan

R2P Responsibility to Protect

TICAD Tokyo International Conference on African Development

UN United Nations

UNCED United Nations Conference on Environment and Development

UN/ESCAP United Nations Economic and Social Commission for Asia and the Pacific

UNFCCC United Nations Framework Convention on Climate Change

US United States of America

WMO World Meteorological Organization (WMO)

CHAPTER 1 INTRODUCTION

Section 1. RESEARCH MOTIVATION

Since climate change was perceived as a threat to human existential security, global aspiration to mitigate the climate change was embodied by the adoption of the *United Nations Framework Convention on Climate Change* (UNFCCC) in 1992. Then, the UNFCCC took a regulatory ascendance ladder by fleshing out its core norms of principle of equity and precautionary approach through the *Kyoto Protocol* (KP) which was adopted in 1997. These two international institutions have worked as the core institutions that govern and centralize global climate change actions. However, despite the existence of these large-scale UN-based institutions of the UNFCCC/KP, efforts to respond to climate change problem have multiplied in number in a competing and overlapping manner.

In Asian regional vessel, the proliferation of climate change institutions backed by the institution-builders is unexceptionally marked. The US, which did not ratify the KP, created the *Asia-Pacific Partnership on Clean Development and Climate* (APP) in 2005. Japan showed a dramatic story. Japan led the adoption of the KP in 1997 in Kyoto and yet announced its non-participation in the second commitment period of the KP in 2011. Then, what appeared by Japan in 2012 was the *East Asia Low Carbon Growth Partnership* (LCGP). South Korea, which was supposed to embark its participation in the second commitment period of the KP, launched the *East Asia Climate Partnership* (EACP) in 2008. Not only the nation state but also the Asian regional organizations made official declarations for regional and global climate change action pathways in 2007 when the post-Kyoto policy architecture started being negotiated.

The issue area of climate change has come to be co-governed by multiple and divergent institutions that exist outside the existent core institutions of the UNFCCC/KP, and this phenomenon of co-governance has been termed by the concept of *institutional fragmentation*. Institutional

fragmentation refers to the phenomenon that the international policy domain is co-governed by a patchwork of multiple and divergent international institutions (Biermann et al. 2009). This institutional fragmentation poses baffling questions on the typology, the consequence, and the responsive management, and the genesis of institutional fragmentation.

Section 2. PUZZLING QUESTION

Undoubtedly, the existence of multiple institutions outside the central institutions of the UNFCCC/KP can congest and confuse the road of climate change governance with divergent objectives, decisions, and actions. With this negative connotation, scholarly concerns have been forward-looking to explore the current degree of institutional fragmentation, the consequence of institutional fragmentation to regime effectiveness and political behaviors of the actors involved, and the management of fragmented multiple institutions. Recently, however, the concern has moved to the backward-looking: why are competing and overlapping institutional arrangements created outside the already existent UN-based institutions of the UNFCCC/KP? This puzzling question relates to the genesis of the institutional fragmentation.

Section 3. GENESIS OF INSTITUTIONAL FRAGMENTATION

With regard to the institutional fragmentation, initially concerned was the consequence of institutional fragmentation to regime effectiveness; the degree of institutional fragmentation becomes the explanatory variable that causally influences the dependent variable of regime effectiveness. Thus, a typology to assess the degree of institutional fragmentation was framed and applied (Biermann et al. 2009). Yet, the study on institutional fragmentation is facing a turning point in two aspects: i) from typological stage to causal stage, and ii) from linguistic turn to empirical and theoretical turn. Firstly, the concern has extended from typology-making of institutional fragmentation in a given issue area to the *degree* of institutional fragmentation across issue areas, the

varying spectrum of the *consequence* of institutional fragmentation, the *management* of institutional fragmentation, and, particularly, the *genesis* of institutional fragmentation. The institutional fragmentation is approached as an entity that is not just given but endogenously generated, so the causal mechanism that brings out the genesis of the institutional fragmentation receives a concern.

Secondly, institutional fragmentation is in great need of both empirical application and theoretical explanation. Despite definitional explorations, the term of institutional fragmentation is still open to conceptual flexibility and choice. It is time for institutional fragmentation to overcome "linguistic turn" and move to theoretical turn (Zelli and van Asselt 2013, p.3). Out of themes of institutional fragmentation, the theme of genesis has awaited theoretical touch from conventional international relation theories.

Exploration on the genesis of institutional fragmentation means asking why an additional, overlapping, and competing institution is created besides an already existent dominant institution. Previous studies have attempted to explicate the factors that drive the creation of a competing institution, the APP, outside the UNFCCC/KP, and those studies are classified on the basis of three strands of international relations theories as follows;

Material & Power-oriented approach. Competing institution emerges by the efforts of state actors with sufficient power and resource to maximize national interests with discontent on the uniform regulatory measures that do not consider divergent material endowment and relative gains (Kellow 2006; Karlsson-Vinkhuyzen and McGee 2013).

A. Function-oriented institutional approach. The emergence of overlapping institutions is originated from divergent problems associated with climate change, divergent interests of the agents, and divergent organizational practices (Keohane and Victor 2011).

B. Non-functional institutional approach. The creation of a countervailing

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Neo-Realism

Neo-Liberal

institutionalism

institution is driven by institutional capture; if an existing institution is perceived being change-impermeable due to institutional capture by the particular interests of certain interest groups, then, dissatisfied actors create a new competing institution (Van de Graaf 2013).

Normative contestation approach. A competing institution is the embodiment of new alternative and competing norms, normative interpretations, discourse, policies or ideas that are in contestation with the existing ones of a dominantly existing institution (Hoffmann 2007; van Asselt 2007; McGee and Taplin 2009; Stevenson 2009).

Section 4. CRITICAL APPROACH

Constructivism

The afore-mentioned theoretical approaches have explanatory power, but each of them is not without deficiency. The weakness of the current theoretical explanation is as follows;

Having materials and power to establish an institution is one thing, and erecting an additional institution outside a prevailing institution is a different matter. Also, the neo-realism cannot explain the creation of a series of normatively conflictive institutions to the prevailing institution from cognitive perspective.

The function-oriented neoliberal institutionalism approach cannot explain the creation of institutions that are perceived to be legitimacy-deficient or normatively-competing to the existing institution.

Neo-Liberal

Neo-Realism

institutionalism

In the case of non-functional approach, what determines the perception of institutional capture or strategic bargaining at the center of institutional creation not only particular interests but also ideational elements such as principles, beliefs, ideologies, and views.

Normative contestation is one thing, and institutional-building is another. Also,

Constructivism causal relation between an existing institution and the creation of new competing institutions still remains a black box.

From this critical approach, despite some explanatory power on the genesis of institutional fragmentation, the rational approaches of both neo-realism and neo-liberalism have some limitation in explaining the meaning of conflictual institution in cognitive dimension. Meanwhile, constructivism can explain "a variety of social structures" (Narine 1998, p.39) including a conflictual institution through exploring norms, rules, practices and diverse characteristics that shape the institution. In this regard, the current constructivist approaches have filled up explanatory lacuna of the rational approaches; institution is identified as normative and ideational constitution; a newly emergent institution is comprehended in relation with an existing institution in normative and cognitive dimension; and, normative contestation is explicated as a source of the creation of a normatively contestant institution against the existing institution. However, still, normative contestation is one thing, and institutional-building is another. Causal relation between an existing institution and the creation of new competing institutions awaits further exploration.

These theoretical promises and limitations have four implications to ponder over. Firstly, the genesis of institutional fragmentation cannot be detached from strategic and interest-oriented actors. The emergence of an additional institution takes huge costs in transaction, establishment, and implementation. The institution can be born from strategic bargaining, power, and material capacity. Secondly, the genesis of institutional fragmentation cannot be detached from normative and ideational dimension. The constituents of an institution are not only materials and procedural rules for expected consequences but also ideational elements such as norms (or principles), ideology, discourse, and culture that shape the appropriateness of actor behaviors. Thus, genesis of institutional fragmentation necessarily deserves the look on the contestation of the appropriateness. Thirdly, a newly created institution cannot emerge out of nothing and, thus, relishes the existing normative relics. That is, a new institution needs to be concerned in relation with the existing

Table 1-1 Position of my research

International relation	Rational Approach		Reflexive approach
theoretical approaches	Neo-Realism	Neo-Liberalism	Constructivism ($$)
		Divergent problems,	
Factor that brings forth institutional fragmentation	Power	strategic actors, and	Normative
	(Material capability)	organizational practices or	contestation
		Institutional capture	

Source: The author.

Note: Cells with a check mark $(\sqrt{})$ indicate the theoretical position of this research.

institution. Fourthly, both rational approach and constructivist approach stand in limping leg to explain the creation of competing institution. Thus, a proper way is to make the strategic agent and the social constructive agent get married and bear a new explanatory mechanism.

On the basis of the critique to the current approaches to the genesis of institutional fragmentation, this thesis will take the constructivist theoretical ground that stands in the middle ground in-between not only structuralism and individualism but also materialism and idealism (Adler 1997). Thus, the constructivist's "contingent and contested nature of normative change and normative influence" is connected with rational choice or rationality. In this regard, the creation of additional competing institutions in Asia is explicated as a strategic social construction (Finnemore and Sikkink 1998, p.914). Theoretical position of this research is explicated in the table 1-1 above.

Section 5. RESEARCH QUESTIONS

The current constructivist approach to the genesis of institutional fragmentation with normative contestation in the issue area of climate change, however, still needs further exploration. Firstly, with a plethora of concepts in use such as norm conflicts, normative contestation, and discursive contestation, norms and discourses have not been fully substantiated as analytical elements in the

previous studies. Also, norms need to be related with the notion of institution in a manner that institution is an aggregate of multifarious norms (Finnemore and Sikkink 1998). In order to argue that the normative contestation is the logic behind the genesis of institutional fragmentation, multiple norms that constitute the institution need to be figured out, selected, leveled, substantiated, and specifically operationalized. Though there was an attempt with conceptual operationalization such as normative dimension and normative position (Hoffmann 2007), they are at the incipient stage. Without a comprehensive map on normative contestation with specific operationalization, it is hardly arguable whether, to what extent, and in what level, a newly created institution is in normative contestation with an existing institution. Additionally, it seems hard to exactly pinpoint the institutional fragmentation of the additional and competing institution outside the UNFCCC/KP. Accordingly, further microscopic look on the normative contestation is awaited.

Secondly, as afore-mentioned, normative contestation is one thing, and the establishment of a competing institution is another. It is because normative contestation can be liquidated within an existing institution through negotiation. Thus, current approach fails to explain why the agents, loathing to existent norms and forging alternative norms and normative interpretations, create a new institution and why the agents adhering to existent norms on the basis of the logic of appropriateness establish a new institution. This explanatory failure is driven from a static approach to normative contestation for a comparison between the existing institution and the new competing institution. Accordingly, a dynamic approach to normative contestation on the basis of norm life cycle will probably render further implication on causal relation between normative contestation and the creation of new competing institution.

Thirdly, even after the creation of competing institution to the existing one, the genesis of additional and competing institutions does not halt. Why does institutional fragmentation continue? If previous studies in the vein of constructivist approach concern the agent's creation of a new institution against an existing institution, unexplored is the agent's reaction in the face of normative contestation by the co-existence of both a core institution and a competing institution.

The fourth relates to the third point. If institutional fragmentation is something on-going,

not static, a concern moves onto the evolution and the future direction of institutional fragmentation. That is, institutional fragmentation is not only the matters of degree of fragmentation, consequence, and management but also the matter of institutional or regime change. However, this vein of institutional evolution, driven from institutional genesis, has not received much attention yet. The institutional change cannot be extricable from normative change or normative shift by relevant agents' normative positions and instantiating practices in the face of normative contestation.

Fifthly, institutional genesis relates to the other themes of degree, consequence, and management of institutional fragmentation. Though currently these subjects are separately dealt with, they are all inter-related.

Sixthly, current approaches to the genesis of institutional fragmentation mainly put the nation states to the fore, and the other agents such as regional organizations, civil society organizations (or non-governmental organizations), and business actors are not much underlined.

To summarize, previous studies on the genesis of institutional fragmentation pose three main tasks of i) further operationalization on normative contestation as the logic of institutional fragmentation, ii) causal and dynamical mechanism of an agent's normative contestation and the creation of a competing institution, and iii) agent's reaction to normative contestation and the future direction of institutional fragmentation. For a fuller explanation on the genesis of institutional fragmentation on the basis of constructivist ground, three research questions are set in the following way;

1st question

Normative contestation in spectrum: Logic of Institutional fragmentation. To what extent does a newly created overlapping institution compete with the existing institution? Put differently, to what degree does the competing institution form the normative contestation? In order to argue that the genesis of institutional fragmentation is attributable to normative contestation, it is important to specify which norm is in contestation by which competing norm or normative interpretation. The degree of institutional fragmentation will be

analyzed by the operationalization of the normative contestation. The newly emergent institution will stand somewhere with a certain pinpointed normative position in the spectrum of normative contestation.

Normative contestation in action: Genesis of institutional fragmentation. Why does a normatively competing institution emerge? Normative contestation is one thing, and the establishment of a normatively competing institution is another. The commonality is that there is an agent behind competing norms and competing institution. This means that not only a structure (institution and norms) but also agent behaviors need to be analyzed in a combined manner. Accordingly, the genesis of institutional fragmentation will be analyzed on the ground of strategic social construction by a norm entrepreneur's normative contestation.

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Normative contestation and its path forward: Evolution of institutional fragmentation. What is the reaction of agents to normative contestation? If international norms are diffused, then agent reaction will be the efforts to liquidate normative contestation between international norms and domestic or regional norms and practices. However, if international norms themselves are in normative contestation, agent reaction will differ. Their reaction by interpretation, position-setting, and position-propelling practices will influence and determine which norms in normative contestation will be empowered. The direction of institutional fragmentation in the issue area of climate change will be analyzed by relevant agents' normative position-setting and position-instantiating practices in the face of normative contestation of the international norms.

3rd question

2nd question

Section 6. ANALYTICAL FRAME

- Target of analysis: Institution. Institutional fragmentation basically relates to institution. In constructivism, institution is not something subordinated to structure but a "structure of identities and interests" (Wendt 1992, p.399). Structure is both constraining agents and being constructed by agents. An agent recognizes and interprets a structure, defines its identities and interest in terms of the structure, forms collective understanding through social interactions with the other agents, and instantiate collective understanding through social practices (Wendt 1995). Put differently, structure and agents are mutually constitutive. On the ground of this mutual constitution, constructivists focus on both cognitive-dimensional and process-oriented characteristics of structure. Particularly, structure is an inter-subjective structure which is composed of "shared understandings, expectations, and social knowledge" (Wendt 1994, p. 389). Institution also characterized as "cognitive entities" or "collective knowledge" on the basis of inter-subjective understanding among the agents. However, the institution is a more stabilized structure that is experienced to have an ontological status relatively above agents and to work as "coercive social facts" to the agents. Sometimes, institution is embodied into norms and formal rules in documents (Wendt 1992, p.399).
- Unit of analysis of the institution: Norms. In the constructivist approach, institution is an "aggregation" of norms (Finnemore and Sikkink 1998, p. 891) or an embodiment of norms and measures (Bernstein 2002). Norms are one of substantive analytical constituents to understand the institution (or the structure). Norms are defined as "shared (social) understandings of standards for behavior" (Klotz 1995, p.451), "standard of appropriate behavior", "shared assessment" (Finnemore and Sikkink 1998, p. 891-892). From these definitional attempts, it can be inferred that norms are relevant with behavior and standard that entails the characteristics of behavioral "ought" (Florini 1996, p.364). Important is that norms can have the same ontological status with structure, because institution is the embodiment of norms and the relevant rules. As institution has the same ontological status with structure, the norms that build the institution take the same ontological status.

Accordingly, norms constrain agents and are constructed by the agents.

• Logic of analysis: Normative contestation. Norms as a structure are not stable but dynamic, because the agents within a certain institution shape their identities through social interactions with other agents, interpret norms in their own way, and construct their own interests (Wendt 1995). If agents interpret existing conventional norms as inflicting a loss on their understanding of interests, they will initiate new norms "with alternative identities, practices, and sufficient material resources" (Hopf 1998, p. 180). These newly emergent norms enter normative space where existing norms are dominant, and the resultant competition between existent and new norms becomes inevitable. This phenomenon refers to "normative contestation" (Finnemore and Sikkink 1998, p. 897).

Normative contestation is a "strategic social construction that aims at undermining or displacing an accepted or emerging inter-subjective meaning through the formulation by actors of competing discursive interventions that challenge the meaning of norms that embody conflictive interpretations of values" (Weiner 2004; Contessi 2010, p.325-326). Normative contestation is subject to both static and dynamic approaches. From a static perspective, by the emergence of competing norms or competing interpretation on the existing norms in normative space, normative contestation draws a range of competing appropriateness and extends the normative space. A microscopic look on normative space can ascertain bipolar or multi-polar normative ends and draw out normative boundary. From a dynamic perspective, concerns are laid on the process of how normative contestation is incurred, extended, and liquidated. By the dynamics of normative contestation, the doom of existing norms and competing norms will be determined.

• Target norms to be analyzed: Common but differentiated responsibility (CBDR) and Precautionary approach. The UNFCCC and the KP are the embodiment of two founding norms on the appropriate actor and the appropriate behavioral response to mitigate climate change. They are CBDR and precautionary approach (Biermann et al. 2009). The CBDR has two dimensions of 'common (responsibility)' and 'differentiated responsibility': the 'common (responsibility)' renders all actors

facing common risks and being responsible in risk reduction, and the 'differentiated responsibility' imbues burden-sharing in the risk-reduction activities with equity (Stone 2004). Thus, the CBDR in the issue area of climate change determines who will bear the cost of mitigating GHG emission. This principle is interpreted in a manner that only developed countries will take a leading responsibility and that developing countries are given consideration (UNFCCC 1992, Article 3(1) & (2)).

The *precautionary approach* means that an action to reduce uncertain threat (or risks) or harm is undertaken in a mandatory manner regardless of uncertainty of scientific proof of yet-coming threats. This norm has four definitional dimensions of i) threat, ii) uncertainty, iii) action, and iv) command dimension (Sandin 1999, p. 898). The linchpin of this principle is how risk mitigation action is to be achieved for cost-effective way under uncertainty (UNFCCC 1992, Article 3(3)).

Section 7. RESEARCH SCOPE

• Target Institution: Asian climate change institutions. Asian region brewed over numerous climate change institutions. The much-touted regional climate change institution is the Asia Pacific Partnership on Clean Development and Climate (APP). With the APP as a starter, regional climate change institutions in Asian region appeared in the latter half of the 2000s when the global climate change architectural path was under negotiation. Asian climate change institutions have been unexplored much, and, the overall path of Asian climate change institutions remains obscure. Though appearing in scholarly realm frequently, the APP does not represent the Asian regional institution. Furthermore, the delineation of all the Asian climate change institutions seems baffling. Thus, only weighty climate change institutions in Asia by the initiatives of nation-state and regional cooperative organization are enumerated and classified in the table 1-2. Concerned regional initiators are the United State of America (US), Korea, and Japan, which produced unilateral nation-led institutions, and the Asian regional organizations of the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC), and the East Asian Summit (EAS) that announced declarations on regional climate change actions in 2007.

Table 1-2 Major Asian Climate Change Institutions

Initiating Agent		Institutions
Individual	The US	Asia-Pacific Partnership on Climate change (APP) a
Nation	Korea	East Asia Climate Partnership (EACP) b
state	Rorea	with Global Green Growth Institute and Green Technology Center Korea
state	Japan	East Asian Low Carbon Growth Partnership (LCGP) c
	ASEAN	ASEAN Declaration on the 13th session of the Conference of the Parties to the UNFCCC
Regional		and the 3rd session of the CMP to the Kyoto Protocol (2007) d
cooperative	APEC	Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean
Agency	ency	Development (2007) e
	EAS	Singapore Declaration on Climate Change, Energy and the Environment $(2007) f$

Source: a. http://www.asiapacificpartnership.org/english/default.aspx

- b. http://eacp.koica.go.kr/
- c. http://www.mofa.go.jp/announce/event/2012/3/0314 01.html
- d. http://environment.asean.org/asean-declaration-on-the-13th-session-of-the-conference-of-the-parties-to-the-unfece-and-the-3rd-session-of-the-cmp-to-the-kyoto-protocol-2007/
- e.http://www.apec.org/About-Us/About-

APEC/~/link.aspx?_id=C1E817728B23488D8F4FA801EC58FCC7&_z=z

f. http://www.aseansec.org/21116.htm.

Section 8. RESEARCH OBJECTIVE

Institutional multiplicity, institutional proliferation, regime congestion, institutional complexity, and institutional fragmentation are the terms that characterize global governance on climate change. Without a clear distinction on these terms, much effort has been laid on the questions of the degree of, the consequence of, and ultimately the response (management) to the phenomenon. Particularly, institutional fragmentation has also taken the same series of questions on degree (extent of fragmentation), consequence (impact on the regime effectiveness), and response (management). However, in the midst of this fuss, a fundamental question of why this phenomenon of institutional

fragmentation occurs has remained in shadow. The ultimate question of what to do (management) with the institutional fragmentation cannot be properly answered without a clear understanding on the genesis of institutional fragmentation. Though this question just started being theoretically explored by international relation theories, theoretical journey has yet been fully completed. This thesis will go over each theoretical approach that entails both explanatory promises and limitations and venture the explanation on the genesis of institutional fragmentation on the theoretical background of constructivism that stands in the middle ground. The clarified birth and growth of the institutional fragmentation will have a fuller and different understanding on related themes of the degree, the consequence, and the management of institutional fragmentation.

Section 9. RESEARCH COMPOSITION

This thesis is to be composed of seven chapters in the following manner;

- Chapter 1: Introduction. The outline of this research is explicated.
- Chapter 2: Literature Review. This chapter delineates current studies on institutional fragmentation. Yet, because the term of institutional fragmentation entails conceptual newness and ambiguity, this chapter traverses institutional theories in social science in the first place to clarify the notion of 'institutional fragmentation'. This chapter narrows the institutional studies to the theme of institutional multiplicity, goes over the phenomenon of institutional multiplicity in global environmental politics, and situates the notion of institutional fragmentation as the generic phenomenon of institutional multiplicity. In the third place, this chapter deepens the study of institutional fragmentation in climate change issue area. Then, institutional fragmentation is classified by origin, level, and scope. This chapter, focusing on the institutional fragmentation in a given issue area, summarizes previous approaches that explicated the 'genesis of institutional fragmentation' in climate change issue area on the ground of international relation theories, and

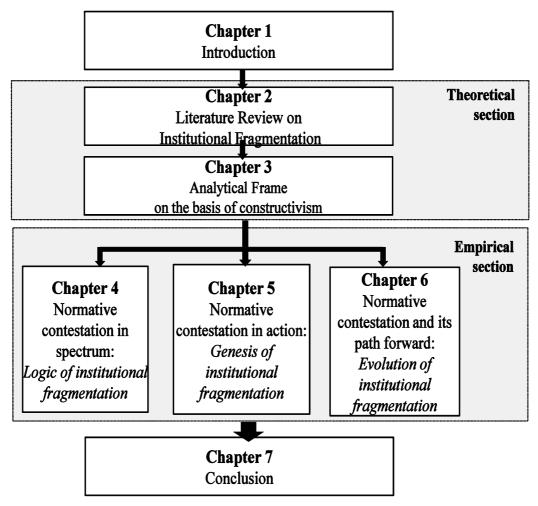
shows the limitation of current approaches. On the basis of this literature review, lastly, three research questions are to be made.

- Chapter 3: Analytical Frame. This chapter draws an overall analytical frame to venture the genesis of institutional fragmentation. In the first place, theoretical frame is to be made on the ground of constructivism. The institution as a target of analysis, the norm as a unit of analysis, and an analytical logic of normative contestation are to be specifically described. Then, what follows is an analytical frame on the basis of normative contestation. The common-but-differentiated responsibility (CBDR) and the precautionary approach are set as target norms. For case studies, the regional climate change institutions initiated by the Asian nation states and the Asian Regional cooperative organizations are selected.
- Chapter 4. Normative contestation in spectrum: Logic of Institutional fragmentation. In this chapter, the operationalization of normative contestation will be made on the basis of two normatively competing institutions of the Kyoto Protocol (KP) and the Asia-Pacific Partnership on Clean Development and Climate (APP) with two norms of the CBDR and the precautionary approach. What is to be explored is the normative position of a newly emergent Japan-led regional climate change institution, the East Asia Low Carbon Growth Partnership (LCGP). The selection of the LCGP is due to Japan's participation in both the KP and the APP. This research will be of help in drawing out the degree of normative contestation with a newly created overlapping institution against an existing institution. The newly emergent institution will stand somewhere with a pinpointed normative position in the spectrum of normative contestation.
- Chapter 5. Normative contestation in action: Genesis of institutional fragmentation. This chapter deals with the genesis of institutional fragmentation and confronts the question of why competing and overlapping institutions are created beside the dominantly extant institution? In this regard, attention is laid on the Asian climate change institutions that are generated outside the dominantly

existent institution of the Kyoto Protocol sitting on the UNFCCC: the *Asia-Pacific Partnership on Clean Development and Climate* (APP) in 2005, the *East Asia Climate Partnership* (EACP) in 2008, and the *East Asia Low Carbon Growth Partnership* (LCGP) in 2012. With these cases, the genesis of institutional fragmentation will be analyzed on the ground of strategic social construction by a norm entrepreneur's normative contestation.

- Chapter 6. Normative contestation and its path forward: Evolution of institutional fragmentation. This chapter looks at the reaction of agents to normative contestation. The direction of institutional fragmentation in the issue area of climate change will be analyzed by relevant agents' normative position-setting and position-instantiating or -propelling practices in the face of normative contestation on international norms. Thus, this chapter will investigate the normative implication of climate change institutions of the Asian regional cooperation organizations to see what their normative positions are and how they instantiate their positions with practices. For this study, the cases to be selected are the regional climate change institutions of the Asian regional cooperative organizations: the ASEAN, the APEC, and the EAS.
- Chapter 7. Conclusion. This chapter provides summary results from empirical studies and the interpretations. Given the interpretation and discussion of the results, Chapter 7 offers some implications to institutional fragmentation in climate change issue area. Firstly, a comprehensive chart of normative contestation on two norms of the CBDR and the precautionary approach is to be drawn. Secondly, the genesis of institutional fragmentation by strategic social construction is to be shown on the basis of normative contestation and norm life cycle. Thirdly, the evolution of institutional fragmentation by actors' norm-positioning and —propelling in the face of normative contestation is to be shown by norm dynamic path. The overall structure of this thesis is shown in the figure 1-1 in the next page.

Figure 1-1 Structure of thesis



Source: The author.

CHAPTER 2 LITERATURE REVIEW

To approach the observed phenomenon of institutional fragmentation in a given issue area of climate change and explore the genesis of institutional fragmentation theoretically, it is highly tempting to search for a theoretical vantage point, which is world politics, and to make a dash into it strait-forwardly. It is because institutional fragmentation is an on-going discourse made in the realm of world politics. However, a cautionary buzzer is sounded. Institutional fragmentation is a new ontological entity that accompanies conceptual, epistemological, and methodological flexibility (Zelli and van Asselt 2013). That is, institutional fragmentation has not found its firm theoretical roothold. Firstly, institutional fragmentation is too new to be specifically defined within only the boundary of world politics. The arena of world politics is now swarming with a plethora of similar ontological concepts such as institutional multiplicity, institutional proliferation, institutional complexity, regime density, or regime congestion other than institutional fragmentation.² Along this line, secondly, institutional fragmentation is too broad to be specifically defined by theoretical sources in the realm of world politics. From the recognition that institutional fragmentation has both ontological newness and conceptual ambiguity, a right track to pinpoint what it means by institutional fragmentation is to find both common threads and differences among the terms of use. Comparison and differentiation will reveal what institutional fragmentation is. Yet, there should be some basic criteria by which the terms of use can be compared. Thus, though this thesis aims at the genesis of institutional fragmentation, the very fact that the concept of institutional fragmentation suffers from conceptual ambiguity and newness necessitates an exploration of theoretical and conceptual roothold of institutional fragmentation. The theoretical and conceptual clearance of institutional fragmentation should take precedence over the theoretical exploration on the genesis of institutional fragmentation. Then, where are we supposed to start?

Here lie two common threads. One is that they originate from 'institution'. The other is that they have relevance to 'plurality of institutions'. Institutional fragmentation is also inextricable from

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² Young (1996), Ivanova and Roy (2007), and Alter and Meunier (2009).

these two threads. Thus, it seems necessarily important that the phenomenon of institutional fragmentation is to be situated in the lattice of institutional study at the outset. Also, institutional fragmentation needs to be thought of in the realm of institutional multiplicity. Without theoretical exploration on the institution and the implication of institutional multiplicity, we cannot clearly figure out where the study of institutional fragmentation can be laid in the study of institution and is to be directed forward. It is necessarily inevitable to go on a pains-taking journey to ask what the institution is from the beginning. Though hard, it is the safest start.

In this regard, this chapter serves as literature review on institution in four sections. The first section explores institutional theories across disciplines in social science and compares such institutional phenomena as institutional existence, design, effectiveness, change, and multiplicity. Here, the phenomenon of institutional fragmentation is derived from the generic phenomenon of institutional multiplicity on the basis of existing theories on institution. The second section describes 'institutional multiplicity' in global environmental politics. The third section deepens the study of multiplicity of institutions with the 'institutional fragmentation' in climate change issue area. The fourth section explores previous theoretical approaches that explicated the origin of institutional fragmentation in climate change issue area and shows the limitation of the current approaches. On the basis of this literature review, lastly, three research questions are to be made.

Section 1. Institution

Institution is both easily and hardly defined. Definitional easiness comes from the proliferation of definitions. Insofar as the institution is recognized as *being* in human society, the existence, nature, and role of institution becomes a target of ontological question in the fields of political science. The institution enjoyed numerous attentions from people who see and define it on their own terms. Because institution has been living in numerous minds of those who did, do, and will understand the institution, definitional difficulty comes from interpretative differences across disciplines, schools of

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³ The term of 'institutional multiplicity' is the most direct and neutral expression on the phenomenon that the number of the institution is more than two.

thought within the same discipline, scholars even in the same school, and time horizon. Added to this difficulty are that the interpretive and definitional difference is not a just literal difference. There is a zone of sharing even in definitional differences. Important is to find centripetal implication of the institution that is commonly and similarly shared among different approaches to institution and to recognize the extended centrifugal ranges made by different approaches. The thrust of taking a consumptive and hard labor of traversing institutional approaches by discipline will leads us to understand what institution means by discipline but also to situate what institution is and does in world politics. Only after this, we can see where we are and should be positioned and moving forward with regard to institutional study, which is the essential part of this study on the genesis of institutional fragmentation.

The study on institution is split into old institutionalism and new institutionalism. The old institutionalism put its concern on the effect of an institution on social and political outcomes. The new institutionalism arose by a renewed concern on institution and an exploration of specific aspects of the institution such as specific definition, institutional constituents, institution and actor relation, and institutional genesis and growth (Hall and Taylor 1996). With a focus mainly on the new institutionalism, this section will go through the institution in the disciplines of economics, sociology, political science at the domestic level, and world politics. Particularly, in the part of the world politics, segmented by three major theories of neo-realism, neo-liberal institutionalism, and constructivism, different theoretical approaches to the institution will be explicated. Institutional study in the social science will be summarized into two institutional approaches: a functional approach and a non-functional (or sociological) approach.

2.1.1. Institution in Economics

Recognition on the importance of institution commenced from the recognized imperfection of orthodox neoclassical economics in that individual choice is not always explained by economic models that have grown under the protection of assumption-ridden greenhouse. Against an individual choice on the basis of interest and preference under budget constraints and material

scarcity and subsequently collective action by the invisible hand of price, John R. Commons argued that the individual choice can be under the influence of structure, an institution, and that the collective choice is institution-driven (Commons 1931). As an extension of the critique on the neoclassical paradigm, Ronald Coase focused on transaction cost, or, a "cost of using the price mechanism", which is assumed non-existent in the mainstream neo-classical economics. He defined it as the "the cost of negotiating and concluding a separate contract for each exchange transaction" (Coase 1937, p. 390-391). Along this line, Coase (1937) explained the existence of a firm by transaction cost reduction, uncertainty in contract, and different regulations by different governments or by other regulatory bodies endowed with regulatory powers on the same transaction of within-market and within-firm. Thus, if neo-classical economics frames a market as a means of coordination and the firm as an operating entity within the market, Ronald Coase sees that the market and the firm are alternative institutions where the transactions are coordinated. However, the discourse on the role of institution was not full-bloomed yet.

Stepping on Ronald Coase who reshaped the relation between the market and the firm, Oliver Williamson further divided economic organizations into market, hybrid, and hierarchy (firm) by the structural criteria of incentive, administrative control, and adaptability on the basis of transaction cost (Williamson 1991). In this logic, human rationality is assumed not only to be opportunistic for interest-seeking but also to be bounded by its limited cognitive competence across time and across individuals. This bounded rationality generates a friction in any economic exchanges, and the cost of liquidating the friction is no other than transaction cost. The transaction cost encompasses ex ante cost of "drafting, negotiating, and safeguarding an agreement" and ex post costs in such cases as mal-adaptation, haggling, set-up and running, and bonding to effect the secure commitments in the contract (Williamson 1985, p.20). In order to reduce the transaction cost, human inevitably becomes a "contractual man" by forming a contact that binds behavioral boundary for mutual gains (p.43). The diversity of contracts in an economic sphere is explicated by an economic agent's selection of the most efficient mode of governance that best reduces transaction cost. In this regard, the firm is defined as one of "the institutions of governance" (Williamson 1993, p.98). Major

concern in this transaction cost economics is laid on the *design of (contract) rules between or across* economic organizations (or agents).

Meanwhile, there is another approach that confronts the frictionless economic choice. If Williamson is sided with looking at the firm as "nexus for contracting relationships" rules (Jensen and Meckling 1976, p. 311), this new approach examined the rules within the organization, particularly, informal rules embedded in the economic organization of the firm, so in this new approach the firm is interpreted as a "bundle of routines", resources, and activities (Mathews 2010, p.232). This approach arose with regard to technology choice. The orthodox economics expounds that technology choice hinges upon individual preference on a certain technology and the possibilities and characteristics of the concerned technology itself. Yet, Arthur (1989), recognizing that modern high technologies are new, uncertain, and competing, argued that technology choice is influence not only by the individual preference and the technology possibilities but also by dominant market share and technological improvement of previously adopted technology on the one hand and contingent historical events on the other hand. The logic behind this explanation is the concept of increasing returns that a technology-adopter receives more pay-offs when choosing a previously adopted and utilized technology, despite an alternative and better technology. Accordingly, the current choice of technology adoption is locked-in by the previous behavior of adopting a certain technology, and the choice connection between the past and the present is termed as "pathdependence". Cowan (1990) explicated the dominant global market share of the US-oriented technology of light water reactor by learning-by-using, learning-about-payoffs, and network externalities that engendered increasing returns to the choice on the one hand and by the role of the US army, the Soviet nuclear bombing threats, desire for non-proliferating design type, and the US government subsidy that constitute historical random events on the other hand. Distinctive in this is the role of central authority in the technology development and the global diffusion of that technology. Arthur (1994) later operationalized the mechanism that induces increasing returns by four factors: i) scale economies, ii) learning effects, iii) adaptive expectations, and iv) network economies. To be noteworthy are that the current choice is not always efficient because the choice is path-dependently done and that the inefficient equilibrium persists out of multiple equilibria. In order to lock-out from the inferior equilibrium that is laden with inefficient path-dependent choice, what is required is an increase of capability, resources, knowledge, and newly organized routines. This is where evolutionary economics was born, and the diversity of firms is explicated by the different levels and degrees of learning, path-dependency, technological capacity, assets, and routines which are the institutions constraining the choice. This approach concerns the *redesign of rules* or the *change of rules* to lock-out from the path-dependent institutions. For these, required are both enhanced capacity and enhanced bundling of capacities.

On the basis of the afore-mentioned transaction cost economics and the evolutionary economics, concern was extended from the microstructure of the firm to the macrostructure, the "institutional environment" (Williamson 1993, p.98). Douglass North is the one who looked at the macrostructure and breathed ontological life into institutional environment and attempted the explanation of different economic performance across the nations. He defined the institution as "rules of the game" comprising formal and informal rules (North 1990, p. 4). If formal rules are political, judicial, and economic written contracts, the informal rules are socially accepted and unwritten code of conducts, norms, conventions, culture, and repetitive practices. The individual choice is explicated in interaction with institution. The actor in the game is struggling with the uncertainty arising from complexity of problems in social exchange, the limited problem-solving software of individuals, and the complexity of environment. Here, game rules draw a behavioral boundary of constraints and opportunity and reduce transaction cost in the process of decisionmaking and social exchange, so the choice is made through interplay between the institution and the opportunity-seeking actor (North 1990). Noteworthy is that formal rules supplant informal constraints in a manner that the formal rules reduces the transaction cost of information processing, monitoring, and enforcement in exchanges and helps the effective implementation of informal rules. Despite the formal rules that proves to bring out economic efficiency, the formal rules are not planted and developed in some countries, because the informal rules that have long been constructed govern the activities of the actors. The diversity and development of economic institutions across the nations are explicated by the institution on the logic of transaction cost and the path-dependence.

2.1.2. Institution in Sociology

Unlike the institutional economics that arose with an attention on the structural influence in the choice against atomistic, free-willed, and agent-based choice determination of neoclassical economics, sociological institutionalism focused on the influence of structure in the outcome from the beginning. Old sociological institutionalism studied formal and coercive forms of organizations and bureaucracy that constitute social realities and affect actor behaviors. Individuals are positioned to be cognizant of and reactive to the social systems that impose formal rules and informal constraints of norms and values. (Hall and Taylor 1996). What marks new sociological institutionalism from the old institutionalism is an active role of individuals with regard to institution. Individuals are depicted more actively reactive to the institutions. In cognitive aspect, individuals not just passively recognize and respond to the institution but instead actively form their own identities to the institution and support, change, or constitute social institutions. Furthermore, in cultural aspect, the individuals of their own identities, reflexive of the institutions, collectively form a common definition of the situation, produce common knowledge and beliefs, and set their action strategies forward (Scott 2001; 2008).

As a step forward, there is a comprehensive approach to an interaction between the institution and the actor, specifically, organization. DiMaggio and Powell (1983) questioned the homogeneity of organizational forms and practices among organizations despite their organizational variation and answered that the source of isomorphic behavioral diffusion is driven from institutional pressures formed in the organizational field. Organizational field is defined as "a recognized area of institutional life", and this area is constituted by none other than the organizations such as "key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (p. 148). External pressures on the organizations in the organizational field influence the firm's decision on the adoption of a certain management design or organizational

practice. Three mechanisms of institutional isomorphism are i) coercive pressure from force, authority, persuasion, or invitation to join in collusion by other organizations, ii) mimetic pressure to imitate organizational practices of "similar organizations in their field that they perceive to be more legitimate and successful" in response to uncertainty, and iii) normative pressure to define the conditions and methods of their work and to control the production of producers out of professionalization (p. 152). Thus, the once constructed institution influences the agent behavior and leads to the homogeneous diffusion of behaviors, and the agents' isomorphic behaviors reinforce the existing institution, which leads to institutionalization.

Along the same line, Scott (2001; 2008) explicated that the institution is supported by regulative, normative, and cultural-cognitive pillars. From the perspective of regulatory pillar, the institution, shaped by regulatory process such as rule-setting, monitoring, and sanctioning activities, plays a role of constraining individual behaviors. The institution in normative pillar encompasses values and norms, both of which infuse "prescriptive, evaluative, and obligatory dimension into social life", define a certain directionality of movement with goals or objectives, and point out appropriate ways to reach the objective (p. 54). Yet, if the values relates to what is regarded as preferred or desirable, the norms are close to what is regarded as legitimate. Lastly, the institution in cultural-cognitive pillar is no better than a collective-formed and shared knowledge or conception. What is distinctive in Scott (2001:p.182; 2008: p.196) is that he introduced "de-institutionalization" which refers to "process by which institutions weaken and disappear" in three pillars: i) in regulative pillar, sanctions are enfeebled and non-compliance is increased, ii) in normative pillar, taken-forgranted norms are eroded, and the expectation on the obligating force of norms is decreased, and iii) in cultural pillar, cultural beliefs are diluted. In this de-institutionalization, social actors form coalitions, engender fragmentation of existing institution, and replace it with new one. Important is that a new institution is not something completely new, because the new institution borrows regulative rules, values and norms, and cognitive aspects from the pre-existing institution.

Thus, sociological institutionalism in the cognitive perspective focuses on a relation between the institution and the individual, and the new sociological institutionalism argues that the relation is not uni-directional from institution to individual but *interactive* on the basis of the newly formed identity of the self in reflexive of the institution. In the cultural aspect, sociological institutionalism focused on the socially-embedded, culturally-transmitted, collectively-shared norms and values that structure the individual behaviors, and the new sociological institutionalism focused on the active individuals who horizontally exchange their identities and understanding of the context inter-subjectively, form *collective identity*, and influence the given norms and values. In the organizational aspect, an interaction between institution and agents leads to intensified *institutionalization* or *de-institutionalization* of the existing institution. Accordingly, new sociological institutionalism looks at not just institutional power on the actor behavior but also the influence of an individual with reflexive identity and the individuals forming collective knowledge and actions on the institution. The institution is transformed into a dynamic entity that interacts with the agent.

2.1.3. Institution in Political Science at Domestic Level

In the institutionalism in the political science, there are two strands that are born by "cross-fertilization" of new institutional approaches (Goodin 1996, p. 11). One strand is rational choice institutionalism which complements rational choice approach to political science. Rational choice approach applies the neo-classical economic assumptions and models of free-willed, interest-seeking, unbounded, and atomistic individual doing an economic exchange with the other individuals in a frictionless market to the political world. As the institutionalism in economics emerged against the limitation of neo-classical paradigm, the rational choice institutionalism also arose from the recognition that there are political outcomes that the rational choice approach cannot explicate. With the case of political decision made in the US Congress, if a political agent is the same with an economic agent who makes decision in a free market, the stable and efficiently fast majority voting result for legislation in the US Congress, regardless of diverse legislators with diversity of interests

⁴ Goodin (1996) utilized the term, "cross-fertilization", to indicate only the combination of approaches within the new institutional economics, but the term I use here subsumes both the cross-intramural fertilization within the discipline and the cross-fertilization between different disciplines.

on diverse issues, cannot exist. In a free market, an invisible hand automatically leads to precarious and diverse interests into equilibrium. By the same token, political square also needs a hand to lead to stability, regardless of whether it is visible or invisible. This is where the notion of institution steps in with a sword of transaction cost. The Congressional institution reduces transaction cost of political exchanges by providing information to the legislators, making the information-sharing possible among the legislators, and influencing and constraining the width of variant choices of the legislators with procedural rules (Riker 1980). That is, political outcome is not just shaped as a result of individual choices but also political structures. Because of institution, political outcome is not a jumble of varying and dynamic political interests but an induced equilibrium with convergence and stability (Shepsle 1989). Importantly, depending highly on transaction cost economics, the rational choice institutionalism assumes that the political institution is designed and selected for functional efficiency of political exchange.

The other strand is historical institutionalism which is born from the cross-disciplinary fertilization of the evolutionary economics in the new institutional economics and the culture-orientedness of the new sociological institutionalism. To Paul Pierson who is a trailblazer of this strand, much of the politics, essential of which is the provision of public goods, is done not by political exchange but by political authority with legal-binding rules. By borrowing the logic of increasing returns and the concept of *path-dependence* of Arthur (1994), Pierson explicated the "density" of an existing institution and the difficulty of establishing a new institution (Pierson 2000a p. 259). Though acknowledging the efficient and functional role of institution in reducing the transaction cost in actor's choice and coordinating political exchanges, his saying is that not all the institution is efficient or function-driven and that the undesirable institution is sticky, persistent, and hard to be replaceable by the more efficient one. Also, he put the issue of "time horizon" on the table. Unlike the transaction cost economics where credible commitment between economic agents across

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When the term, "density", is used with a single institution as in the case of Pierson (2000a)'s, it implies that the institution experiences intensification and specification in terms of rules, functions, internal organization, accompanying infrastructures vertically and horizontally so that the institution is becoming persistent and change-resistant. If the term is used with the case of multiple institutions as will be noted later, the density refers to institutional proliferation in the governance so that "the density of institutions" bears a negative connotation (Young 2002b, p.263).

time is possible through contract-making on property right, political property lacks the characteristics of economic property rights. This means that Pierson is critical of the compatibility between the transaction cost economics in economic sphere and the rational-choice institutionalism in the political sphere. He also belittled the rational-choice institutionalism's belief in *path-making* or *path-reversal* by the design of new institution. The institution is change-resistant, time-embedded, and culturally produced. Design of any new function-oriented efficient institution is limited and cannot be done without the existing institution, so Pierson argued that institutional research in political sphere needs to explore the sociological tradition (Pierson 2000b).

2.1.4. Institution in World Politics

Neo-liberal institutionalism

In the world politics, the institution grabbed the eyes of those who searched for the puzzle of international cooperation and collective action. There are three distinctive theories whose implications on the institution vary: neo-liberal institutionalism, neo-realism, and constructivism. In the first place, the wind of the new institutionalism blew in the world politics at the time when the hegemony withered. An alternative mechanism needed to sit on the vacant chair of global order which was long taken by power-oriented hegemony, and subsequently the institution occupied that seat.

Here, the status of institution is markedly elevated in world politics. If the institution is one of explanatory factors in the political outcome in the domestic political society in the current of the new institutionalism, the institution in world politics rises to the single most important factor to bring about a collective action outcome in the absence of hegemony. Among the schools of thought of the new institutionalism, Keohane (1984/2005) introduced the rational choice institutionalism whose genealogy is transaction cost economics of new institutional economics. This is perhaps the natural corollary of a theoretical search for institutional genesis in the global society which is

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⁶ General order in the indication of the theories is neo-realism, neo-liberal institutionalism, and constructivism. Because the focus is laid on the institution in this thesis, the indication here starts with the neo-liberal institutionalism.

described as an anarchy and is thus absent of any prior institution. Despite the non-existence of a prior institution, the rational-choice institutionalism posits a functional assumption that a rational actor can design and establish an institution for a certain expected function. The institution reduces transaction cost of negotiating, monitoring, information-collecting and -sharing and facilitates political exchanges. Because the agreement on the rules of behavior between or among nations provides mutual gains to be secured, the institution is established. Thus, a well-designed institution functions to enhance interdependence and ultimately lead to international cooperation (Keohane 1988). Institution's ontology is driven by the functions and performance that the institution is expected to deliver.

This vein of world political stance with its genealogy from the rational choice institutionalism is called the *neo-liberal institutionalism*. In the midst of definitional proliferation on the institution, Robert Keohane started from a broad definition of "persistent and connected sets of rules that prescribe behavioral roles, constrain activity, and shape expectations" (Keohane 1988, p. 386), delimited it as "complexes of rules and norms, identifiable in space and time", and then focused on two types of institutions: specific institution and practices (Keohane 1988, p. 383). According to his explanation, the specific institution refers to purposive rules that render a behavioral role to the actors to play, differentiate the roles, and structure the pattern of behaviors. The practices as institution refer to taken-for-granted rules by members within. In the world society, the institution exists in the name of regime which is an "institution that specializes in making collective choices on matters of common concern to the members of a distinct social group" in a "more limited set of issues or a single issue area" (Young 1994, p.26). The regime is issue-specific. If a certain issue is recognized as problematic and the conditions surrounding the issue foster international negotiations among the actors involved, the negotiations produces treaties, conventions and international agreements which constitute the regime and lead to the birth of the regime (Mitchell 2010). Neoliberal institutionalism is grounded on a firm belief in the power of the regime that with compliance rules leads to a collective action in a certain issue problem. By the

establishment of regimes on the diverse issues, the world society has now become a collection of regimes.

Neo-realism

Though the antecedents in favor of hegemony-oriented interpretation of state behavior drooped, power-oriented thoughts were inherited in a more systematic manner. Kenneth Waltz in the stream of neo-realism identified difference between domestic political structure and international one in three criteria: i) principle of order, ii) functional specification of formally differentiated units, and iii) distribution of material capabilities across those units. By these criteria, domestic political structure is delineated as being i) of a governmental institution-based, centralized, and hierarchical order, ii) with formally and functionally differentiated units, and iii) of the relative capabilities among the units that constitute the structure. Meanwhile, international political structure has an order of anarchy for i) the lack of an international government, ii) the formally and functionally similar units of states, and iii) the unequally distributed capabilities of power among the states. Particularly, to explain the shaping and reshaping of the non-hierarchical and decentralized international order, Waltz borrowed micro-economic theory and equated the economic market structures of monopoly, oligopoly, and perfect competition market with the world politics of a single hegemon, a few great powers, and non-hegemon. Accordingly, in the hierarchical sphere of domestic politics, the differentiated and specialized units by the central orderer are closely interdependent and integrated, but in the anarchical structure of world politics, the formally and functionally similar units of states are afraid of losing their own entities due to an overlapping function and concerned about relative gains in any cooperative action with the other units (Waltz 1979). Accordingly, it is not surprising that John Mearsheimer dubbed the institution as "reflection of the distribution of power in the world" (Mearsheimer 1995, p.7). That is, the institution is another power-dipped structure where the interests of hegemonic nation state are exercised and the distribution of power is reflected and reproduced. The institution cannot be an alternative to anarchy, because the institution is established within an anarchical structure. The role and functional leverage of the institution is much diluted. As

a naturally corollary, Kenneth Waltz argued that the action principle for a nation state to take in this inescapable structure of anarchy is self-help, which reduces the organization cost considerably. In this vein, the political structure of anarchy in world politics is given and unchanged. Any institution set up by the agents cannot be a substitute for the anarchy. Institution works as an agent's *power-carrier* to diffuse its own plots.

Comparison between neo-liberal institutionalism and neo-realism

The approaches by neo-liberal institutionalism and realism to the institution are markedly contrasted. The circle of the former believes that the institution, equipped with cooperative mechanism such as transaction cost reduction, makes it possible for nation states in anarchy to cooperate. Meanwhile, the latter rejects the belief in the institutional functionality and regards the institution as no better than an instrument of power exercise and diffusion. Also, if the former sees that the institution replaces hegemony, the latter sees that institution is extension or different forms of hegemony. Accordingly, neo-liberal institutionalism strongly believes in the power of structure, more correctly, the power of institution. In contrast, neo-realism believes in the power of nation state.

Despite these differences, however, they have similarity. In the first place, the institution does not replace the anarchy. In the neo-liberal institutionalism approach, the establishment of an institution means the formation of a hierarchy in a specific issue area, but that is an artificial *island* of hierarchy in the sea of anarchy. Those who see the benefit and agree upon the rules of the island decide to drop an anchor. To the eyes of neo-realists, the institution is a large-scaled battleship floating to allure small ships to sail across the sea of anarchy together. The anarchical structure is exogenous, given, unchangeable and irreplaceable. All the actors can do is to survive in whatever method in the given structure of anarchy, because the sea of anarchy gets never dried up.

In the second place, regardless of different characteristics, the institution is functionoriented and design-based. The neo-liberal institutionalists intend cooperative interaction of states and, for this function, design principles, norms, rules, and decision-making procedures. Important is that they hold "injunctions about behavior" (Keohane 1984/2005, p.59). In the circle of neo-realism, nation state intends to carry through its power and interest and so design the skewed interest-tainted institution. This means the power and interest-ridden rules of the institution influence the actor behavior. Furthermore, the regulatory rules govern the matter of distribution of materials. If the institution governs the distribution of varying interests in neo-liberal institutionalism, the neo-realism's institution contains rules to deal with the distribution of material capabilities, briefly, the powers. Accordingly, the institution is a set of regulative rules that coordinate distribution of materials, and there is a function-driven rule designer.

The third, which is implicated from the second point, is that both strands are bracketed into rational approach (Keohane 1988). The neo-liberal institutionalism assumes that nation states are unitary economic and organizational agents with bounded rationality and that the institution can help the nation states in solving information asymmetry and reducing transaction cost of information collection by information provision. The neo-realism also sees that a nation state works like an economic agent in market, thinks of relative gains on the basis of relative power capabilities, calculates pay-offs in the game matrix, and puts a decision from constrained options available (Krasner 1991). Thus, it can be inferred that the *institutional designer has a skewed rationality of homo economicus*. Summing up, regardless of institutional set-up or self-help that the actor chooses, important is that the actor choice is originated from the logics of anarchy. Instead, the role of anarchy goes no further, and the rest is devolved upon the hands of actors.

Constructivism

Against the afore-mentioned rational approaches of the rational agent-based and institution-setting neo-realism and neo-liberal institutionalism, there arose a reflexive approach to the institution.⁷ This approach forms a theoretical camp, called, *constructivism*, dipping its foot in the sociological tradition, and contrasts itself from the rational approaches by three main criteria of anarchy, institution, and actor rationality. As mentioned previously, the rational approaches assume that the

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⁷ Keohane (1988) classified scholarly currents in world politics in gross into rational approaches and reflexive approach.

structure is given, the structure is anarchistic, and the actor is rational. The logics flow from the given structure to actor. However, the constructivist logic goes in reverse by doubting the actor rationality of the rational approaches. This does not mean that the ontology of the structure is denied. Alexander Wendt explicated the actor behavior in his famous article of "Anarchy is what states make of it" in two ways. Firstly, an actor not only recognizes the structure but also interprets the structure and forms his or her identity on the roles and expectations about the self within that structure. This identity is subjective and "inherently rational" (Wendt 1992, p. 397). This identity determines the actor's positional willingness to support, inaction, or change the structure. This identity is the origin of actor's interest that induces a certain action strategy and implementation of it. That is, the actor behavior is fundamentally based on the identity on the structure.

Secondly, the actor that embraces an identity interacts with the other actors by exchanging and sharing the interpretation of and the identity on the structure. What happens at this time is identification. Identification alludes to "affective relationships" between or amongst actors, and the ordinal degree of identification can be drawn from high to low, from favorable to unfavorable, or from dense to sparse (Finnemore 1996a, p. 5). By the favorable degree of identification, formed are both collective knowledge and collective identity, put differently, inter-subjective meanings (Wendt 1992, p. 405). The collective meanings, arising from horizontal actor interaction, constitute the structure again. Accordingly, the structure is subject to change. In the ontological timing, the structure is not something given and stable but instead dynamically created in an on-going manner. Thus, the ontological status of the structure becomes equalized with that of the actor (Wendt 1987). The ontological relation between the structure and the actor is inter-dependence. The once constructed social structure influences and constitutes the actor identity, and, at the same time, the social structure is embodied, reconstituted, and even un-constituted by the practices of the actors. Because of this ontological characteristic of mutual constitution between the structure and the actor, it is hard to reduce the understanding of the political process and outcome to the matter of structure or the matter of actor. Furthermore, because of this mutually constitutive relation, the social or political structure has "inherently discursive dimension" that is reflexive of the concerned actors' discursive, sociological, and ideational realm of rationality (Wendt 1987, p. 359).

This re-exploration of actor rationality leads us naturally to the criterion of anarchy. Repeatedly speaking, the rational approaches regard international political structure as anarchy, or, an absence of hierarchy, so the supporters of neo-liberal institutionalism propagate the advantages of setting a small structure of hierarchy, the regime, within the anarchical structure, and the neo-realists think of self-help as the most preferable action choice due to the lowest cost to be taken in the anarchical structure. To them, the anarchy is the only grand structure that constrains the behaviors of the nation state. However, Wendt (1992) made some critiques against the assumption of a sole and given structure of anarchy with his implicating title of an article, "the anarchy is what states make of it". This means that the anarchy is the structures that the nation states choose to support and construct. It is because the structure is inter-dependent with the actors, the actors form self-identities and then collective-identity through interaction on the structure, and the structure is instantiated and embodied by the practices of actors on the basis of collective identity that determines the nature of the structure. Accordingly, if the structure has an anarchistic nature, it is because the nation states are supportive of the anarchical structure where only the power and the egoism are preponderant.

The constructivists' logic of anarchy leads us to the final criterion of institution. If we follow the stream of thoughts by constructivism, there can be no doubt that institution is the structure that the actors constitute on the basis of collective identity. Hence, in constructivism, the (international) institution is an alternative structural substitute to the anarchy. Also, as the structure is the constitution of identities and identity-oriented interests to constructivist, the institution is thought of as "cognitive entities" that contain shared-meanings, -knowledge, -identities (Wendt 1992, p. 399). Put simply, institution is "shared ideas" (Wendt 1999, p. 94). Thus, institution holds *ideational* elements. The ideational elements encompass identity, ideology, norms, discourse, and culture. The focus on the ideational elements implies that the ideational factors matter.

Wendt (1999) classified the causal role of ideas in two types. One type of causality is related with a rivalry between the material-based power and interest and the idealistic elements in

the causal influence on the expected outcome. The causal role of ideas in international politics is brought forward by constructivism to explain the variation of nation states' foreign policies, which was dominated by materialism-based power and interest logics. John Gerard Ruggie unfolded the causal effects: international principled beliefs, norms, and beliefs have a causal effect on the patterns of global outcomes such as decolonization and human rights enhancement, stabilization of the abrupt changes. Behind the causal role of ideas, Ruggie (1998) saw a conceptual actors who are not only strategic but also "discursively competent" enough to entrepreneur certain ideas to draw out a certain expected political outcome (p. 869). "Norm entrepreneur" (Finnemore and Sikkink 1998, p. 893), an expert-oriented epistemic community in the formation of consensual knowledge (Haas 1992), and the "knowledge brokers" in the translation of issue-specific jargon to policy makers (Litfin 1995, p. 253) in the formation of the institutions do all indicate this discursively competent actor. The other type of causality departs from the rivalry relation between materialism and idealism and instead constructs the directional dependence that flows from idealism to materialism: ideas causally influence power and interest. This means that power and interests, traditionally thought of as being in the realm of materialism, are intrinsically ideational elements (Wendt 1999). 8 Constructivist defend that ideas define interests, while the rational approaches defend interests (Ruggie 1998).

As an extension in this line, institution is composed of constitutive rules, unlike the institution in the rational approaches being a complex of regulative rules that anticipate a causal effect on actor behavioral change. Constitutive rules are the rules "that make up a particular class of consciously organized social activity" (Ruggie 1998, p. 871). Put differently, it is because of the constitutive rules that a consciously organized activity is made possible. The norms, defined as standards of "appropriate behavior" or "shared assessments" (Finnemore and Sikkink 1998, p. 891-892), take precedence over the regulative and procedural rules of the institution. In this regard, the institution is an embodiment of norms (Bernstein 2002). Notably, the formation of norms on the appropriate behavior on a certain realm is unimaginable without the shared and collectively favored

⁸ Wendt (1999) mentioned, "the meaning of power and the content of interests are largely a function of ideas" (p. 96) in a two staged process that "the meaning of the distribution of power ... is constituted ...by the distribution of interests and that the content of interests are in turn constituted ... by ideas" (p. 135).

ideas by the actors, namely, the collective identity. As an additional note, though the rational approaches are grounded on material elements of power and interests, constructivism does not ground itself only in the idealism but instead sheds light on the idealistic elements that precede the interests and the power. That is, constructivism is much more *tangential* to idealism, which does neither argue the primacy of ideas nor rejects the strength of power and interests in the materialism base. The constructivism sits in the middle ground in-between idealism and materialism for a more balanced view on the understanding of international politics (Adler 1997).

Sociological Institutional Economics Institutionalism Structure Structure **New Institutional Economics** Neooriented Agency Classical New Old ansaction Evolutionary Economic nstitution nstitution Cost Economics alism alism **Economics** 乀 Rational Rational Historical **Politics** Choice Choice Institutionalisn nstitutionalism Neo-liberal World Realism Institution Constructivism **Politics** alism Non-functional Functional Approach Approach

Figure 2-1 Institutionalism in social science

Source: The author.

2.1.5. Two grand institutional approaches and Institutional Multiplicity

To understand the institution in world politics that diverge by disciplines and theories, a long and broad journey was made. The institution I encountered in different disciplines and theories does not render me to describe it in a nutshell. Furthermore, any attempt to define it with recourse to only the cursory knowledge of the institution obtained from this journey can take a risk of being 'specific but too skewed' or 'inclusive but too ambiguous'. Undoubtedly, institution is a collection of rules. However, by the characteristics of rules, the typology of rules, and the comparative difference in the weight given to the typed rules, the definition of institution differs. As mentioned at the beginning,

this journey is a preliminary step to draw the genealogy of institution in the first place and ultimately explore the origin of institutional fragmentation in world politics and to situate the phenomenon of institutional fragmentation in the institutional study. Though rough, the tree of institutional family is drawn in the figure 2-1 above.

Three distinctive characteristics, inferred from the genealogy, are as follows. Firstly, there is cross-fertilization between economics and sociology. In the economics where the agent-oriented neo-classical paradigm was dominant, the vein of institutional economics started looking at the limit of free-willed, unbounded, calculative, egoistic agent-oriented explanation in the economic choice and the power of structure, the institution. In the sociology where a structure-oriented approach enjoyed preponderant position in the explanation of social outcome in a manner that structure influences social actors, new sociological institutionalism looked at the power of actors and expounded the social outcome through mutual constitution between the actor and the structure.

Secondly, in the economics, despite a theoretical transfusion from the sociological tradition, the vein of new institutional economics is a complement to the neo-classical economics. An economic agent's rationality is not rejected but revised by the bounded rationality. The setting-up of an institution is to resolve the friction that arises due to the bounded rationality in economic exchanges. The institution is an instrumental helper for the facilitation of rational and calculative agents' economic activities. This means that an economic agent interacts with the institution, but the agent is still separate from the institution. Accordingly, the institutional approaches in the politics with their genealogy from transaction cost economics are also rational approaches in political actions. Institution is a functional instrument for stable and efficient political action.

Thirdly, within the sociology, new sociological institutionalism works as a complement to the limit of old institutionalism. Though an agent is back in as a new explanatory variable that leads to social outcome as well as social structure, the agent is not separate from the structure. Not only the agent constitutes the structure but also the structure constitutes the agent. The institution as a structure cannot be instrumental for a certain intended outcome.

From the genealogy of the institutional approaches, it becomes clear that there are two divergent veins of thought to the institution: economics-oriented functional approach and sociologyoriented non-functional approach to the institution. These two veins are described to relate with two diverging logics: "logic of anticipated consequences and prior preferences" and "logic of appropriateness and sense of identity" (March and Olsen 1998, p.949). Put simply, the logic of consequence and the logic of appropriateness. To bluntly say, they are the logic of economic tradition and the logic of sociological tradition, but the terms of March and Olsen (1998) reveal differences of two traditions in terms of the behavior of political actors. March and Olsen (1998) compared two logics that are the driving force of political action. The political actor, assumed to behave in the logic of consequence, acts like a rational economic agent who tries to maximize interests according to his/her preference. Individual political behavior is understood as an intended action to fulfill the most expectedly profit-generating consequence. The politics is said to be about the aggregation of divergent interests and the formation of collective action. Because political actors contain divergent preferences and interests, convergence on the divergent interests requires a process of "bargaining, negotiation, coalition formation, and exchange" (p. 950) that is never frictionless. Here, the necessity of institution arises. The institution as an instrument to facilitate the convergence process is designed and set up. Accordingly, the institution, which is designed and set-up by the consequence-driven political actors, has its meaning in its functions and consequences.

Meanwhile, the political actor, following the logic of appropriateness, is explained to substantiate the identities, rules, norms, and taken-for granted practices rather than the preferences, the interest, or the profit-maximization. Particularly, identity takes a special position in this logic. The rule-bounded actor shapes its own identity on the basis of the rules that shape the structure or institution, so the identity is associated with the rules. That is, there is no detachment of identity from the rule. The identity can be instantiated to the rule by the practice of individual behavior, but, at the same time, the identity is compared with the other identities across different time and across different actors. The identity, assessed as being similar with the other identities, elevates itself to the collective identity. This collective identity is the source of collective action. Importantly, in the

formation of identity and subsequently collective identity, the cognitive, ethical and aspirational dimensions are activated rather than the calculative, profit-seeking, outcome-oriented consequential dimensions.

To summarize, if the politics in the logic of consequence is all about the arrangement of the political exchange, the politics in the logic of appropriateness is the organization of political life (March and Olsen 1996). Subsequently, if political world, which is governed by the logic of consequence, is a "collection of contracts", the political world under the influence of the logic of appropriateness is a *collection of identities* (March and Olsen 1998, p.949). These two logics provide a good helping hand to understand the afore-mentioned two bifurcated institutional approaches in politics, though seeming too broad to sensitively trim the similarity out of difference. Accordingly, more specified comparison on the way how the institution stands and works in different ways is to be made as follows.

Interpretation of Institution by two institutional approaches

In the understanding of the institution, two approaches show commonalities and differences, and in this section those common thread and divergence in the ontological and epistemological dimension will be dealt with. The first is the institution from the perspective of structure-agency or institution-actor relation. For commonalities, the existence and the role of the structure is recognized in determination of social outcome. By this ontological finding of the structure, an interaction between the agent and the structure becomes inevitable. However, divergence is found regarding the relational distance and status between structure and agent. The functional approach did usher in the structure back into the floor where the agency dances alone. The political agent in genealogy of the neo-classical economic paradigm is separately existent, self-determined, unboundedly rational, egoistic, cost-benefit calculative, interest-oriented, preference-following, and expectant of the outcome in the frictionless political exchange. However, political outcome is not explicated only by the agent's solo dance. Full belief in the agent's omnipotent rationality is revised by the bounded rationality. Thus, there is a need of an instrument with which the agent can overcome the bounded

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⁹ Here, institution is equated to structure.

rationality and subsequently inefficient decision-making. The institution helps not only the individual decision-making but also the collective decision-making in a stable and efficient manner. As the *being* of institution is recognized, the institution becomes an added variable to the agent-dominant methodological framework. The institution as a structure interacts with the agent and balances the dance floor. However, important is that the institution does neither replace the agent nor enjoy an equal status with the agent. Still a main dancer is the agent, and the structure is an auxiliary dancer in interaction with the agent.

On the contrary, the non-functional approach puts the agent back into the dance floor. The agent in genealogy of the sociological institutionalism is not just a receiver of the signals of appropriateness from the structure but also a constructor of the appropriateness with embodying practices. Accordingly, though "rapprochement" between the structural side and the agency side is projected (Goodin 1996, p.18), the ontological distance between the structure and the agent is different. In the functional approach, the agency and the institution interact as separable entities. The institution provides both constraints and opportunities, and the agency interprets the constraints of and seeks opportunities from the institution. However, in the non-functional approach, the agent cannot have a sociological self without the institution, and the institution is embodied only by the practices of the agent. They are not inseparable literally but mutually-constitutive, so their ontological distance is much closer than that of the functional approach. Furthermore, the ontological status between the two is markedly different. In the functional approach, despite the enormous functional merit and role of institution in the generation of a certain political outcome, the institution is an instrument for the facilitation of rational choice of the agent, so the agent/actor takes a higher status than the institution. However, in the sociological institutionalism, the institution is never an instrument, so the actor and the institution see each other in the same height. This different ontological understanding of the structure-agency relation influences the methodological dimension. In the functional approach, the institution is inserted as an explanatory variable to the causality frame. In the non-functional approach, the research frame is constitutive process how the institution and the actor mutually form the political outcome.

The second is the constituents of the institution. As mentioned previously, the institution is a collection of rules. However, the rules span from formal rules to informal ones (North 1990). The formality-informality of rules has several interpretive dimensions. From the perspective of regulative specification, if the formal rules are procedural rules, the informal rules refer to fundamental principles. 10 The formal rules in the legality dimension are equivalents to legally-binding rules that constrain the actor's behavior through sanctioning non-compliance. The informal rules are nonlegally binding norms, code of conduct, promise, and pledges. In the time horizon, the informal rules indicate time-embedded custom, norms, culture, practices, and routines that obstruct an easy change, but the formal rules are malleable to the external change pressure. Lastly, in the dimension of regulatory function, if the formal rules are regulative rules that lead to direct interest-oriented behavioral change, informal rules are comparatively less regulative. 11 Rather, they are constitutive rules that lead to identity formation and subsequently behavioral construction. From this, the institution has itself multi-dimensions. A certain institution is a complex of rules that are not inclusive of but selective from a pool of rules. The institution sits somewhere in the continuum of formality-informality of rules in each dimension. Here, the functional approach looks at the institution on the skew as a complex of the formal rules, the rules that are specific and procedural, legally-binding, easily changeable, and regulative. Accordingly, such regulative rules as membership rules, participation rules, and decision-making rules, compliance rules are the major concern. Meanwhile, the non-functional approach has more regard on the institution as a collection of informal rules, the rules that are general and fundamental, non-legally binding, embedded, changeresistant, and constitutive. Much concern is laid on such rules as norms, culture, collective identity, shared meanings, and repeated practices.

This divergence in the interpretation of the institution necessitates further look at the very important issues in the study of institution. They are institutional design, institutional effectiveness,

¹¹ Informal rules are also regulative.

Wiener (2007) made a norm typology at the level of specification (or generalization): fundamental norms, organizing principles, and standardized procedures. The fundamental norms are citizenship, human rights, democracy, rule of law (non-intervention), and sovereignty. For the organizing principles, there are accountability, transparency, flexibility, and mutual recognition. Standardized procedures can include qualified majority voting, unanimous decisions, and proportional representation rules. He said that the less specific the norm is, the more contestation on ethical ground the norm generates. I utilized this in the classification of formal and informal rules.

and institutional change. These subjects have aroused great scholarly interests. As the institution lives simultaneously across disciplines and across theories within the same discipline, the studies on these subjects have also multiplied. Furthermore, each subject has formed its own theoretical and empirical ground, so it is beyond the author's capacity to deeply delve into each theme. Also, traversing each subject is not a major target of this study. Important is that those three subjects are differently approached in political science and so to be dealt with in a different section below.

Essential Institutional issues: Institutional design, effectiveness, and change

Institutional design, effectiveness, and change are tightly connected, though seen different and dealt with separately. This connection is to be unfolded in the course of looking at each subject. Firstly, two institutional approaches clash over very fundamental questions with regard to the institutional design. To borrow Powell and DiMaggio (1991)'s question, "Is the institution the 'product of human design' or 'the result of human activity'?" (p. 8) This question implies an inquiry of how institution is formed, put differently, whether institution can be designed or not. In the functional approach, as previously mentioned, institution is a powerful instrument for a rational actor to resolve any friction arising from the social exchanges and produce an intended utility-maximizing outcome. The institution is born out of the necessity. Before the birth of institution, there are calculative parents who think of cost and benefits of bearing and raising a baby institution, expect their institution to be born and grown with a certain face and figure, and infuse their intention through parental training with a list of compliance and non-compliance mechanisms with commitments (Keohane 1988). Finally, institution is born with a clear birth date and parents beside it. Interestingly, once the institution is born, it starts to govern the parents, transform them into subordinates to the institution, and lead them to generate a collective action. Accordingly, institution is an embodiment of intention and expected consequences before its birth, so the institution is designed. Regarding the way the institution is designed, if there is something to be governed, then the institution, which is fit to a certain circumstance and for collective goods to be expectedly provided, is tailor-made. Undoubtedly, the concern has moved from 'institutional design matters' to 'well-designed institution matters'.

Thus, the principles for good institutional design have been explored such as "revisability", "sensitivity to motivational complexity", and "variability" (Goodin 1996, p.40-42). On the basis of the actor's proclivity toward the compliance, the design of institution to sanction the individuals is strategically devised in a different manner (Pettit 1996). Or, regardless of value-attached principles of institutional design for good functional outcome of the cooperation, made was another attempt to open the black box of institutional designing mechanism. Design problems such as distribution, enforcement, actor number and asymmetries among them, and uncertainty are set as explanatory variables, and the institutional design elements such as membership rule, issue coverage, centralization of tasks, control rules, and flexibility are laid as dependent variables. The causality between independent variables and dependent variables are conjectured (Koremenos, Lipson, and Snidal 2001).

Meanwhile, in the non-functional approach, it is rather unclear when the institution was born and who the parents are. The institution has been living in a mutually constitutive way with the actors who have experienced birth and death, ups and downs, and stability and change of lives. The institution is an instantiation of the actor's vicissitude of life, and at the same time the actors are the reflection of the vicissitude of institution. This means that there should be a 'time' factor in the production of what is to be called 'institution'. Institution is a shared and constructed idea on a time horizon. The construction of institution is process-oriented. Thus, institution is not only a time-embedded product of human activities but also an on-going production of certain human activities. Accordingly, institution is constructed rather than is designed. Unsurprisingly, in the non-functional approach, it is doubtful for a certain institution to be designed. This doubt is not on the possibility of designing an institution but on the possibility of designing a workable institution. Institution is time-embedded, instantiated by the practices of the actors, and collectively-constructed, so the emergence of any new institution cannot be thought of as being apart from the existing institution. The existing institution is itself a collection of rules that are time-enduring and dissolved into the actors.

Goodin (1996) mentioned 'good design' in relation to "goodness of fit" both at the functional level and at the ethical and metaphysical level (p. 39). However, the term 'design' itself is on the skew toward the functional approach.

Accordingly, designing an institution, which implicates designing new rules, on the basis of expected outcome in the future seems implausible from the perspective of non-functionalists.¹³ That is, in the functional approach, institution is an instrument to functionalize social exchange efficiently, so a new institution can emerge at any time by any necessity. Meanwhile, in the non-functional approach, a new institution cannot emerge unless the existing one is cognitively regarded as inappropriate or illegitimate, so the emergence of a new institution is explained by the path-dependent relation with the existing institution (Hall and Taylor 1996).

This discourse of institutional design leads us to the next subject, *institutional effectiveness*. The institution does something. This 'doing' of institution diverges by two institutional approaches. In the functional approach, the institution does *work* from the functional viewpoint and produce an intended outcome. Accordingly, the doing of institution is assessed by the produced outcome. This consequence-oriented assessment of the institution is institutional effectiveness. What if institution cannot produce the intended outcome? The institution is regarded as ineffective, and the correction measures are taken: redesign of institution or its rules. This is where two issues of institutional design and institutional effectiveness meet together. Meanwhile, in the non-functional approach, institution does *live* with the actors by constituting the actors and being constituted by the actors. Institution is assessed by whether actors can live with the institution together. If the institution is regarded as inappropriate to live together. Then, the actors try to infuse their way of living into the institution through long persuasion and repeated practices.

The subjects of institutional design and institutional effectiveness lead us to the subject of *institutional change*. There is a plethora of studies in this area, and it seems worthwhile to deal with what the institutional change means. Literally, it indicates the change of institution. From the perspective of longitudinal span of the institution, narrowly speaking, it can refer to the change of the already established institution. Broadly speaking, it can be inclusive of the genesis of institution,

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However, this does not mean that the non-functionalists do neither concern nor use the institutional design. Instead, the focus is laid on the ideational aspect of the institution. Dryzek (1996) mentioned that institutional designers need to focus not only hardware but also "discursive software" of institutions (p. 122).

In this thesis, literatures that cover the method of institutional effectiveness are not dealt with. For a general information, please refer to Breitmeir et al. (2006).

the reproduction of the once-established institution through reinforcement or diffusion, the deinstitutionalization, and the replacement by a new institution or the genesis of the new institution. Or, the discourses of institutional change multiply by the specificity of the questions on the sources, procedures, mechanisms, typology, etc. Going through all these contentious studies also stands outside the purview of this thesis.

In the functional approach, particularly, in the domestic political science, the source of institutional change relates to whether it is an external shock, institution's lack of resilience to the shock, or endogenous mechanisms such as actors' interest conflicts or ambiguity of rules that affects actors' interests (Mahoney and Thelen 2010). Anyhow, whatever the sources of institutional change are, the focus is not on the continuous dynamic change of the institution but on the specific stage in the institutional change. In the genesis stage, concern is not the process of genesis but the design of rules and the expected outcome from the genesis. After the genesis, concern moves to a degree-of-fit between the expectation and the reality. If the institution is regarded as ineffective, then the designed rules are questioned and the rules are changed. Thus, it is without saying that institutional change is the redesign of institution for a better effectiveness. This is not to say that the process-oriented concern on conflict and convergence of interests, preferences, rules, and outcomes does not exist, but the process is replete with calculative expectations and outcomes. Here, the institutional design is gradually corrected and refined through the adaptive mechanism (Pierson 2000b). That is, through institutional change, the institution goes enhanced, and the institutional change is frictionless. The once established and currently existing institution can be changed at any time by any intention, if there is a necessity for a change. The direction of the institutional change is thus anticipated.

Meanwhile, in the non-functional approach, institution is a complex adhesion between institution and actors. An existing institution is constructed only on the basis of shared understanding on the appropriateness of institution. Once an institution emerges, the institution is practically reproduced and diffused by the recursive practices of actors. However, if the institution is regarded as inappropriate by actors, then the actors do not instantiate the rules of the existing institution. Instead, the actors do political practices to support the other appropriately regarded rules (Holm

1995). To those standing in the non-functional approach, institutional change is all about the dynamics of appropriateness. The dynamic is seen in the all stages in the genesis of an institution from pre-existing institution, the growth of the institution through reproduction, the expansion of the institution by diffusion, the de-institutionalization of the existent and established institution, the replacement by a new institution, and the emergence of the new institution on the basis of the existing-institution. In the change from the existing institution to the new one, what happens is a change of appropriateness, and the Enlightenment concept of (institutional) enhancement is not much included. Furthermore, concern is process-oriented. The institutional change is embodied by the collective mobilization of actors that instantiate the new institution over the existing one, and the process of change is time-taking, frictional, and dynamic. Noteworthy is that "the presence of multiple competing and overlapping institutional frameworks undermines the stability of each" (Scott 2001, p.183). Therefore, interestingly, in the sociological institutionalism-based nonfunctional approach, the source of institutional change is not only the appropriateness gap between levels (actor level and structure level) but also the multiple institutions (Scott 2001; 2008). The multiplicity of institutions will be dealt with in a different section.

Institutional Multiplicity

It has been a long way to arrive at the theme of *institutional multiplicity* by going through two bifurcated paths grounded on the economic tradition and the sociological tradition. Then, what is institutional multiplicity? Literally, the multiplicity of institution means that there are a multiple number of institutions or that the number of institution is plural. Unlike the afore-mentioned subjects such as institutional design, effectiveness, and change, institutional multiplicity has not been a concerned target. It is probably because we are living in the world of multiple institutions and the multiplicity of institutions is something too natural to be a separate theme of concern.

In the functional approach, particularly, the transaction cost economics of new institutional economics, the multiplicity of institutions has not been without interest. However, focus is laid on the variation among the multiple institutions. In case of microstructure, the variation is induced by

the way how the institutional ingredients such as hierarchical mode, incentives, adaptation measures are differently combined. The selection on an institution among multiple institutions by an economic agent is determined by the type-of-transaction that varies by uncertainty, frequency, and asset specificity on the one hand and the cost-of-transaction that takes the least among the institutions in the production of intended outcome on the other hand (Williamson 1985). Accordingly, the characteristics of transaction determine the typology of institution.

An economic agent with bounded rationality does not live doing only one transaction but with numerous transactions. Thus, the economic agent participates in multiple institutions simultaneously, put differently, many contracts all at the same time, to do multiple transactions. Instead, one institution corresponds to one transaction. Accordingly, the multiplicity of institutions (strictly speaking from the viewpoint of transaction cost economics, multiplicity of contracts) contains two meanings. One is that there are multiple institutions that wait for a selection to enact one economic transaction. Out of the multiple institutional choices, the most efficient institution that takes the least cost of transaction is selected. In this regard, the multiplicity of institution relates to the multiplicity-of-institutions (or multiplicity-of-institutional designs) per one transaction. The other is that institutional multiplicity is no better than the *multiplicity-of-transactions*, and the multiplicity of transactions means that there is a multiplicity of goods to be produced. 15 If borrowing the term of 'transaction' from the economics, the multiplicity-of-institutions is not problematic, because each of multiple institutions is presumed to be selected in correspondence to one transaction and in consideration of goodness-of-fit by the rational agent. As long as the economic agent can handle numerous (of course limited) multiple transactions, harnessing multiple institutions that best fit multiple transactions is a recommendable action. The multiple institutions are well positioned according to the transactions by the coordination of a rational agent.

Meanwhile, within the non-functional circle, the multiplicity of institutions is something natural as well, but the multiplicity of institutions can be problematic. Not all the institutions where social agent belongs are the selected but naturally or socially given. That is, the multiplicity of

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Here, the goods do not indicate only the saleable goods in the market. The term of goods here is more likely to indicate an intended outcome.

institutions is not driven by the necessity of the actor but rendered sometimes naturally. Each institution specifies the role of the individual, and the actor forms his/her identity (or position) within each institution and instantiates that institution by practices. Accordingly, social actor needs to position him/herself in each of multiple institutions. However, because of the multiplicity of the institutions, there can be a high likelihood that the actor's positions of multiple institutions can clash. Furthermore, it is possible for an actor to experience the conflicts in doing practices of multiple institutions.

The multiplicity of institutions across time also engenders a conflict. For example, an individual, whose name is K, is a son and the oldest brother in a family institution, a sophomore student at university in educational institution, a part-time worker at a print shop from the morning till the evening for three days during the week in economic institution, a member of study club during the weekend at a voluntary and private institution, a voter on a Presidential election day under a political institution. If the congressional election day is set on Wednesday this year but unfortunately K is supposed to work on Wednesday. K started negotiating with his employer to defer his time to go to work, but he failed. Thus, he could not instantiate the social practice of voting. The horizontal multiplicity of institutions engenders the competition and conflict among the institutions, and the instantiation of certain institutions is forsaken. K, who inevitably could not vote on the congressional election day, felt the inappropriateness of the election procedural rules, and K was not the only one. Public opinion was formed for the systematic guarantee of the voter's right in the case that the voter is part-time worker and that the day of election is set during a workday. A conflict between those who support the existing system and those who want to construct new system is inevitable. Fortunately, the system was changed. However, even though the system was changed, in the next election, still there are many part-time workers who could not go to the voting booth, because their employers threatened them to quit the job. This is the case of longitudinal multiplicity of institutions that trigger a conflict.

Regardless of approaches, instead, the institutional multiplicity itself, being regarded as a fact of life, has not exerted a much scholarly concern as an independent subject. The multiplicity of

institutions in the functional approach has been connected to the diversity of institutions in comparative studies on the divergence of economic or political performance. That is, the multiplicity of institutions is assumed, and the different types of institutions become explanatory variables that lead to different outcome. The divergence of outcome (economic and political performance) is explained by the difference of institutional designs. Ultimately, the multiplicity of institution is dissolved into the causal mechanism of institutional design and institutional effectiveness. Meanwhile, in the non-functional and sociological approach, the multiplicity of institutions is the direct source of institutional change. However, the focus is laid on the institutional change, not on the institutional multiplicity itself. The overall studies on the institution by functional and nonfunctional approaches are summarized in the table 2-1. As seen in the table, the theme of institutional multiplicity is situated within the current study of institution, from which we can see that the multiplicity of institution cannot be thought of without the other institutional issues of institutional design, effectiveness, and change. The phenomenon of institutional fragmentation, arising out of institutional multiplicity, cannot be free from these fundamental institutional themes of institutional design, effectiveness, and change. On the basis of the previous long journey of the institution and its disposition, the next section will traverse on institutional multiplicity in world politics, particularly in global environmental politics, and make a ground for the phenomenon of institutional fragmentation.

 Table 2-1
 Two Institutional approaches

Institutional Perspective	Function-oriented Approach	Non-functional Sociological Approach
Scholarly tradition Political Actor Politics	Economics Economic actor Arranging political exchange	Sociology Social actor Organizing political life
Political world	Collection of contracts	Collection of identities
(Single) Institution Instrument	Instrument	Non-instrument
Institution-actor relation Ontological distance Ontological status	Interactive Aloof Unequal status	Mutually constitutive Close Equal status
Constituents of institution	Formal rules	Informal rules
Institutional design Institutional genesis	Product of Design (arrangement)	Production by mutual constitution (constitution)
Pre-existing institution Source of genesis Direction of genesis Possibility of design	Not important Function-driven Going forward (Expected consequence) Possible to design	Important Appropriateness-driven Going backward (Pre-existing institution) Not impossible
Institutional effectiveness Target of assessment Possibility of enhancement	Institutional effectiveness Enhanced fit-of-design	Institutional inappropriateness Enhanced fit-of-appropriateness
Institutional change Meaning Focus Directionality Sensitivity to change Source	Re-design of institution Static point in change Enhancement Strong External shock & Endogenous mechanism	Change of appropriateness Dynamic process No concept of enhancement Weak (change-resistant) Gap between actor and institution & Multiple institutions
Institutional multiplicity Meaning	Institutional design diversity or transaction diversity	Source of institutional competition and conflicts
Managing multiple institutions	Positioning of multiple institutions by an economic actor	Positioning of social actor in the multiple institutions
Strong Point	Institutional design & Institutional effectiveness	Institutional change

Source: The author on the basis of literature review on the institution done in this section

Section 2. Institutional Multiplicity in World Politics

In the previous section, the theoretical implication of institutional multiplicity in the institutional study was explored. This section traverses scholarly concern on and advances in institutional multiplicity in global environmental politics. There are many other expressions that are in use along the line of the institutional multiplicity: "proliferation", "density", "complexity", "treaty congestion", and "institutional fragmentation". Despite a neutral or negative connotation, a common thread sewn by those terms is that international political arena is populated by multiple institutions. The multiplicity of institutions came to grab the scholarly attention for mainly its negative connotation from the perspective of *institutional effectiveness* in the theoretical circle of neo-liberal institutionalism along the line of function-oriented institutionalism.

This section attempts to demarcate the study on institutional multiplicity by dyadic and systematic level in the first place. From the study on institutional multiplicity at the systematic level, this section attempts to encompass and compares two approaches of regime complex and global governance architecture by scope, origin, and structural properties. Then, the phenomenon of institutional fragmentation is extracted as a generic phenomenon of institutional fragmentation. Then, overall scholarly subjects with regard to institutional fragmentation in a given issue area along the line of global governance architecture are to be summarized.

2.2.1. Global Environmental Politics and Institutional Multiplicity

Market rules exist to resolve conflicts over private ownership on a scarce resource. By this demand for the assurance of private ownership, an economic institution, denoting rules of the interdependent game of society, is supplied by the government (North 1990). The institution functions both to restrict the behavior of rule-bounded actors and to open a possibility of incentive to the opportunity-seeking actors. Likewise, conflicts over environmental resources require a bundle of rules to govern

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¹⁶ For reference, look at Ivanova and Roy (2007), Alter and Meunier (2009), Brown Weiss (1993), Zelli and van Asselt (2013). "Treaty congestion" (Brown Weiss 1993, p.679) was cited by Stokke (2001, p.3).

the way the conflict is to be settled. The environmental institution has enjoyed a prestige in drawing out not only collective political behavior of cooperation and but also environmental enhancement.

In world politics, the wind of this function-oriented neo-liberal institutionalism blew at the time when the hegemony withered away. An alternative mechanism to the power-oriented coalition needed to sit on the vacant chair of global order, and the institution occupied that seat (Keohane 1984). At the international scene where there is no authoritative ruler, the institution facilitates cooperation among actors by reducing transaction cost through information-sharing and temptation of the actors to shirk the rules, fostering cross-issue-area linkages (Krasner 1991), and enhancing credibility for commitments, and coordinating the activities as a focal point (Keohane and Martin 1995). Regime is a special name of issue-specific institution. Because the international society is lack of hierarchy, the regime in the horizontal international society is formed at the center of a specific single issue area (Young 1994). If a certain issue is recognized as a global problem and the conditions surrounding the issue foster international negotiations among the actors involved, the negotiations produces an institution/regime in the form of treaties, conventions and international agreements (Mitchell 2010).

Noteworthy is that international regime is understood to exist as a *one-to-one* correspondence to a certain issue. That is, a singular international environmental regime arises at the center of a specific environmental problem. Accordingly, a major concern has been to find institutional design variables that lead to the enhancement of regime effectiveness on the one hand and to frame methods to measure the regime consequence on the other (Young and Levy 1999; Breitmeir et al. 2006). Though not perfectly complete, diagnostic design methods have been thought of for the institutional formation in the absence of institution and for the re-design of the existing institution in response to the political settings such as problems, politics, players, and practices (Young 2008).

From the 1990s, the effectiveness of a singular regime/institution has been looked upon from a different perspective. The international society has experienced a certain phenomenon of institutional multiplicity. This is attributable to the establishment of regime on the diverse issues by

the one-to-one match. The proliferation of institutional arrangements accompanied worries on the regime ineffectiveness arising out of overlapping membership, functional duplication, completing mandates, resource capture, loss of coherence, etc (Stokke 2001). Thus, the discourse of regime effectiveness became not only the story of a singular regime but also the story of multiple regimes/institutions that are in interaction.

2.2.2. Institutional Multiplicity at dyadic interaction level

Scholarly concern on institutional multiplicity started on two institutions that have a certain interaction on a subject matter and influence the effectiveness of each institution. Interaction between two institutions became a new unit of analysis, and the typology, the consequence, and the management of dyadic interaction between two institutions started being explored (Gehring and Oberthür 2009; Oberthür 2009).

The initial scholarly attention centered on the making of typology of formal aspect of interaction between two institutions, and there are two kinds. One is functional and political interaction. Functional linkage refers to two institutions that are linked functionally (biogeophysically or socio-economically) and effectiveness-related, and the political or strategic linkage is applicable to the institutions that are intentionally connected by political actors who share a broader normative complex or strategically respond to the side-effects of the other institution. Meanwhile, the other is horizontal and vertical interactions whose focus is laid on how two different institutions at the same level (horizontally) and across different levels of scales (vertically) interact and then generate a certain type of institutional effectiveness and change (Young 2002a; 2002b; 2006). Gehring and Oberthur (2000) suggested a mixed typological criteria such as functional interdependence, intentional or non-intentional interaction, quality of effectiveness (synergetic or obstructive), interaction response by unilaterally inductive or under consent, by individually or multilaterally, or by regime modification or cross-regime coordination.

A different approach at the typological stage puts a focus on the substantive aspect of interaction rather than the afore-mentioned formal linkage. Stokke (2001) criticized all the previous

interaction typologies for being neither exhaustive of all interaction cases nor based on the regime effectiveness theory. In his understanding, the previous typologies of institutional interaction cannot generate "theoretically informed and empirically testable hypotheses' to infer a relation between institution and problem-solving, which is the essence of the regime/institutional effectiveness (Stokke 2001, p.7). Thus, he framed the typology consisting of utilitarian, normative, and cognitive interaction on the basis of three sets of regime effectiveness mechanism in relation with actors involved: i) regime affects utility function that changes the cost of actions of actors, ii) regime affects the perception of actors on what is normatively appropriate action, and iii) regime affects the knowledge of goals to be achieved by actors. Also, in order to see the relation between the institutional interaction and the institutional effectiveness, this typology attaches a value to the consequence of interaction, put differently, whether the interaction gives a positive or negative effect on the institutions or regimes involved. By this substantive and theory-embed approach, the interaction analysis is not bounded by the formality of specific function, scale, or level. The substantive typology can be a tool of figuring out the interaction pattern between two institutions. However, still limitation resides in the fact that i) by any new perspective, more typology can be generated, ii) the typology does not expound how interaction is originated, processed and done with a certain consequences, iii) typology-making is result-based, that is, the cases that are experienced to have existing interaction are only concerned.

Stepping on the substantive typology-framing, two lines of studies are stretched, overcoming the "typological stage" (Zelli 2011). One is the causal mechanism of interaction between two institutions, and the other is interplay management. The former focuses on the internal mechanism of how interaction occurs between a source institution and a target institution, and the latter extended the former by dealing with an intentional management of interaction in case of weak or no interaction between the institutions concerned. The notion of causal mechanism was a conceptual progress from typological stage (Gehring and Oberthür 2008). The causal mechanism of institutional interaction framed three elements: i) a source institution as an explanatory variable, ii) a target institution as a dependent variable, and iii) cause-effect relationship between two institutions.

The source institution is the complex of rules, norms, decisions, and knowledge. Here, noteworthy is the linkage between the institution and the actors in each of institutions. Accordingly, causality flows in three steps: i) the source institution shapes and influences the perception, preference, and behavior of actors in the source institution, ii) the changed perception, preference, and behavior of the actors in the source institution affects the preference and behavior of actors in a target institution, and finally iii) the actors in the target institution exert an effect on the rules (formal and informal) and performance of the target institution.

The consequences of institutional interaction are then arranged by two levels: one is result level, and the other is effectiveness level. The interaction result is classified into output, outcome, and impact by the level of where the change occurs. Then, each of this result is further classified by whether the interaction provides synergistic, neutral or disruptive effects on the target institution (Gehring and Oberthur 2009). Simply speaking, the causal mechanism focuses on how the interaction occurs internally between two institutions and how the interaction relates to the effectiveness of the target institution at outcome, output and impact level. Therefore, the causal mechanism provides an instrument to reveals the interaction between institutions in a causal relation, splits the interaction consequences more specifically, and frames the types, conditionalities, and rational of what leads to synergistic, neutral and disruptive interaction at outcome, output and impact level. Meanwhile, the management of interplay, referring to purposeful intervention to enhance the synergistic interaction between two institutions in the case of weak or scant interaction, is largely dependent on the causal mechanism notion (Oberthür 2009).

However, this causal mechanism approach to institutional interaction between two institutions has still room for further exploration. First and foremost, the causal mechanism of dyadic institutional interaction stands on a feeble theoretical ground. The origin, consequence, and management of overlapping institutions have not met the theoretical explanations of international relation theories (IRTs). This means that viable hypotheses on the actor behaviors that are driven by power, interests, and norms and ideas cannot be framed at this stage yet. Furthermore, in the causal mechanism approach, the institution is set to be a complex of rules, norms, decisions, and knowledge.

However, the "ability of the international institution" in isolation differs by the IRTs, so the "ability of the international institutions to influence each other's development and effectiveness" is presumably to differ by the IRTs (Gehring and Oberthur 2009, p.125). However, the causal mechanism approach has not yet explored this theoretical differentiation of the institution. Secondly, the pathway of causality in the causal mechanism between two institutions is unidirectional, not interactive (Zelli 2011, p.257). The causality flows from the source institution to the target institution, so the analytical result on the consequence of causal influence is also the result of the target institution. Thirdly, the causal mechanism approach presumes the existence of multiple institutions as exogenously given. This means that this approach analyzes the causal relation between two given institutions but cannot explicate the causal reason of the genesis of a responsive institution from the given institution. Though, for example, the analytical result shows that the relation between source institution and target institution is conflictive, the fact that the concerned institutions are genealogically relevant or irrelevant is not considered in this approach. Fourthly, the causal mechanism approach analyzes the consequence of the interaction by an ordinal degree that ranges from being synergistic, neutral, or disruptive to institutional effectiveness at the output, outcome, and impact level. Important is that institutional interaction not only influences the effectiveness of involved institutions but also the change or development of the institutions. Yet, this institutional change did not experience much the exploration by the causal mechanism approach. Fifthly, this causal mechanism approach does not tell much about what should be the appropriate response (or remedial management) for disruptive interaction between institutions. This critique relates to the questions on who should be given an authority of management, or who should be the manager, and whether the institutions have the capacity of management.

2.2.3. Institutional Multiplicity at system level

In the 2000s, the concerned unit of analysis is extended from dyadic interaction of two institutions to the structure that is formed by multiple institutions at the system level. Put differently, the concern moved to the structure of the multiple institutions. There are two strands in the systematic approach to institutional multiplicity.

Regime Complex: Institutional multiplicity on a subject matter

One strand is in line with the afore-mentioned notion of institutional interaction under the neo-liberal institutionalism theoretical approach. In this strand, concerned are multiple institutions at the system level which form an indecomposable "array of partially overlapping and nonhierarchical institutions governing a particular issue-area" (Raustiala and Victor 2004, p. 279) or "a loosely coupled set of specific regimes" (Koehane and Victor 2010, p.1). This is termed as *regime complex*.¹⁷ Oberthür and Stokke (2012) mentioned that the regime complex consists of two or more international institutions that interact to co-govern a particular issue-area in international relations, often without any clear hierarchy. The most specific definition of regime complex was made by Orsini et al. (2013, p.29): The regime complex is "a network of three or more international regimes to a common subject matter; exhibit overlapping membership; and generate substantive, normative, or operative interactions recognized as potentially problematic whether or not they are managed effectively".

On the basis of this, Orsini et al. (2013) made more specific six defining characteristics of the regime complex: i) constitutive elements of regime complex are elemental regimes, ii) the regime complex comprises at least three elemental regimes, iii) regime complex focuses on a subject matter, not an issue area, iv) the elemental constituents of regimes have partially, not entirely, overlapping memberships, v) multiple elemental regimes do not automatically translate into regime complex, vi) the genesis of regime complex is neither driven by a certain subject nor relevant rules and impacts but a changed perception of actors with regard to the subject matters. Most importantly, the boundary of regime complex is defined by specific subject matter, not the issue areas. If issue areas indicate sets of issues "dealt with in common negotiations and by the same, or closely

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¹⁷ Along this line, a similar concept of "international regime complexity" was born and defined: "the presence of nested, partially overlapping, and parallel international regimes that are not hierarchically ordered" (Alter and Meunier 2009, p.13). Thus, the regime complex and the international regime complexity can be thought of as being conceptual equivalents.

coordinated, bureaucracies", the subject matter is "often narrower in scope than an issue area" (p. 30). ¹⁸ The singular issue area draws a boundary of an individual regime, and the subject matter can invite an overlapping of different issue-oriented regimes. Thus, the regime complex has a horizontal, overlapping and indecomposable structure (Raustiala and Victor 2004).

The structural characteristic of regime complex is that regime complex stands in the middle in the continuum ranging from highly integrated system to anarchical fragmentation (Keohane and Victor 2011, p. 4). According to Raustiala and Victor (2004), what characterize regime complex are multiple institutions, divergent norms and rules, and functional overlapping. Major concern on regime complex is the conflictual or synergistic nature of the linkage among the institutions at the center of a specific subject matter. Particularly, "divergence of rules and norms across the elemental regimes" is the source of international conflict (Orsini et al. 2013, p.34).

Alter and Meunier (2009) detailed further the consequence of regime complex from the perspective of its effect to the strategies and interaction of the actors involved in five aspects: i) regime complex can engender rule ambiguity due to the overlapping rules and interpreting authorities, and the rule ambiguity necessitates an effort to figure out the meaning of the agreements and to define which agreement to be salient in the implementation, ii) regime complex can render "cross-institutional politics strategies" such as "forum-shopping, regime-shifting, and strategic inconsistency" (p.17), iii) regime complex can empower the informers such as experts, lawyers, and NGOs, create opportunities for political actors to devise "problem framing" and framing-shift, and obscure the cause-and-effect relations and make it hard to form optimal policy choice (p.18), iv) regime complex multiplies the international venues and form an environment where small groups are formed and activated, and v) regime complex can boost competition among the institutions and actors. Particularly, the competition has both negative and positive effects; the negative effects are institutional battle, coordination failure, accountability reduction, facilitation of non-compliance, regime-shifting, or withdrawal from the agreement; the positive effects are total resource increase, risk-hedging, experimentation, spill-over across domains, and increasing value of loyalty.

¹⁸ Definition of issue areas are originally from Keohane (1984, p.61), and this was referred in the article of Orsini et al. (2013).

Appropriate response to conflictual regime complex is the coordination among the concerned institutions (Zürn and Faude 2013). A division-of-labor among different institutions through functional, sectoral, or spatial differentiation can bring out positive coordination results to regime complex with lessons-learned from the dyadic interplay management (Oberthür and Stokke 2012).

The regime complex approach has both common and different threads with the institutional interplay. The similarity lies in five aspects: i) the concerned constituent of institutional multiplicity is elemental regime/institution, ii) elemental regimes/institutions live in different issue areas, and each regime/institution follows a one-to-one correspondence between a singular issue and a singular regime, iii) elemental regimes have a non-hierarchical interaction, iv) interaction occurs at the center of a specific subject matter, because the elemental institutions are issue-oriented and overlapping only at a narrower, lower, and more specific subject matter than an issue area, and v) the existence of regime/institution(s) is found to have an influence on the development and performance of the other regime/institutions(s). Particularly, if the institutional interplay concerns the conditions and the consequences that typify the kind of inter-linkage, the regime complex concerns the structural properties and its consequences.

However, there are some points that make the institutional interplay and the regime complex differ from each other. Firstly, the number of involved institutions is different; if the institutional interplay is delimited to dyadic interaction between two institutions, the regime complex requires more than three institutions. Secondly, the institutional interplay sheds light on the interaction between two institutions at the macro-level and the actor at the micro-level, and the regime complex has more interests in the structural properties of the concerned multiple institutions at the system level. Thirdly, if the genesis of institutional interplay is to arise by an intermediate adaptation of preferences and behaviors by relevant actors, the regime complex arises by the perception of the actors on the existence of competing or overlapping regime/institutions or the change of perception of the actors on the existing problem (Orsini et al. 2013). The comparison between the institutional interplay and the regime complex is summarized in the table 2-2.

Table 2-2 Comparison between Institutional Interplay and Regime Complex

	Institutional interplay	Regime complex
Similarity		
Constituent	- Elemental regime/institution	- Elemental regime/institution
Existence of constituents	- Different issue areas	- Different issue areas
Relation	- (non-hierarchical) Interaction	- (non-hierarchical) Interaction
Scope	- Subject matter, not an issue area	- Subject matter, not an issue area
Existence of interaction	- Influence to development and	- Influence to development and
	performance of the other	performance of the other
	institution/regime	institutions/regimes
Difference		
Number of constituent	- Two elemental regimes	- At least more than
		three elemental regimes
Level	- Institution-actor level	- Systematic (structural) level
Genesis of interaction	- Intermediate adaptation of preferences	- Perception of actors
	and behavior by relevant actors.	

Source: The author by the modification of Orsini et al. (2013).

Note: The most distinctive similarity between institutional interplay and regime complex is that the interaction is made at the center of a specific subject matter, not an issue area. Salient difference lies in the number of elemental regimes/or institutions involved; institutional interplay is delimited to two institutions/regimes, and regime complex is inclusive of at least more than three institutions/regimes.

Governance Architecture: Institutional multiplicity in a given specific issue area

The other strand focuses on the existence of multiple institutions within a specific issue area and terms it as "global governance architecture". The governance architecture means "the overarching system of public and private institutions that are valid or active in a given issue area of world politics" (Biermann et al. 2009, p. 15). The distinctive structural property that characterizes the global governance architecture is institutional fragmentation in a given specific issue area.

What is generally accepted logic is the one-to-one correspondence between a singular international issue and a singular institution/regime to tackle the issue. However, this logic of one-to-one match withers in the case of institutional fragmentation of global governance architecture, because overlapping or competing institutions emerge beside or outside a dominantly existing institution within a singular issue area. Thus, there is an implicit hierarchy between the dominant institution that works as a core and the newly emergent non-core institutions. In this regard, this strand attempts to assess the degree of fragmentation of plural non-core institutions from the core institution by three criteria i) degree of institutional integration and degree of overlaps between decision-making systems, ii) existence and degree of norm conflicts, and iii) type of actor constellations. The result of assessment ranges from synergistic, neutral to conflictive fragmentation, and what is assumed is that the synergistic degree of fragmentation between a core institution and non-core institutions is more conducive to the regime effectiveness. The assessment of the institutional fragmentation is represented in the table 2-3 below. Along the line of systematic enhancement, what is suggested for a further integrated internal structure is to make a formal linkage between an all-inclusive core institution and fragmented non-core institutions.

 Table 2-3
 Typology of Fragmentation of Governance Architectures

Criteria	Synergistic	Cooperative	Conflictive
Institutional	One core institution, with other	Core institutions with other	Different, largely
integration	institutions being closely	institutions that are loosely	unrelated institutions
	integrated	integrated	
Norm conflicts	Core norms of institutions are	Core norms are not conflicting	Core norms conflict
	integrated		
Actor	All relevant actors support the	Some actors remain outside main	Major actors support
constellations	same institutions	institutions, but maintain	different institutions
		cooperation	

Source: Biermann et al. (2009: p. 19)

Comparison between Regime Complex and Global Governance Architecture

The multiplicity of institutions at the systematic level enjoys two strands of regime complex approach and governance architecture approach. These two strands, however, have both similarities and differences. From the perspective of similarities, both concern the structural characteristics of the system that comprises multiple institutions, put differently, the conflictual or synergistic relation among the institutions. Also, both approaches care about the principles, norms, rules, and procedures of the constituting institutions/regimes which can work as a source of conflictive interaction, so they analyze a "degree of divergence" (Orsini et al. 2013, p.29) and a "degree of fragmentation" (Biermann et al. 2009, p.18). These two approaches anyhow implicate a necessity of some level of structural "integration or coordination" (van Asselt and Zelli 2012, p.11). Furthermore, both exhibit an interest in the consequence of the structural characteristics, or, the effect of the conflictual or synergistic relation on the regime effectiveness. For the enhanced regime effectiveness, interest is also laid on the management of conflictive structure.

Meanwhile, regime complex and global governance architecture differ in some aspects. The most distinctive difference lies in the scope. Regime complex forms its boundary at the center of specific subject matter. This means that each regime/institution corresponds to a different singular issue and that the different issue-oriented regimes experience overlapping on a specific and narrow subject matter. Thus, different multiple elemental regimes form a structure of regime complex on a subject matter. Meanwhile, global governance architecture is found to exist in a specific issue area. Multiple institutions are jammed in a singular issue area, so many (multiple) institutions correspond to a singular issue. Thus, a singular issue area experiences a structural change from an integrated structure with a singular institution to a fragmented structure by the existence or the emergence of multiple institutions.

The different scoping of institutional multiplicity leads to the difference in terms of issueinstitution match. Regime complex approach maintains one-to-one match between issue and institution. Global governance architecture approach takes one-to-many match. This issue-institution match, then, tells that there is a different directionality in the formation of structure by multiple institutions. Elemental regimes, separately existent in different issue areas, become parts of the whole in the regime complex on an overlapping subject matter. In case of global governance architecture, a singular regime, existent as a whole in a singular issue area, renders itself to fragmented parts in a given singular issue area.

Besides the afore-mentioned scope-driven differences, the constituents are characterized also differently. In regime complex, the constituent is a different issue-oriented elemental regime, and global governance architecture has the same issue-oriented institution. Regime complex requires at least more than three elemental institutions, but global governance architecture concerns at least more than two institutions. Noteworthy is the ontological property of the constituents. The elemental regimes of regime complex are genealogically unrelated, because regimes reside in different issue areas. Yet, in global governance architecture, elemental institutions co-habit in the same issue area, so they are genealogically related.

This genealogical property influences hierarchical property among the constituents. At the center of a specific subject matter, the elemental regimes form a non-hierarchical relation among one another. Yet, in global governance architecture, the newly generated institution cannot emerge without the existing core institution, so there is an implicit hierarchy between an existent core institution and a newly emergent non-core institution.

This leads to the difference in the understanding of the genesis of the phenomenon of institutional multiplicity. In the case of regime complex, the formation of multiple institutions at the center of a subject matter is originated in the actor perception on competing institutions or the changed perception of the existing problem of the subject matter. In global governance architecture, the phenomenon of institutional multiplicity within a single specific issue area is driven from the creation of competing or overlapping institutions beside the dominantly existent core institution. The comparison between regime complex approach and global governance architecture approach to institutional multiplicity is summarized in the table 2-4.

 Table 2-4
 Comparison between Regime Complex and Global Governance Architecture

	Regime Complex	Global Governance Architecture
Similarity		
Level	- System level	- System level
Phenomenon	- Multiplicity of institutions	- Multiplicity of institutions
Focus	- Structural characteristics	-Structural characteristics of institution
	of regime complex	fragmentation
	(Conflictual ~ Synergistic)	(Conflictual ~ Synergistic)
Assessment	- Degree of divergence	- Degree of fragmentation
Consequence of phenomenon	- Consequence (regime effectiveness) and	- Consequence (regime effectiveness)
	response (management)	and response (management) of
	of institutional fragmentation	institutional fragmentation
Difference		
Scope	- Subject matter	- Issue area
Issue-institution match	- one-to-one match	-one-to-many match
Structural directionality	- From elemental regimes (parts)	-From a singular regime (whole)
	to regime complex (whole)	to multiple institutions (parts)
	on a subject matter	within a given issue area
Constituent	- Elemental Regime	- Elemental Institution
Number of constituent	- At least more than three	- At least more than two
Ontology of constituents	- Genealogically unrelated	- Genealogically related
Hierarchy among constituents	- Non-hierarchical	- Hierarchical
Genesis of phenomenon	- Perception of competing institutions or	- Creation of competing institutions
	change in the perception of the existing	in a given issue area
	problem on the subject matter	

Source: The author on the basis of previous studies.

2.2.4. Institutional Fragmentation from Institutional Multiplicity

The structural characteristic that marks institutional multiplicity at system level is *institutional* fragmentation. At the moment, there is not an agreed-upon definition on institutional fragmentation (Zelli and van Asselt 2013). However, there are some properties to be indicative of this term. Firstly, institutional fragmentation is an offshoot of institutional multiplicity. Institutional fragmentation never happens if only one single institution exists. Secondly, institutional fragmentation is an interinstitutional phenomenon. That is, institutional fragmentation never appears without a certain degree of interaction between or among the institutions, even though there are multiple institutions. Thirdly, institutional fragmentation implicitly relates to a circumstantial fact that international policy domain is not regulated by a single international regime/institution. If there is a hierarchy among the regimes/institutions or if interaction is coordinated by a certain organization which is given an authority, then interaction is automatically coordinated and institutional fragmentation has no time to appear. These three properties are shown in both regime complex approach and global governance architecture approach.

However, institutional fragmentation becomes further diverged by two approaches of regime complex approach and global governance architecture approach. As explicated in the comparison between the two, the structural directionality of regime complex takes a part-to-whole path. Originally, an elemental regime forms a certain hierarchy within a given issue area. Yet, the elemental regimes stand in a fragmented and scattered manner as a whole. These different issue-oriented elemental regimes come to find themselves overlapping on a subject matter and being influenced by the operation of the other elemental regimes and thus to form a regime complex on a subject matter. Institutional fragmentation on a subject matter is something given *exogenously*. Due to potential conflicts arising from divergent principles, norms, and rules among the elemental regimes, a major concern in this case of institutional fragmentation is i) the measurement of conflicts, ii) the consequence of structural linkage among elemental regimes to regime effectiveness and political impact, and iii) the management to solve a conflictive link among elemental regimes

for a better performance of regime complex on the specific subject matter (Orsini et al. 2013).

However, global governance architecture approach takes a whole-to-parts path. The traditional logic of a single regime in the governance of a single issue area is demolished by the cogovernance by multiple institutions in the single issue area. That is, the single issue area is not any more governed by a dominantly existent singular core institution due to the genesis of overlapping institutions within the given issue area. Of course, the concern is also laid on i) the measurement of conflicts, ii) the consequence of institutional fragmentation, and iii) the response to institutional fragmentation by the management of multiple institutions (Biermann et al. 2009). Noteworthy is that institutional fragmentation in a given issue area is something incurred *endogenously*

Thus, it is a natural corollary to ask the genesis of institutional fragmentation in a given issue area or institutional fragmentation in global governance architecture. More direct question is why multiple institutions that are overlapping and competing to the dominant core institution are created. The genesis of institutional fragmentation in a given issue area is a black box that waits to be open. Therefore, the institutional fragmentation just moved from a "linguistic turn" to a theoretical turn (Zelli and van Asselt 2013, p.3). Theoretical approach to the genesis of institutional fragmentation just started.

Putting the afore-mentioned accounts together, the study on institutional fragmentation in a given issue area is experiencing both thematic expansion and theoretical application. Currently, there are four major subjects at the center of the institutional fragmentation. They are i) the comparison of institutional fragmentation across different issue areas, ii) the consequence of institutional fragmentation, iii) the management of institutional fragmentation, and iv) the genesis of institutional fragmentation. Firstly, because the boundary of institutional fragmentation is drawn by 'issue area', the cross-comparison between or among different issue areas will reveal the mechanism of institutional fragmentation. Secondly, institutional multiplicity within the issue area will give both merits and demerits in many aspects in the governance of a single issue area. The third subject relates with the management of fragmented multiple institutions in the given issue area. Lastly, institutional fragmentation has an origin. Thus, it questions the very beginning of the institutional

fragmentation in this way: why an overlapping and competing institution is created despite the existence of a dominantly existent institution? This question deals with a cause in the phenomenon of institutional fragmentation. This cause cannot be explicated without a help from theoretical hands. The relevant specific questions are enumerated in the table 2-5. In the next section, climate change issue area where the phenomenon of institutional fragmentation is saliently observed is to be explored.

 Table 2-5
 Four subjects and relevant questions in institutional fragmentation

#	Subject	Questions
i)	Institutional fragmentation across different issue areas	 What is the degree of institutional fragmentation in a given issue area? To what extent does institutional fragmentation differ across different issue areas? To what extent does institutional fragmentation make the governance architecture stable or fragile? To what extent does the institutional fragmentation form a division-of-labor or a new type of conflict?
ii)	Consequence of institutional fragmentation	 What is the consequence of institutional fragmentation? Does institutional fragmentation affect regime effectiveness positively or negatively? What are the drawbacks and advantages of institutional fragmentation?
iii)	Responses to (management of) institutional fragmentation	• What are the options for and limits to the management of fragmentation?
iv)	Genesis of institutional fragmentation	 Why does institutional fragmentation occur? →Why is an overlapping and competing institution created beside (or outside) the dominantly existing institution?

Source: The author on the basis of Zelli and van Asselt (2013) and Zelli (2011).

Section 3. Institutional Fragmentation in Climate Change Issue

This section travels the phenomenon of institutional fragmentation in the issue area of climate change. Firstly, the history of a singular international institutional establishment in climate change issue area is to be explored. Then, institutional fragmentation along the line of global governance architecture is to be explored.

2.3.1. Global Climate Change Regime

The history of the UN-based climate change negotiations in two segments: before the Kyoto Protocol which was adopted in 1997 and after the Kyoto Protocol. For the history of 'before the Kyoto Protocol', this section is highly dependent on the work of Bodansky (2001) which divides the development of climate change regime until the adoption of the Kyoto Protocol in 1997 into five periods: i) foundational period, ii) agenda-setting phase, iii) pre-negotiation period, iv) formal intergovernmental negotiation phase, and v) post-agreement phase. The history of 'after the Kyoto Protocol' hinges upon the literature by Bodansky and Rajamani (2013) which splits the period after the adoption of the Kyoto Protocol into two: i) regulatory phase and ii) constitutional phase.

Before the adoption of the Kyoto Protocol

The first foundational period is summarized as reaching the 'scientific consensus'. A distinctive event that signaled the scientific recognition of threat of climate change was the First World Climate Conference, held on February 12-23, 1979 in Geneva under the sponsorship of the World Meteorological Organization (WMO), though this conference did not grab much attention from policy-makers. In the 1980s, the issue of climate change came to reach the UN General Assembly, and the second World Climate Conference experienced leveled-up recognition and response from the world on the issue of climate change. Yet, still, scientific uncertainty persisted.

The second stage, ranging from 1985 to 1988, is characterized by three additional factors

that pushed governmental actions in comparison with the first stage: i) a small group of environmentally oriented Western scientists as knowledge brokers and entrepreneurs, ii) increased concern about global environmental issues such as stratospheric ozone layer, deforestation, loss of biological diversity, pollution of the oceans, and institutional trade in hazardous wastes, and iii) North American heat wave and drought of the summer of 1988. Despite increased concerns on climate change, the first and the second stage are mainly delineated as the actorness of non-governmental actors.

Third stage that spans from 1988 to 1990 is marked by the actorness of the government as well as the non-governmental actor involvement. There were numerous pre-negotiation meetings on the issue of climate change at the center of non-governmental organizations. To name a few, the IPCC, which was established in 1988 under the auspices of WMO and the United Nations Environment Programme, published the IPCC First Assessment Report 1990 on climate change. Noteworthy is that first FAR played a role in the establishment of the International Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC) (IPCCFacts 2014).

Governments, particularly Western developed countries, started showing their involvement in the pre-negotiation on an appropriate action to tackle climate change with somewhat split positions. European nations together with Canada, Australia, and New Zealand supported a target & time-table approach, which refers to quantified national GHG limitation through international programs. Meanwhile, the US, recalcitrant to any rigid regulatory approach, put a focus on scientific research and national programs. Japan was standing in support of the US. This positional difference was seen in the 1989 Noordwijk ministerial meeting and further deepened the May 1990 Bergen Ministerial Conference on Sustainable Development.

The position difference was extended from a circle of developed countries to a circle of both developed and developing countries. Developing countries saw the issue of climate change not only as an environmental issue but also as a development issue. Hence, developing countries regarded the IPCC as an inappropriate venue for the negotiation of climate change issue for its technically narrowed focus and salient voice of industrialized countries. The position of developing

countries can be classified into three in terms of 'how-to-do' with climate change: i) at the one end, the Alliance of Small Island States (AOSIS) supported a target & time-table approach, ii) at the other end, oil-producing developing countries preferred going slow with dubious eyes on the scientific research result on climate change, and in the middle, iii) big industrializing developing countries that include Brazil, India, and China argued that climate change action should not be in conflict with their right-to-(economic) development. Despite different positions on 'how', developing countries have a common position on 'who' should be responsible for the action; they argued that developed countries should take the responsibility on the basis of historical contribution to the problem of climate change.

The fourth stage is marked by formal-treaty-making process. The INC/FCCC was established by the UN General Assembly to formulate a convention in time for the signature at United Nations Conference on Environment and Development (UNCED) in Rio held in 1992. The initial target in the INC/FCCC negotiation process was to draw out the framework agreement that contains very general and minimum obligations for member states to conform to. This framework agreement will be groundwork for institutionalizing the negotiation process and formulating a protocol that contains substantive and specific commitments. What was controversial in a series of INC/FCCC was i) the insertion of targets & timetables, ii) the establishment of new financial mechanism or the utilization of existing financial mechanism of the Global Environment Facility (GEF) for financial assistance and technology transfer to developing countries, and iii) the establishment of strong or weak institutional mechanism. The 1992 UNFCCC was a tactic compromise of these contentious issues.

The fifth phase refers to the period between the adoption of the UNFCCC in 1992 and the adoption of the Kyoto Protocol in 1997. The UNFCCC became effective in March 1994, and subsequently the first Conference of Parties (COP) to the UNFCCC was held in Berlin in 1995. Essential negotiation result of the COP-1 is i) Berlin mandate on the establishment of the protocol or another legal instrument with the deadline of 1997 for the commitments of developed countries and the initiation of the Ad Hoc Group on the Berlin Mandate, ii) no new commitments for developing

countries, iii) the start of pilot phase of joint activities, and iv) the utilization of the existing financial mechanism of the GEF. Though there were adversarial arguments on the necessity of legal-binding commitments on "quantified emission limitation and reduction objectives (QELROs)" and the credibility of the second FAR of the IPCC, the COP-2 to the UNFCCC held in 1996 in Geneva quelled these oppositions. Also, the COP-2 signaled the action in "the absence of consensus", which indicates an international action despite the opposition from some countries (p. 35).

The negotiation after the COP-2 faced two issues: i) commitment by developed countries with target & time-table and ii) commitments met by developed countries in a flexible manner. With regard to the first issue, the European Union (EU) in support of strong commitment and the US preferring weaker commitments were confrontational. Japan was standing in the middle. This conflict was resolved by the different specification of targets for each country: the target ranges from 8 percent reduction to 10 percent increase from 1990 levels. With regard to the second issue, the confrontation was resolved by the insertion of flexible mechanisms, which would work as a supplement to the domestic national quantified GHG emission reduction efforts, to the Kyoto Protocol. The representative flexible mechanism is the Clean Development Mechanism (CDM) under which developed countries can earn certified emission reduction credits through emission-reduction projects in developing countries and meet their national GHG reduction target. Instead, the specification of the rules for flexible mechanism was transferred to subsequent COPs with the deadline of adopting the rules at the COP-6 in 2000.

After the adoption of Kyoto Protocol

Despite the adoption of the Kyoto Protocol in 1997, the KP took a long time in fleshing out its shape and becoming effective. The time period from 1997 to 2005 is termed as regulatory phase for negotiating what should constitute the Kyoto Protocol (KP) and specifying and implementing what is embodied in the KP after the adoption of the Kyoto Protocol: i) commitment by developed countries with target & time-table and ii) commitments met by developed countries in a flexible manner. In the first place, the commitment requires the deposition of instruments of ratification,

acceptance, approval or accession by at least 55 Parties to the UNFCCC for the KP to be effective (KP 1997, Article 25 (1)).

Meanwhile, the specifics of flexible mechanism were not decided at the COP-3 at Kyoto; negotiation on the extent of flexible mechanism was deferred to the COP-4 in Buenos Aires in 1998 and scheduled to be concluded at the COP-6 to be held in Hague in 2000 as a deadline of adoption of rules of the flexibility mechanism; Yet, the COP-6 was not successful in reaching the conclusion due to confrontation on the matter of the inclusion of sink activities for developed countries to earn credits. In this context, the US, the largest GHG emitting country formally announced that it would not ratify the Kyoto Protocol. In 2001, President George W. Bush of the US explicitly announced that the US has no intention to abide by the KP. Particularly, the Senate Resolution 98 of the US Senate elucidated its reluctance against any treaty that would: (a) impose mandatory GHG emission reduction for the US without also imposing such reduction for developing nations, or (b) result in serious harm to the economy (McCright and Dunlap 2003). In the midst of sullen resentment among the supporting countries of the Kyoto-based regime produced the Marrakesh Accords in 2001 at the COP-7. Afterwards, by the ratification by Russia in November 18, 2004, the KP dramatically became effective on February 16, 2005 (KP 2014).

Lastly, the seventh phase, ranging from year 2005 to present, is the constitutional phase for post-2012 climate change regime and its future commitments and for post-2020 climate change regime. ¹⁹ In 2005, COP-11 to the UNFCCC in Montreal set up two negotiation processes to negotiate the post-Kyoto commitments: an Ad hoc Working Group on further commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) and a Dialogue on long-term cooperation action to address climate change by enhancing implementation of the convention (LCA) (Sterk et al. 2007). Numerous policy proposals mushroomed for the re-design of the post-Kyoto commitments. Those proposals were extensive from, additional to, or alternative against the existing UN-based climate change institutions in terms of what, by whom, when, and how to govern. The scope of what to govern was segmented to many sub-themes such as sectoral approaches, technology,

¹⁹ Bodansky and Rajamani (2013) set year 2001 as the beginning of the constitutional phase, but here in this thesis the constitutional phase is set to start in year 2005.

development-oriented actions, adaptation, financing, and negotiation process and treaty structure other than mitigation (Bodansky et al., 2004).

Bali Action Plan, produced at the COP-13 in Bali, Indonesia, indicates its decision "to launch a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session" (UNFCCC 2007). Here, the matter of enhanced action in the UN-based functions of adaptation, technology development and transfer, and finance as well as mitigation surged to the fore (UNFCCC 2007). Particularly, technology cooperation on development and transfer, working as a glue between the adaptation and the mitigation, relaxed the nationally-defined country-driven approach on the basis of respective capabilities (UNFCCC 2009, para 11). The adaptation obtained the same priority position as the mitigation had enjoyed (UNFCCC 2010, para 2(b)). The Copenhagen Accord of the COP-15 could neither become "an agreed outcome" nor acquire the authority to work as a formal negotiation outcome. The status of "an agreed outcome" was given instead to the Cancun Agreement of the COP-16 which in large portion incorporates the major elements of the Copenhagen accord. At the COP-17, what's implied in the Cancun Agreement underwent operationalization. Also, the Ad Hoc Working Group on the Durban Platform (ADB) for a negotiation of a post-2020 climate change agreement. The ADB has been working toward the adoption of legal instrument or agreed outcome with legal force in 2015 and implementation from 2020.

Noteworthy is that, in the mist of this constitutional phase, Canada withdrew from the KP at Durban COP 17 in 2011 (UNFCCC 2011a). Later, Japan announced that it would not participate in the 2nd commitment period in 2011 (MOEJ 2011). The internal architecture of the UN-based climate change institution has been undergoing bottom-up vibrations (Bodansky 2011). The phase-based explanation of the UN-based climate change politics till the adoption of the Kyoto Protocol is summarized in the table 2-6.

Table 2-6 History of climate change regime before Kyoto

Phase	Time	Content	Activities
1 st phase	before 1985	Foundational period	Concern on global warming arose and developed from scientific pillar.
2 nd phase	1985~1988	Agenda-setting phase	The issue of climate change was changed from a scientific issue to policy issue.
3 rd phase	1988~1990	Pre-negotiation period	National governments came to be involved in the process.
4 th phase	1990~1992	Formal inter-governmental negotiation phase	Formal negotiation by nation states was made, and the UNFCCC was adopted in May 1992
5 th phase	1992~1997	Post-agreement phase	Further specification on the commitments of the nation states was made for the implementation of the UNFCCC.
6 th phase	1997~2007	Regulatory phase	 Negotiation, elaboration and implementation of the Kyoto Protocol Non-ratification of the Kyoto Protocol by the US Kyoto Protocol, coming into effect in 2005 Appearance of Asia-Pacific Partnership on Clean Development and Climate (APP)
7 th phase	2005~Present	Constitutional phase	Formal negotiation by nation states for Post-Kyoto climate change regime

Source: The author on the basis of Bodansky (2001) and Bodansky and Rajamani (2013).

2.3.2. Global Governance Architecture Approach

Alongside the afore-mentioned historical development of the UN-based climate change institution, the issue area of climate change watched the emergence of a certain phenomenon, called institutional fragmentation. In the vicinity of the time when the KP became effective in 2005, the US and Australia, which are the non-ratifying countries of the KP, presented the Asia-Pacific Partnership on Clean Development and Climate (APP). The appearance of the APP in the year 2005 put a damper on the feast of the dramatic settlement of the KP. The APP sufficed to arouse discontent among ardent supporters of the KP. Though the APP Charter indicated an intention "to complement and not replace the KP", many literatures analyzed the APP as distracting from the KP (Mcgee and Taplin 2009; 2006; Lawrence 2007) in all aspects of 'what', 'who', 'when', and 'how' to reduce carbon dioxide emissions (Olmstead and Stavins 2006). Ever since, numerous institutional arrangements at bilateral, regional, and multilateral level have sprouted outside the UN-based

regime. The efforts to respond to climate change problem have not only multiplied in number but also shown divergent characteristics with competing and overlapping characteristics despite the existence of large-scale UN-based institutions of the UNFCCC/KP.

There are numerous climate change institutions worldwide, but, currently, a "full-fledged analytical account of the fragmentation" has not been made yet (Zelli 2011, p.263). With several distinctive institutions, Biermann et al. (2009; p.24) diagnosed the overall degree of fragmentation of global climate change regime as "an example of cooperative fragmentation" that entails all the elements of synergistic, cooperative, and conflictive fragmentation. In their approach, firstly, the 1992 United Nations Framework Convention on Climate Change (UNFCCC) is set as an institutional core. Secondly, on the basis of a map of spheres of institutional fragmentation encircling an institutional core (Biermann et al., 2010), an individual institution is set as a non-core institution, and it is classified into a relevant sphere. Sphere I, indicating the UN Climate Regime, includes Conference of Parties (COP), the 1997 Kyoto Protocol (KP), the Ad Hoc Working Group on Long-Term Co-operative Action under the UNFCCC, Ad Hoc Working Group on Further Commitments for Annex I parties under the KP, etc. Sphere II contains multilateral forums on climate and energy. The other international environmental institutions and organizations such as World Meteorological Organization or International Marin Organization, etc., are included in the sphere III. Sphere IV contains international institutions and organizations whose issues are not related with environment, and a representative institution is the World Trade Organization. Thirdly, the degree of fragmentation between the core institutions and the multiple non-core institutions is set to be analyzed by three criteria: i) institutional integration and overlaps between decision-making systems, ii) conflicts of norms of the common-but-differentiated responsibility and the precautionary approach, 20 and iii) constellations of actors that support the core institution by ratification. A typology to assess the degree of institutional fragmentation in climate change issue area is framed in the table 2-7 in the next page.

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The *common-but-differentiated responsibility* means that the international cooperation is needed due to the global public goods at risk but the burden is mainly borne by the rich (Stone 2004). For *precautionary approach*, a certain activity or substance that is regarded as damaging the environment is preventively regulated, despite an uncertainty of scientific proof (Cameron and Abouchar 1991).

Table 2-7 Typology of institutional fragmentation of global climate change regime

Criteria	Criteria Specification	Explanation
Institutional integration	Relation to UN-based institutions of the UNFCCC/KP	 Whether the non-core climate change institutions are related with the core institutions of the UNFCCC/KP closely or loosely or largely unrelated Whether the non-core institutions have similar or dissimilar decision-making process Whether the non-core institutions provide alternative venue for negotiation
Norm conflicts	Common-but-differentiated responsibility Pre-cautionary approach	 Differentiation between developed countries and developing countries Consideration of Climate change Impacts in a precautionary manner (Preference of regulatory measures by mitigation or adaptation)
Actor constellations	Support of the actors of the institutions	 Whether the UNFCCC/KP are supported by all relevant actors or not →Particularly, whether the major actors support different institutions other than the UNFCCC/KP

Source: Arrangement by the author on the basis of Biermann et al. (2009).

The sphere I of the UN climate regime is said to have elements of both synergistic and cooperative fragmentation. The KP represents a synergistic element in that it bases itself on the UNFCCC and principal norms of the KP are shared with those of the UNFCCC. However, at the same time, the major emitting nations, the US and Australia, are not member states of the KP, which leads to the cooperative fragmentation. Also, fragmentation elements are markedly shown in the noises on the post-KP actions and the recent COPs of the UNFCCC.

In the sphere II, many arrangements at the international, regional, and sub-national levels with a diversity of institutional characteristics have emerged during a recent decade. These arrangements display the elements of cooperative fragmentation in that some share the principal norms and values with the UNFCCC explicitly but the others show a low level of participation by key actors and a low level of compatibility with the UNFCCC, though acknowledging the UN process. Much attention is given to the elements of conflictive fragmentation, revealed in the Asia-Pacific Partnership on Clean Development and Climate (APP) and Major Economies Process on Energy Security and Climate Change, both of which were initiated by the US. These arrangements

have a different position from that of the UNFCCC and the KP in principles and norms, institutional coordinating mechanism of activities, target issue, actor participation, etc.

Concerning the sphere III and the sphere IV, there have been many attempts to analyze interaction between the non-core institutions and the UNFCCC, but the amount of interaction results has not reached yet the level of assessing the overall architecture in the sphere III and IV. Therefore, global governance architecture on climate change regime is portrayed as "an example of cooperative fragmentation" (Biermann et al. 2009), strictly speaking, in the sphere I and II. The architectural analysis in the sphere III and sphere IV waits for more studies to accumulate. However, sphere III and IV are the areas far stretched from the core institution, so it is without doubt that the matter of proliferation and diversity of institutions is accelerated, which makes it more difficult to analyze all the non-core institutions that relate to the climate change issue. The distinctive institutions that represent a certain elements of institutional fragmentation that ranges from synergistic to conflictive fragmentation in global climate change regime are enumerated in the table 2-8 below.

 Table 2-8
 Degree of institutional fragmentation : Cooperative fragmentation

#	Type	Evaluated elements of fragmentation	
i)	Synergistic	□ The 1992 UNFCCC as the core	
1)	fragmentation	□ The 1997 KP	
***************************************		• The UN-based institutional mechanisms such as the Clean Development Mechanism	
		and various funding arrangements	
		 The UN-based 2007 and 2008 Conference of Parties 	
		^o Public-private partnership (Methane to Markets, Carbon Sequestration Leadership	
		Forum, International Partnership for a Hydrogen Economy)	
::>	Cooperative	^a High-level ministerial dialogues (Dialogue on Climate Change, Clean Energy and	
ii)	fragmentation	Sustainable Development)	
		• Regional initiatives (European Union emissions trading scheme, International	
		Carbon Action Partnership)	
		^o Sub-national initiatives (California's Global Warming Solution Act, the Regional	
		Greenhouse Gas Initiative in the US)	
		^o Private institutions (Carbon Disclosure Project, Investor Network on Climate Risk)	
;;;)	Conflictive	Asia-Pacific Partnership on Clean Development and Climate	
iii)	fragmentation	^o Major Economies Process on Energy Security and Climate Change	

Source: Arrangement by the author on the basis of Biermann et al. (2009).

The degree of institutional fragmentation leads our concern to the consequence of the institutional fragmentation. Biermann et al. (2009) analyzed four aspects of consequence: i) the speed of negotiation and agreement, ii) the level of realization of regulatory ambition, iii) the level and scope of participating actors, and iv) the involvement of equity. Firstly, the fragmented institutions with a small membership with like-minded actors can be fast in negotiating and reaching an agreement for climate change actions with different objectives and rules. Yet, institutional fragmentation can dis-incentivize non-members to get engaged in the universal climate change actions and shaken the stability of long-term climate change actions. Secondly, fragmented institutions can provide benefits of attaining narrower goals more deeply than a more integrated singular institution with broad goals. Furthermore, the fragmented institutions can induce regulatory competition among the institutions and generate different and innovative solutions. However, the fragmented institutions with narrow-and-deep goals of attainment can promise neither the long-term stable effects of the institution nor dynamic flexibility in the face of change in the interest of actors or the situation. Thirdly, institutional fragmentation reduces entry costs for private actors to enter and participate in diverse institutions and voice out their interests and positions. Furthermore, different sectors can be covered by institutional fragmentation. However, institutional fragmentation with much of conflictive elements can give confusing signals to the actors, and the actors engaged in the conflictive institutions can suggest a different direction from the one from the core institution. Particularly, business actors, aversive to stringent regulatory measures, can shop the forums to find an institution that requires minimum behavioral change for environment and better fits to their interest. This means that environmental effectiveness can be tainted by conflictingly fragmented institutions. Lastly, institutional fragmentation does not hold much of equity or fairness. The UNbased institutions with universal participation provide an equal voting to nation states and an opportunity for the nation states in lack of power to engage in the negotiation on an equal footing with powerful nation states. However, institutional fragmentation by like-minded actors with a small membership can leave 'less or the least developed countries' unconcerned. Furthermore, the nation states with power, which are dissatisfied with the core institution, can take advantage of the institutional fragmentation by incurring a parallel, alternative, or competing institution that will work as a venue of reflecting a skewed desire.²¹ Therefore, the consequence of institutional fragmentation is analyzed as being negative to the overall performance of global climate change regime.

Then, what is an appropriate *response* to the institutional fragmentation which is negative to the regime effectiveness? The answer is the management of conflictingly fragmented institution. In climate change regime, the APP is explicated as an element of conflictive fragmentation that departs from the key features of the UN climate regime in that i) the APP is not nested to the core institution, ii) the core norms of the APP are in conflict with those of the core institution, and iii) the major actors of the US and Australia support only the APP, not the KP. The suggestion to minimize the negative impact from the conflictive elemental institution like the APP is an integration of fragmented negotiation process of the APP within the UN-based climate governance. The way for structural design policy is to re-design the relevant institutions: i) the broadening of the APP membership to least developed countries and small-island developing states and ii) the linking of the APP with the overall UN-based climate regime through formal coordination, put simply, institutional *linkage*.

For a further integrated quality of the structure, a function-based institutional linkage is being explored at the center of sub-themes such as emission-trading scheme, technology, and unilateral trade (van Asselt and Zelli 2012). The functional linkage is started from between similar systems or between the same sub-themes and then explored between disparate systems. For example, in the case of market-based emission-trading schemes, what is thought of is the linkage not only between cap-and-trade systems through a credit system but also between market-based emission-trading scheme and command-and-control tax system (Metcalf and Weisbach 2012). For a successful linkage treatment, prerequisite is a controlling linkage enforcer, and in this regard, the role of the UNFCCC surges to the fore (van Asselt and Zelli 2012). However, to what extent both authority and capacity are to be given to the UNFCCC and the relevant organization, the Climate Technology Centre and Network, in the case of technology cooperation function can be questioned.

²¹ Relevant discourse can be found in Benvenisti and Downs (2007).

 Table 2-9
 Governance architecture approach

#	Institutional Fragmentation	Question & Answer
i)	Degree	 What is the degree of fragmentation in the climate change issue area? →Answer: Cooperatively Fragmented
ii)	Consequence	 What is the consequence of institutional fragmentation? →Answer: Negative to the performance of the climate change regime
iii)	Response (Management)	• What are the options for the management of fragmentation? → Answer: Institutional linkage of the conflictive institution to the core
iv)	Genesis	 Why is an overlapping and competing institution, the APP, created outside the UNFCCC/KP? →Answer: Intentional establishment due to the UNFCCC/KP

Source: The author making on the basis of the Biermann et al. (2009) and the others.

Lastly, why was the APP created despite the existence of the core institutions of the UNFCCC/KP? The answer is that the conflictingly fragmented institutions like the APP and the MEP are intentionally created because of the existing climate change institutions of the UNFCCC/KP. However, this answer remains still ambiguous. Unlike the other questions of the degree of, the consequence of, and the response to institutional fragmentation, the *genesis* of institutional fragmentation just started being theoretically explored. From four major questions and answers on the institutional fragmentation in climate change issue area are summarized in the table 2-9 above.

2.3.3. Regime Complex Approach

Regime complex, referring to an array of multiple regimes that are substantively, normatively, and operatively in interaction *on a subject matter*, deals with the institutional fragmentation not within a confine of an issue area but at the narrower subject matter (Orsini et al. 2013). Thus, institutional fragmentation *within the given issue area* of climate change does not hold much relevance with the regime complex. However, Keohane and Victor (2011) brought the concept of the 'regime complex'

to the confined issue area of climate change.²²

They assessed the *degree* of institutional fragmentation of the current global climate change regime as being neither highly integrated nor chaotically fragmented but a loosely coupled in-between. The constituents are the UN legal regimes of the UNFCCC/KP, Expert Assessments of the Intergovernmental Panel on Climate Change (IPCC), nation-state level bilateral partnerships, unilateral action at the domestic level, Montreal Protocol, Specialized UN Agencies, Multilateral development Banks, clubs of the APP, Nuclear Suppliers Group, etc. Particularly, the APP is classified as the club-type institution together with the Major Emitters Forum, the G8, and the G20. Accordingly, this "varied array of narrowly-focused regulatory regimes" is what represents the "regime complex for climate change" (Keohane and Victor 2010, p.2). What is distinctive in the climate change regime complex is firstly that the term of institution is all replaced by regulatory regime. Along this line, secondly, the UNFCCC/KP which is regarded as one of the regimes in the climate change issue area does not have a hierarchically higher position than the other regulatory regimes. Thirdly, the elemental regimes that constitute the regime complex for climate change have a horizontal shape among one another.

Regime complex has variation in the *consequence* of the regime, and the consequence is ranged "from dysfunctional to functional" regime (p.19). They suggested six different criteria: i) coherence by the compatibility and mutual reinforcement between or among elemental regimes, ii) accountability by the relevance of elemental regimes with right-kind actors, iii) effectiveness by the level of compliance with rules and the level of appropriate set of rules, iv) determinacy by the level of normative ascertainment of rules (the certainty of rules), v) sustainability by the level of coherent equilibrium about future rules, and vi) epistemic quality by the level of consistency between rules and scientific knowledge, the degree of the accountability of managers, the degree of capacity to change rules and responsibility. Under these criteria, climate change regime complex with the singular and centralized institutions of the UNFCCC/KP is analyzed as having low scores in the

From the application of regime complex approach to climate change regime, it can be inferred that Keohane and Victor (2011) insinuate that the issue of climate change cannot be reduced to a single issue but a complex of issues where multiple issue-based regimes are recognized as related.

afore-mentioned six criteria.

Furthermore, institutional fragmentation in climate change issue area in the form of regime complex is said to have favorable policy implications in the following aspects: i) regime complex can make it possible to effectively use the international emission trading, ii) regime complex can boost the opportunities of innovation on the offsets for land use and forestry, iii) regime complex can harbor border tax adjustments, and finally iv) regime complex provide flexibility for political cooperation which can work as complements to the centrally regulated GHG mitigation measures, and the flexibility can be seen in the investment in low emission technology development and transfer.

This implicitly means that a certain level of institutional fragmentation in the form of regime complex better guarantees the functionality of regime complex than the dysfunctional UNFCCC/KP. The argument in this line is that the current manner of institutional fragmentation, in the form of regime complex, performs better than the UNFCCC/KP-oriented monopolistically integrated regime structure. The evaluation of climate change regime complex of 1997-2008 is summarized in the table 2-10 below.

Table 2-10 Evaluation of the climate change regime complex of 1997-2008

#	Criteria	Evaluation
i)	Coherence	Differentiated imposition of binding rules reduces incentives to accept and
ii)	Accountability	comply the rules
iii)	Effectiveness	• Inappropriate rules of the KP: lack of credible compliance mechanisms,
iv)	Determinacy	mandatory dispute-settlement institutions
v)	Sustainability	Dissatisfaction of the US and the other developed countries
vi)	Epistemic quality	Difficulty of changing the rules and the highly political process

Source: Arrangement by the author on the basis of Keohane and Victor (2010).

With regard to the *genesis* of institutional fragmentation, Keohane and Victor (2010) explicated the creation of the APP as pragmatic supplies to the divergent demands for a better effective and working negotiation model, because climate change issue has a diversity of functional problems, interests of strategic actors, accumulated activities and timings that ensues divergent institutions in a fragmented manner. Particularly, due to problem diversity, institutions, established to tackle divergent problems, become inevitably divergent. Climate change issue demands not only the common-pooled resource (CPR) of emission control which is supposedly supplied by the UNFCCC/KP but also the other types of goods such as private goods, public goods, and club goods; notably, the innovative low carbon technology development investment is said to be produced under the club-type institution like the APP where benefits are exclusively shared by small membership and the private goods of intellectual property and related revenues are generated. Besides, the divergent institutional frames are driven by institutional path-dependence due to different interests of different countries with different previous investments in different practices at different times.

From the perspective of the *response* to institutional fragmentation, Keohane and Victor (2010) have a favorable attitude toward institutional fragmentation in climate change issue area for its "flexibility and diversity" at this juncture (p.25). Particularly, the interpretation of the APP as a club-type institution with technology development niche is contrasted with the interpretation of Biermann et al. (2009) as an element of conflictive fragmentation. Accordingly, Keohane and Victor (2010) prefer a *status quo* form of loose coupling and fragmentation, as long as the multiple institutions are compatible by the *division-of-labor* of divergent climate change problems. No action is advised for the APP, because the APP is a recommendable institution. This means that if the same problem is dealt with by multiple institutions, then the re-design of the elemental institution by changing internal function to reduce overlapping is required. In this regard, policy suggestion is the functional, sectoral, or spatial differentiation that leads to enhancement of compatibility and complementarity among the multiple institutions (Oberthür and Stokke 2012). Four sets of questions in the institutional fragmentation in climate change issue area are differently answered by regime complex approach, which is summarized in the table 2-11.

 Table 2-11
 Regime Complex approach

#	Institutional Fragmentation	Question & Answer
		• What is the degree of fragmentation in the climate change issue area?
i)	Degree	→ Answer: Neither highly integrated nor highly fragmented
		but loosely coupled
	<u> </u>	^o What is the consequence of institutional fragmentation?
ii)	Consequence	→ Answer: Positive to the performance of the climate change regime
		• What are the options for the management of fragmentation?
iii)	Response (Management)	→ Answer: Status quo, further fragmentation, and coordination
		by differentiation
		^o Why is an overlapping and competing institution, the APP, created
		outside the UNFCCC/KP?
iv)	Genesis	→Answer: Different problem-oriented functional creation
		Diversity of interests of the actors
		Diversity of accumulated organizational practices

Source: The author making on the basis of Keohane and Victor (2010) and the others.

2.3.4. Comparison of two approaches

The phenomenon of institutional fragmentation in climate change issue area at systematic level has been approached by two strands to a large extent: global governance architecture approach and regime complex approach. Though these two approaches analyzed the same phenomenon of institutional fragmentation in the issue area of climate change, their analytical results and attitudes towards four themes of institutional fragmentation differ: i) degree of fragmentation, ii) consequence, iii) management, and iv) genesis.

Because institutional fragmentation in climate change issue area has been a new ontological entity that appears in 2005 by the creation of the APP besides the UNFCCC/KP, concern has been laid on the degree of institutional fragmentation in the first place. A subsequent concern has been on whether this institutional fragmentation leads to higher or lower effectiveness of climate

change regime. On the basis of this assessment of the degree and the consequence, the engendered concern is what kinds of management options are available for the betterment of the institutional fragmentation in climate change issue area. Recently, a new concern is laid on the question of what is the reason for the genesis of institutional fragmentation. Interestingly enough, two approaches have different analytical results in four sub-themes. More interestingly, their approaches are fundamentally derived from different approaches to the understanding of the institution as seen in the table 2-12.

 Table 2-12
 Comparison on the institutional fragmentation

Institutional Perspective	Function-oriented Approach	Non-functional Sociological Approach
Institutional multiplicity		C 11
Institutional multiplicity Meaning	Design diversity or transaction diversity	Source of institutional competition and conflicts
Managing multiple institutions	Positioning of multiple institutions by a calculative actor	Positioning of social actor in the multiple institutions
Strong point	Institutional design & Institutional effectiveness	Institutional change
***************************************	↓	↓
	Regime complex approach	Governance architecture approach
	↓	↓
Institutional fragmentation		
Definition	Regime complex of climate change	Global Governance Architecture
Degree of fragmentation	Loosely coupled	Cooperatively fragmented
Consequence	Positive to the performance of climate change regime	Negative to the performance of climate change regime
Management	Status quo, further fragmentation, or coordination through differentiation	Institutional linkage
Origin	Diversity of problems, divergent interests of the actors, divergent organizational practices	The UNFCCC/KP

Source: The author making on the basis of Biermann et al. (2009), Keohane and Victor (2010), and the others.

2.3.5. Institutional fragmentation in climate change issue area

As seen in the afore-mentioned two strands, much concern has been laid on the first three themes of the degree, the consequence, and the management which have a tight relevance among one another. Exploration of these themes of institutional fragmentation has a tendency of *going forward* from the degree of fragmentation to the consequence and ultimately the management options. However, this *going-forward* approach to the institutional fragmentation bears some limitation.

Firstly, limitation is found in the lack of concrete theoretical ground in the criteria-setting for the degree of institutional fragmentation. If the theoretical ground is not confirmed, the discourse of which strand explains better the phenomenon of institutional fragmentation and whose management options are better appropriate in the theoretical vacuum becomes likely to be a vain cry. The time has ripe to move from linguistic and typological stage to *theoretical stage*. The criteria-setting for assessing the degree of institutional fragmentation, the consequence of the institutional fragmentation, and the management options all need to meet the theoretical application (Zelli and van Asselt 2013).

Secondly, the limitation is also found in a lesser attention on the origin of institutional fragmentation. Any management options for institutional fragmentation without an exploration on the reason why institutional fragmentation occurs can be under the question of feasibility. Theoretical approach to the genesis of institutional fragmentation just started and waits for further exploration. It is time for *going-backward to genesis* of the institutional fragmentation (Zelli and van Aselt 2013).

Thirdly, the institutional fragmentation is not stagnant but moving. If new institutions emerge or existing institutions transform, the degree of institutional fragmentation undergoes a certain change. Accordingly, concern needs to move to why a new overlapping and competing institution is created and in what direction a newly emerging institution pulls the existing climate change regime. This means the genesis of institutional fragmentation cannot be detachable from the evolution of institutional fragmentation.

Fourthly, the *going-backward* look on the creation of an overlapping and competing institution and its evolution can complement the *going-forward* themes of the degree, the consequence, and the management of institutional fragmentation. Also, though *going-forward* themes have been separately developed, a *going-backward* look necessitates the integrated approach to the themes of degree, consequence, management, and genesis.

Fifthly, the approaches to institutional fragmentation need to concern not only the structural characteristics of institutional fragmentation at the systematic level but also the *individual institution*. It is because institutional fragmentation is basically driven from the multiplicity of institutions in a given issue area. The institutional fragmentation is the story of the existing institution of the UNFCCC/KP and the newly emerging institutions in an overlapping or competing manner.

Sixthly, as seen in the first part of the literature review on institution, the institutional discourse is not only about the institutional (regime) design and effectiveness but also about the change. Exploration on the genesis and evolution of the institutional fragmentation needs to implicate *institutional* (regime) change.

Therefore, the current studies of the institutional fragmentation will benefit a lot from the theoretical exploration of the genesis and evolution of the institutional fragmentation. The current status of the studies on the institutional fragmentation and its expected future path is summarized in the table 2-13 in the next page. The next section will specifically explore the genesis of institutional fragmentation in the issue area of climate change.

 Table 2-13
 Current status of the Institutional fragmentation

#	Current	Step forward
i)	^o Linguistic and typological stage	Theoretical turn
ii)	Going-forward approach	Going-backward approach
11)	→degree, consequence, and management	→ Focusing on the <i>genesis of institutional fragmentation</i>
	Static Approach	Dynamic Approach
iii)	→ focusing on the static snapshot of	→Focusing on the <i>genesis and evolution of institutional</i>
	institutional fragmentation	fragmentation
	Separate approach	Related Approach
iv)	→separate thematic approach to the degree, the	→Combined thematic approach to the degree,
	consequence, the management, and the genesis	the consequence, the management, and the genesis
	Focus on the system	Focus on the individual institution
v)	→ focusing on the structural characteristics	→ focusing on the individual institutional characteristics
vi)	Focus on regime design & effectiveness	Focus on regime change

Source: The author.

Section 4. GENESIS OF CLIMATE CHANGE INSTITUTIONAL FRAGMENTATION

2.4.1. Creation of climate change institutions in Asia region

The emergence of overlapping institutions is remarkable in Asian region. The fact that the APP put its foot in the Asian region was already mentioned. At the standstill of post-Kyoto negotiation, South Korea, supposedly embarking its participation in the second commitment period of the KP, launched a regional cooperative arrangement, the East Asia Climate Partnership (EACP), in 2008. Japan showed a dramatic story of leading the adoption of the KP in 1997 in Kyoto and announcing its non-participation in the second commitment period of the KP in 2011. Then, Japan initiated a new multilateral arrangement, the East Asia Low Carbon Growth Partnership (LCGP), in 2012.

Not only nation states but also Asian regional organizations made a declaration for regional and global climate change action and pathways in 2007 when the post-Kyoto policy architecture started being negotiated. The Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations (ASEAN), and the East Asian Summit (EAS) announced the declaration on regional climate change actions in 2007. The Asian climate change institutions are enumerated in the table 2-14.

To be noteworthy is that the emergence of new institutional arrangements and initiatives does not seem to end here. The phenomenon of the emergence and existence of numerous and divergent institutions outside the existing core institutions and the co-governance in the issue area of climate change by multiple institutions exactly signifies the phenomenon of institutional fragmentation. Accordingly, this institutional fragmentation in the climate change issue area poses baffling questions on the degree of fragmentation, the consequence to the regime effectiveness, the responsive management for the fragmented institutions, and the genesis of the institutional fragmentation.

 Table 2-14
 Major Asian Regional Climate Change Institutions

Initiator		Institutions
	The US	Asia-Pacific Partnership on Climate change (APP) a
Individual		East Asia Climate Partnership (EACP) b
Nation	Korea	with Global Green Growth Institute (GGGI) and Green Technology Center Korea
state		(GTCK)
	Japan	East Asian Low Carbon Growth Partnership (LCGP) c
	ASEAN	ASEAN Declaration on the 13th session of the Conference of the Parties to the UNFCCC
		and the 3rd session of the CMP to the Kyoto Protocol (2007) d
	APEC	Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean
Regional		Development (2007) e
cooperative	EAS	Singapore Declaration on Climate Change, Energy and the Environment (2007) f
Agency	SAARC	THIMPHU Statement on Climate Change g
	MRC*	Climate Change and Adaptation Initiative h
	PIFS*	THE NIUE Declaration on Climate Change <i>i</i>
	SPREP*	Pacific Adaptation to Climate Change Project <i>j</i>

Note: Mekong River Commission (MRC), Pacific Islands Forum Secretariat (PIFS),

Secretariat to the Pacific Regional Environment Programme (SPREP)

Source: a. http://www.asiapacificpartnership.org/english/default.aspx

- b. http://eacp.koica.go.kr/
- c. http://www.mofa.go.jp/announce/event/2012/3/0314_01.html
- d.http://environment.asean.org/asean-declaration-on-the-13th-session-of-the-conference-of-the-parties-to-the-unfccc-and-the-3rd-session-of-the-cmp-to-the-kyoto-protocol-2007/
- e.http://www.apec.org/About-Us/About-

APEC/~/link.aspx? id=C1E817728B23488D8F4FA801EC58FCC7& z=z

- f. http://www.aseansec.org/21116.htm.
- $g.\ \underline{http://www.saarc\text{-}sec.org/userfiles/ThimphuStatementonClimateChange-29April2010.pdf}$
- h. http://www.mrcmekong.org/about-the-mrc/programmes/climate-change-and-adaptation-initiative/
- i. http://www.forumsec.org/pages.cfm/documents/forum-resolutions/
- j. http://www.sprep.org/pacc-home.

2.4.2. Theoretical approach to the genesis of institutional fragmentation

The exploration on the genesis of the institutional fragmentation means asking a question on the creation of an additional, overlapping, and competing institution besides the already existent dominant institution. Currently, international relation theories have been utilized to explicate the factors that drive the emergence of a competing institution, the APP, outside the UNFCCC/KP as follows.

Power-oriented realism and neo-realism visit climate change politics to explain the creation of additional institution to the extant prevailing institution. Kellow (2006) takes a realist viewpoint that the APP is driven by the abundant distribution of coal resources in the Asian region and a resultant interest in clean coal technology development. Dependent on neo-realism, Karlsson-Vinkhuyzen and McGee (2013) explicated the role of power in the emergence and the continuation of legitimacy-deficient mini-lateral forums such as the APP, MEP, and G8 other than the UNFCCC/KP in climate change issue. In the logic of neo-realism, the institution lives from its birth to death with the intention of the hegemon. If the institution cannot work as the hegemon's power-carrier to diffuse its own plots, then, expected path is that the agent exits the negotiations, discards the extant institution, and set up a parallel and competing institution by exploiting its agenda-setting power and maneuvering of weaker states (Benvenisti and Downs 2007).

Meanwhile, stepping on the neoliberal institutionalism with both function-oriented and non-functional approaches to the institution, Keohane and Victor (2011) expounded that the genesis of the additional and multiple institutions are attributable to diverse problems associated with climate change issue, the diverse interests of the actors, and the different national or regional capabilities on the basis of divergently trodden-paths and organizational practices. Particularly, the APP is described as a club-type institution functionally intended to produce club goods of low emission technology development. In this approach, the term, diversity, dilutes a negative connotation of fragmentation. Besides, in consideration of non-functional approach to institution that the institution is change-persistent, Van de Graaf (2013) explained that the creation of a

countervailing institution in renewable energy issue area is driven by institutional capture and hedging; if an existing institution is perceived as being change-impermeable due to institutional capture by the particular interests of certain states and interest groups, then the dissatisfied actors create a new competing institution on the basis of domestic preferences. This institutional capture is the source of abandoning the path-dependently existent institution and adding a new institution. Important is not the institutional capture itself but the perception by relevant actors on the capture.

In the constructivist vein, however, a cognitive dimensional implication of the APP has been much explored. Normative and ideational effect of the APP onto the KP was explored by McGee and Taplin (2006). van Asselt (2007) expounded normatively competing characteristics of the APP against the UN-based climate change umbrella in terms of principle of equity, precautionary approach, and procedural legitimacy on the participation of environmental NGOs. Biermann et al. (2009) delineated the APP having norm conflicts with the UNFCCC/KP in issue-framing, principle of equity, and precautionary approach. Thus, the APP is understood as a representation of normative or discursive contestation against the UNFCCC/KP (Hoffmann 2007; McGee and Taplin 2009). Stepping further, Stevenson (2009) explicated the cause of normative contestation from incongruence between international climate change norms and Australian domestic condition and the creation of the APP as an embodiment of Australia's effort to construct alternative process of climate governance. The APP is itself a "counter norm" (Karlsson-Vinkhuyzen and van Asselt 2009, p. 205). The theoretical approach to the genesis of the institutional fragmentation is summarized as below.

Neo-Realism

Material & Power-oriented approach. A competing institution emerges by the efforts of state actors with sufficient power and resource to maximize national interests with discontent on uniform regulatory measures that do not consider divergent material endowment and relative gains (Kellow 2006; Karlsson-Vinkhuyzen and McGee 2013).

A. Function-oriented institutional approach. The creation of overlapping institutions is originated from divergent problems associated with climate change, divergent interests of the agents, and divergent organizational practices (Keohane and Victor 2011).

Neo-Liberal institutionalism

B. Non-functional institutional approach. The creation of a countervailing institution is driven by institutional capture; if an existing institution is perceived as being change-impermeable due to institutional capture by the particular interests of certain interest groups, then, the dissatisfied actors create a new competing institution (Van de Graaf 2013).

Constructivism

Normative contestation approach. A competing institution is the embodiment of new alternative competing norms, discourse, policies or ideas that are in contestation with the existing norms of the dominantly existing institution (Hoffmann 2007; van Asselt 2007; McGee and Taplin 2009; Stevenson 2009).

2.4.3. Weakness of the previous theoretical approaches

Each theory has its own explanatory power, but is not without deficiency. With regard to neo-realism, a nation state with agenda-setting power can create an institution. However, having materials and power to establish an institution is one thing, and erecting an additional competitive institution outside a prevailing institution is another. Furthermore, neo-realism cannot explain the creation of an additional institution which is ideationally competitive with an existent institution. Also, explanation on the creation of series of normatively conflictive institutions to the prevailing institution from the cognitive perspective baffles the neo-realism approach.

In case of neo-liberal institutionalism, the function-oriented neoliberal institutionalism approach can explain the creation of additional institutions as derivatives of divergent problems, interests, and practices. Put differently, the establishment of an institution is consequence-driven, so a pre-existent institution does not appear in this logic. Also, neo-liberal institutionalism has a skewed attention on behavioral rules and a lack of

attention on fundamental rules, put differently, principles and norms, which influence the specifics of behavioral rules. Thus, it cannot explain the creation of institutions that are perceived to be legitimacy-deficient or normatively-competing in relation to the existing institution. That is, neoliberal institutionalism cannot explain the creation of normatively conflictive institutions.

In the case of non-functional approach, what determines the perception of institutional capture or the strategic bargaining at the center of institutional creation not only particular interests but also ideational elements such as principles, beliefs, ideologies, and views. However, this ideational aspect of the newly created institution has received no attention.

From this critical approach, despite some explanatory power on the genesis of institutional fragmentation, the rational approaches of both neo-realism and neo-liberalism have some limitation in explaining the meaning and creation of conflictual institution in cognitive dimension. With regard to this, the current constructivist approaches have filled up explanatory lacuna. It is because the constructivism can explain "a variety of social structures" (Narine 1998, p.39) including a conflictual institution through exploring norms, rules, practices and diverse characteristics. Thus, constructivism grabbed the ideational aspect of the genesis of institutional fragmentation by exploring the normative and ideational constitution of the newly emergent institution in relation with the existing institution and explicating the domestic normative contestation as a source of the creation of a normatively contestant institution against the existing institution.

However, still, explanatory lacuna exists in the constructivist approach. Firstly, normative contestation is one thing, and institutional-building is the other. Secondly, normative contestation is in lack of operationalization. The current approach fails to explain why new and alternative interpretation on the global norms on climate change is forged by the agents who have adhered to the existent interpretation of the norms. Thirdly, current explanations only show that statically there exists normative contestation. Yet, normative contestation has a dynamic property. The causal and dynamic relation between the existing institution and the creation of new competing institutions needs still remains a black box. The weakness of previous theoretical approaches on the genesis of institutional fragmentation is summarized in the table 2-15 in the next page.

 Table 2-15
 Weakness of Previous Approaches

Theoretical approach		Weakness	
Neo-realism		i) Limitation in explaining the creation of normatively conflictive institution	
		ii) Having materials and power to establish an institution is one thing, and erecting	
		an additional competitive institution outside a prevailing institution is another.	
	Function-	Limitation in explaining the creation of normatively conflictive institution	
N 12 1	oriented	- lack of attention on the existing institution of the UNFCCC/KP	
Neo-liberal institutionalism	approach	- attention on behavioral rules and lack of attention on norms & principles	
	Non-	The Institutional capture only by interest,	
	functional	not by ideational elements of principles, beliefs, ideologies, and views	
		i) Normative contestation is one thing, and erecting an additional competitive	
		institution outside a prevailing institution is another.	
		ii) Lack of operationalization of normative contestation	
Construct	ivism	→ Failure to explain why new alternative norms are forged by the agents who have	
		adhered to the existent norms of the UNFCCC/KP	
		→ Failure to explain the dynamics of the occurrence of normative contestation and	
		the establishment of the normative contestant institution	

Source: The author.

These theoretical promises and limitations have three implications to ponder over. Firstly, the genesis of institutional fragmentation cannot be detached from strategic and interest-oriented actors on the basis of material capacity. The creation of an additional and competing institution takes huge costs in transaction, establishment, and implementation. The institution can be born from strategic bargaining with both necessity and power. Secondly, the genesis of institutional fragmentation cannot be detached from normative and ideational dimension. It is because what constitutes an institution are not only materials and procedural rules for expected consequences but also ideational elements such as norms (or principles), ideology, discourse, and culture that shape the appropriateness of behaviors. Thus, the genesis of institutional fragmentation necessarily deserves the look at the contestation on appropriateness. Furthermore, a newly created institution cannot

 Table 2-16
 Position of my research

	Rational Approach		Reflexive approach	.,
International relation theoretical approaches	Realism & Neo-Realism	Neo-Liberalism	Constructivism	My approach (Constructivism)
		Divergent problems,		
		divergent strategic		Normative
Factor that brings forth	Power	actors, and divergent	Normative	contestation
the genesis of	(Material organizational practices		for	
institutional fragmentation	capability)	or	Contestation	strategic social
		Institutional capture and		construction
		hedging		

Source: The author.

emerge out of nothing and, thus, relishes the existing normative relics. Thirdly, both rational approach and constructivist approach stand in limping leg to explain the creation of a competing institution. Thus, a proper way is to make the strategic agent and the social constructive agent get married and bear a new explanatory mechanism. On the basis of the critique to current approaches to the genesis of institutional fragmentation, this thesis will take the constructivist theoretical ground and apply the normative contestation for strategic social construction. In this regard, this approach makes the constructivism stand in the middle ground in-between not only structuralism and individualism but also materialism and idealism (Adler 1997). The position of this research is shown in the table 2-16 above.

2.4.4. Research Question

Alexander Wendt (1999) gave an advice, "when confronted by ostensibly material explanations": "Always inquire into the discursive conditions which make them work" (p. 135). The current constructivist approach to the genesis of institutional fragmentation with normative contestation, however, still needs further exploration. Firstly, with a plethora of concepts in use such as norm

conflicts, normative contestation, and discursive contestation, the norms and discourses have not been fully substantiated as analytical elements in the previous studies. Particularly, with regard to the norms, an existing institution is an aggregate of multifarious norms (Finnemore and Sikkink 1998). In order to argue that normative contestation is the source of the genesis of institutional fragmentation, multiple norms that constitute an existing institution need to be figured out, selected, leveled, substantiated, and specifically operationalized. Though there was some attempts with conceptual operationalization such as normative dimension and normative position (Hoffmann 2007), they are in the incipient stage. Without the comprehensive map on normative contestation with specific operationalization, it is hardly arguable whether, to what extent, in what level, in which dimension the newly created institution is in normative contestation with the existing institution. Additionally, it seems hard to exactly pinpoint the institutional fragmentation of an additional and competing institution outside the UNFCCC/KP. Accordingly, a further microscopic look on the normative contestation is awaited.

Secondly, as afore-mentioned, the normative contestation is one thing, and the establishment of a competing institution is another. It is because normative contestation can be liquidated within an existing institution through negotiation. Thus, the current approach fails to explain why the agents, loathing to the existent norms or normative interpretations and forging alternative norms, policies or interpretations, create a new institution. Also, ambiguity remains in why the agents adhering to existent norms on the basis of the logic of appropriateness establish a new institution. This explanatory failure is driven from the static approach to normative contestation for a comparison between the existing institution and the new competing institution. Accordingly, a dynamic approach to normative contestation in the norm life cycle will probably render further implication on the causal relation between the normative contestation and the creation of new competing institution.

Thirdly, even after the creation of competing institution to the existing one due to normative contestation, the genesis of competing institutions does not halt. Why does the institutional fragmentation continue? If previous constructivist approach concerns the agent's

creation of institution against the existing institution, unexplored is the agent's reaction in the face of normative contestation by the co-existence of both the core institution and the competing institution.

The fourth relates to the third point. If institutional fragmentation is something on-going, not static, the concern moves onto the evolution and direction of the institutional fragmentation. That is, institutional fragmentation is not only the matters of degree, consequence, and management but also the matter of institutional or regime change. However, this vein of thought on institutional evolution, driven from the institutional genesis, has not received much concern yet. The institutional change cannot be extricable from normative change or normative shift by the relevant agents' normative positions and instantiating practices in the face of normative contestation.

Fifthly, the genesis of institutional fragmentation relates to the other subjects of the degree, consequence, and management of institutional fragmentation. Though currently these subjects are separately dealt with, they are all inter-related.

Sixthly, the current approaches to the genesis of institutional fragmentation mainly put the nation states to the fore, and the other agents such as regional organizations, civil society organizations (or non-governmental organizations), and business actors are not much underlined.

To summarize, previous studies on the genesis of institutional fragmentation pose three main tasks of i) further operationalization on the degree of normative contestation, ii) causal and dynamical mechanism of the agent's normative contestation and the creation of a competing institution, and iii) agent's reaction to the normative contestation and the future direction of institutional fragmentation. For a fuller explanation on the genesis of institutional fragmentation on the basis of constructivist ground, three research questions are set as follows;

1st question

Normative contestation in spectrum: Logic of Institutional fragmentation. To what extent does a newly created overlapping institution compete with the existing institution? Put differently, to what degree does the competing institution form normative contestation? In order to argue that the genesis of institutional fragmentation is attributable to normative contestation, it is

important to specify which norm is in contestation by which competing norm or interpretation. The degree of institutional fragmentation will be analyzed by the operationalization of the normative contestation. The newly emergent institution will stand somewhere with a certain pinpointed normative position in the spectrum of normative contestation.

2nd question

Normative contestation in action: Genesis of institutional fragmentation. Why does a normatively competing institution emerge? Normative contestation is one thing, and the establishment of a normatively competing institution is another. The commonality is that there is an agent behind competing norms and a competing institution. This means that not only structure (institution and norms) but also agent behaviors need to be analyzed. Accordingly, the genesis of institutional fragmentation will be analyzed on the ground of strategic social construction by norm entrepreneur's normative contestation.

Normative contestation and its path forward: Evolution of institutional fragmentation. What is the reaction of the agents the normative contestation? If international norms are diffused, then the reaction of the agents will be the efforts to liquidate normative contestation between international norms and domestic norms and practices. However, if the international norms themselves are in normative contestation, the reaction of the agents will differ. Their reaction by interpretation, position-setting, and position-propelling practices will shape and influence which norms in normative contestation will be empowered. The direction of institutional fragmentation in climate change regime will be analyzed by the relevant agents' normative position-setting and position-instantiating or propelling practices in the face of normative contestation of the international norms.

3rd question

In order to answer these questions, the next chapter will set up an analytical frame on the theoretical ground of normative contestation and the scope of an empirical study.

CHAPTER 3 ANALYTICAL FRAME

Section 1. THEORETICAL FRAME ON THE BASIS OF CONSTRUCTIVISM

3.1.1. Target of analysis: *Institution* as a cognitive structure

Institutional fragmentation basically relates to institution. In constructivism, institution is not something subordinated to structure but "structure of identities and interests" (Wendt 1992, p.399). That is, institution and the structure are interchangeably used (Narine 1998). Thus, the characteristics of structure will translate to those of institution. Structure is both constraining agents and constructed by agents. An agent recognizes and interprets structure, defines its identities and interest in terms of structure, forms collective understanding on structure through social interactions with the other agents, and instantiate the collective understanding through social practices (Wendt 1995). Put differently, structure and agents are mutually constitutive.

On the ground of this mutual constitution, constructivists focus on both *cognitive-dimensional* and *process-oriented* characteristics of structure. Firstly, structure is an inter-subjective structure which is composed of "shared understandings, expectations, and social knowledge" (Wendt 1994, p. 389). Secondly, structure is not stable but process-oriented because of the mutual constitutive relation with agents. Structure is instantiated by agents who embrace collective identity and the collective practices of agents. In this regard, the institution is also characterized as "cognitive entities" and "collective knowledge" on the basis of inter-subjective understanding among the agents.

However, structure and institution are not completely the same. Institution is a more stabilized structure that is experienced to have an ontological status *relatively* above agents and to work as "coercive social facts" to agents. Sometimes, institution is embodied into norms and formal rules in documents (Wendt 1992, p.399). Thus, institution constrains agents. To combine, institution as a structure has the characteristics of both constituting and being constituted by agents.

3.1.2. Unit of analysis of the institution: *Norms*

In the analysis of institution in constructivism, norms are one of substantive analytical constituents to understand institution. In relation with norms, institution is expressed as an "aggregation" of norms (Finnemore and Sikkink 1998, p. 891) or an embodiment of norms and measures (Bernstein 2002). Because institution is cognitive and process-oriented structure, the analysis of an individual institution cannot be detached from the analysis of norms that comprise structure.

Definition of norm

Then, what is norm? There is a variety of definitions on norms. Norms are defined as "shared (social) understandings of standards for behavior" (Klotz 1995, p.451), "collective expectations of proper behavior" (Katzenstein 1996, p.5), "collective understandings of the proper behavior of actors" (Legro 1997, p.33), "standard of appropriate behavior", "shared assessment" (Finnemore and Sikkink 1998, p. 891-892), or "collective understanding that make behavioral claims on actors" (Checkel 1999, p.551). From these definitional attempts, it is inferred that norms are relevant with two aspects: behavior and standard. Norms are targeted toward the behavior of actors, neither the mind nor the soul; norms live with the behavior of actors. Also, norms can direct or restrain the behavior of actors toward a certain bearing of appropriateness as a standard. That is, norms implicate a behavioral "ought" (Florini 1996, p.364). One more aspect to be added is inter-subjective collectivity. A certain norm can protect and defend its title of norm by the collectivity of the multitude of actors with their instantiating behaviors. If only a small number of actors regard the norm as inappropriate, the reputation of the norm can be attacked but still can defend its title of norm because of the collectivity of actors. However, if the multitude of actors comes to regard the norm as inappropriate due to circumstantial change or some other reasons, the norm cannot live as norms. The norm loses its robustness and gives in its position to an alternative norm. Accordingly, collectivity has great relevance with the stability and the change of norms.

This leads us to understand norms in four ways. Firstly, norms, as the constituents of

institution, can be equated with social structure: *norm is a "structure of meaning-in-use"* (Milliken 1999, p.231).²³ The analysis of institution requires the disaggregation of institutions into norms. By the highlight of norms, *institution is redressed into a normative structure*. Secondly, because structure in the constructivism is mutually constitutive with agents, *norms live with agents*. Thirdly, structure works as a stable structure on the one hand and goes through dynamics on the other. This relates with the "dual quality" of norms: norms are structuring the behaviors of agents (or actors) and constructed by the practices of agents/or actors (Wiener 2007, p.49). Accordingly, *norms have two faces*. Fourthly, as structure goes through dynamics by the support of actors, by the changing support by and practices of the actors, norms come to arise, evolve, reify, or die: *norms have a life*.

Role and life of norms

When we talk about the role of norms, the role is tightly related with the power of restraining the behavior of actors as a regulative standard. If norms assume this role successfully, then, norms are robust. However, not all the norms are robust. The robustness is determined by three criteria: i) specificity, ii) durability, and iii) concordance. Firstly, specificity relates to the degree of clarity of actors' understanding of norms. The robust norm is specifically defined with regard to the scope and the target of constraints, so actors can clearly and simply understand the compliance of the norm. Secondly, norms need to be effective for a certain length of time and against some challenges to the effectiveness of norms. Thirdly, norms need to be based on an inter-subjective agreement among actors. Norms under the affirmation by actors are reinforced. However, if the norm is under the reaffirmation (or re-evaluation) by the actors, it is not a matter of viability of norms but a matter of weakening of existing norms. Accordingly, "the clearer, more durable, and more widely endorsed" norm is more robust (Legro 1997, p.35). Particularly, by the degree of durability, norms can be classified into norms with stability and norms with flexibility (Wiener 2004).

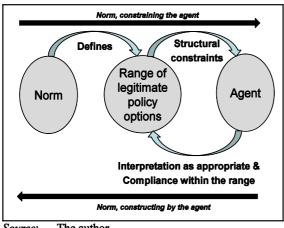
Norms with stability are the norms *under affirmation* by agents/actors' reproducing practices in accordance with the norms. This norm has three roles with regard to actors: i)

²³ Milliken (1999) used the "structure of meaning-in-use" to refer to discourses, Wiener (2004) and Contessi (2010) also utilized those terms to indicate norms.

compliance, ii) shared expectations, and iii) self-reinforcement (Hoffmann 2003, p.4). Firstly, the norm can make actors comply with social standard or strategy. In this case, the norm is defined as "a range of legitimate policy options" that puts "structural constraints" onto the actor's behavior (Klotz 1995, p.461-462). This norm works as a sustaining logic of appropriateness that relates with roles, rights, obligations, standard operating procedures and practices (March and Olsen 1996, p.249). Actors have a high conformity to the norm, exactly speaking, to the range of legitimate policy options and strategies. Secondly, this norm stabilizes the expectations around the standard. Thirdly, by the support of actors through complying practices, this norm is reinforced, and the reinforced norm becomes a more strengthened logic of appropriateness to actors. The norm stability is graphically explicated in the figure 3-1 in the next page.

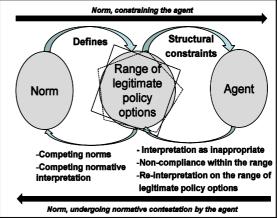
However, norms with flexibility are laid under re-affirmation by actors' "conflictive interpretations" of norms, which indicates that the robustness of norms is not everlasting (Wiener 2004, p.212). By the specificity criterion, if norms are ambiguously defined, if a situation allows an interpretation of ambiguous norms, and if agents have motivation to violate norms, then agents can have wide latitude of interpretation on appropriate behaviors (Shannon 2000). With regard to concordance criterion, if a certain norm defines the range of behavioral choice too narrowly, an agent is likely to experience a collision between norms and interests due to the limited range of choices. Then, what are the behavior options for the agent to take? The agent is likely to re-interpret the existing conventional norms and the range of policy options as inappropriate. The agent comes to violate the norms or to transform him/herself into a fighter against existing structural constraints (Klotz 1995). As a step forward, the agent can forge "competing values and understanding of what is good, desirable, and appropriate". This is when and where normative contestation burgeons (Finnemore 1996b, p.342). By the agent' strategic construction of normative contestation, the norm has a life cycle of norm emergence, norm cascade, and internalization (Finnemore and Sikkink 1998). This life cycle clarifies that norms do not always exercise a constraining power. Only norms that enter the norm internalization can work as the logic of appropriateness. Norm change through the reaffirmation by an agent is shown in the figure 3-2 in the next page.

Figure 3-1 Norm stability



The author. Source:

Figure 3-2 Norm flexibility



The author. Source:

Role of agent in norm entrepreneurship

Because norms work like structure, norms are also constitutive of and constituted by agents. If agents interpret existing conventional norms as appropriate, then, the existing norms are reinforced by the compliance of agents to the norms. That is, agents instantiate their practices within the boundary of legitimate policy options defined by norms. These norm-following practices by agents make existing norms more solid and reinforcing. However, if agents interpret existing conventional norms as inflicting a loss on their understanding of interests, they violate the norms. Or, they will initiate new norms "with alternative identities, practices, and sufficient material resources" (Hopf 1998, p. 180). These newly emergent norms enter normative space where existing norms are dominant, and competition between existent and new norms becomes inevitable. This phenomenon is termed "normative contestation" (Finnemore and Sikkink 1998, p. 897).

This normative contestation is the source of change of normative structure. Notable is that normative contestation occurs intentionally for "normative dominance" by a certain agent or a certain group of agents with "competing values and understandings of what is good, desirable, and appropriate in our collective communal life" (Finnemore 1996b, p.342). Agents involved in normative contestation with competing values are the "norm entrepreneurs" (Finnemore and Sikkink 1998, p.895). Without them, normative contestation never occurs. Accordingly, figuring out a major agent who brings out normative contestation is of importance.

3.1.3. Logic of Analysis: Normative Contestation

Normative contestation is the other side of norm promotion (Contessi 2010). It is because normative contestation never occurs in a normative vacuum. A newly emergent competitive norm is forged and led by norm entrepreneurs to make it enter a normative space where an existing norm is already dominant (Finnemore and Sikkink 1998). The competition for normative dominance between an existent norm and a new norm is therefore highly "political" (Finnemore 1996b, p.342). In this regard, normative contestation is a "strategic social construction that aims at undermining or displacing an accepted or emerging inter-subjective meaning through the formulation by actors of competing discursive interventions that challenge the meaning of norms that embody conflictive interpretations of values" (Weiner 2004; Contessi 2010, p.325-326). This normative contestation is the source of change of normative structure.

Normative contestation is resolved by the winning of an existing norm or a competing new norm. If the competitive new norm wins over the existing one by the support of the majority of actors, then the existing norm is replaced by the new norm. Though the new norm cannot win over the majority of actors by defeat or by parallel-going, the new norm suffices to stir the serenity of the normative space which is dominated by the extant conventional norm. The process of resolving the normative contestation is indicative of the process of normative change. Notably, unresolved normative contestation can be "the mobilizing basis for attacks" on the existing norm and the ground where the competitive norm raises its face whenever the condition is ripe (Finnemore 1996b, p.341). Therefore, nnormative contestation is what represents what the politics is all about: normative competition, struggle for normative dominance, actor involvement, the stretch of normative space, the dynamic change of normative structure, normative advancement across scale, etc.

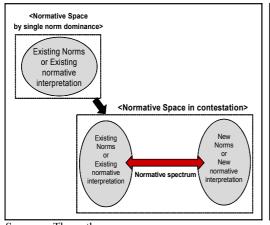
Normative space by normative contestation

Normative contestation occurs in normative space, and this space is subject to microscopic look by a static approach. When normative space is dominated by existing norms, the space is narrow and contracted. Existing norms define "a range of legitimate policy options" that puts "structural constraints" onto the actor's behavior (Klotz 1995, p.461-462). However, by the emergence of competing norms or competing interpretation on the existing norms, the normative space is stretched as seen in the figure 3-3. Then, the existing norms and the new norms compete for the dominance of normative space. It is because normative contestation extends a range of appropriateness, put differently, a range of legitimate policy options. A normative position is a certain pinpointed spot within the range drawn by existing and new norms in competition in normative space (Hoffmann 2007). The competitive norms extend bipolar or multi-polar normative ends and draw the normative boundary of the normative space.

In the analysis of the genesis of institutional fragmentation, the target of the analysis is institution. In order to figure out whether a newly established institution is normatively competing or conflictive to a dominantly existing institution, the normative anatomy of institution needs to be drawn. If a norm is indicative of a single appropriate standard, the institution is an aggregated structure of norms (Finnemore and Sikkink 1998, p. 891). Accordingly, institution cannot stand outside normative space, and institution can be disaggregated into multiple norms. Multiple norms live in a broad normative space, and each of the multiple norms comes to have "normative dimension", used by Hoffmann (2007, p. 14). Normative dimension indicates one division of multiple norms that constitute an institution. Thus, normative dimension is not an equivalent to norms norm but a similitude to normative space in that a range of appropriateness is drawn by existing and new norms in contestation. Normative space is broken down into multiple normative dimensions, and each normative dimension is polarized by an existing norm and a newly emergent norm or by an existing conventional interpretation and a newly emergent competing interpretation. Institution is a composite of normative positions in multiple normative dimensions in normative space. Notably, not all the norms go through normative contestation, so it is quite crucial to figure

Figure 3-3 Normative contestation

Figure 3-4 Institution and normative position



Institution <Normative <Normative Space in normative contestation? dimension> Existing Normative Normative interpretation interpretation dimension A Existing Normative dimension B interpretation interpretation Bi B' Normative dimension C interpretation erpretation

Source: The author.

Source: The author.

out and pick up the norms that are in normative contestation. A comprehensive and specified normative map of institution is a barometer to assess the degree of institutional fragmentation of the concerned individual institution from an existing, dominant, and core institution. The normative map of institution with normative dimension and normative position is shown in the figure 3-4.

Life cycle of the norms by normative contestation

Normative contestation is subject to a dynamic approach. From a dynamic perspective, a concern is laid on the process of how normative contestation is incurred, extended, and liquidated. By the dynamics of normative contestation, the doom of existing norms and competing norms will be determined. Finnemore and Sikkink (1998) explicated that norms come to have a life cycle of norm emergence, norm cascade, and internalization. In the norm emergence stage, as afore-mentioned, norms do not emerge out of nothing. That is, a new norm does not emerge from a normative vacuum but from a normative space where existing norms dominate. Also, in the emergence stage, a new norm cannot voice out its existence for itself. There should be a norm entrepreneur who unfolds three types of political strategies to insert competing norms and interpretations into normative space. The first tactic is the cognitive framing of an issue, inclusive of reframing and reconstruction, to

divert the existing understanding of the issue toward new ways of understanding. By this framing, the logic of appropriateness by existing norms is contested. Secondly, a norm entrepreneur does an inappropriate act deliberately and explicitly to represent normative contestation in an organized way. Thirdly, a norm entrepreneur constructs a standing "organizational platform" through which new norms are promoted with specific objectives and agendas to "shape the content of (new) norms" (Finnemore and Sikink 1998, p. 899). New norms themselves have "no real staying power" (Checkel 1999, p. 552), so, through this organizational platform with resources and leverage, a norm entrepreneur persuades not only critical states to become norm leaders but also weak or developing countries to re-think what has been considered appropriate as inappropriate.

At the extreme of norm emergence, there comes a norm tipping point that determines whether the life of new norms move to the norm cascade stage. Norm-tipping is hypothesized to occur when one-third of the total states adopt new norm or when critical states endorse new norms. The norm-tipping signals the opening of the norm cascade stage when norm entrepreneur(s) forms a network with international organizations. This network itself works as a separate agent for diffusion of new norms. Also, norm leaders activate themselves as agents who persuade others to accept new norms and policies. Main mechanism at this stage is not only persuasion but also socialization mechanism such as the emulation of heroic practices, praise for norm conformance, and ridicule for normatively deviating activities. Particularly, the behaviors of norm entrepreneurs contagiously spread through socialization. Important in the emergence and the cascade stage is the institutionalization of norms in international law, rules of multilateral organizations, and bilateral foreign policies.

Then, new norms enter the final stage of internalization. New norms displace existing norms and work as the new logic of appropriateness that deterministically influences the actor behavior. Professions are the main agents in internalizing new norms into policy domains, and the mechanism of internalization is iterated behavior and habit (Finnemore and Sikkink 1998). The life stage of norm is shown in the figure 3-5. This norm life cycle, propelled by the norm entrepreneurs for strategic normative contestation, can serve as a good window to look at the creation of competing

institutions in the global governance on climate change. In the studies of institutional fragmentation, this life cycle of norm promotion, norm cascade, and norm internalization will be the ground of the genesis and evolution of institutional fragmentation.

Norm diffusion by scale through normative contestation

Normative contestation frequently happens in norm movement across scale or across areas. Particularly with regard to international norms, if an international organization plays as both an entrepreneur and teacher of international norms, which are deemed better and powerful than existing domestic norms, then, the international norms can replace the existing domestic norms (Finnemore 1998). However, international norms are not always diffused but rejected among target nations. The divergence of norm diffusion hinges upon the way normative contestation is liquidated between international norms and existing domestic norms and practices (Finnemore and Sikkink 1998). Notably, the liquidation of normative contestation is partly dependent on the role of a certain domestic agent who forms an intentional construction of fit between international norms and existing domestic norms and practices (Checkel 1999; Risse-Kappen 1994). Or, normative contestation can be resolved by the role of local agents who reconstruct international norms to fit with prior extant regional beliefs and practices ones. This reconstruction process is known as "localization", and the products of localization are localized norms. The localization theory has an explanatory rendezvous with the Asian region as global norms are not diffused without filtering through Asian region variants such as regional history, norms, culture, practices, and economic and political variation among nations.

This vein of theoretical approach to normative contestation has some characteristics: i) international norms are deemed as stable and better at the global scale, ii) normative contestation happens in the top-down diffusion of international norms against existing domestic or regional norms and practices, iii) normative contestation is observed within a regional or a domestic vessel, iv) normative contestation is at the norm level (norm versus norm), and v) normative contestation is already liquidated in the case studies. In these cases, domestic and regional norms are attacked by

and competing with the international norms. Thus, the role of a local agent, particularly a regional organization, is salient in the liquidation of normative contestation as a norm entrepreneur through congruence-building between international norms and regional norms or the reconstruction of international norms to be fitted to the local level. Then, by the strategic hand of a local agent, the doom of international norms is diverged from a lamentable rejection, a new-faced localization, to a successful plantation. In this case, the role of local agents in the liquidation of normative contestation works as an explanatory variable that casually determines the degree of international norm diffusion.

However, this prevailing theoretical approach can have a lesser explanatory fit in such cases that i) international norms are just emergent and in definitional stage at the global level, ii) international norms are themselves currently undergoing bottom-up normative contestation at the global level, iii) normative contestation happens by the emergence of competing institutions to challenge international norms in a bottom-up process, iv) normative contestation is made not at the norm level but at the range of legitimate policy options, and v) normative contestation is still an ongoing entity. Because norms are in definitional stage, local agents can have divergent interpretations against the range of legitimate policy options which are defined by the norm. Local agents set their positions on the basis of existing domestic norms and localized norms and propel their normative positions through a singular international negotiation venue.

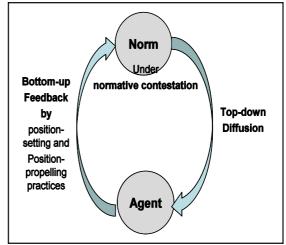
In this regard, in the case of the international norm which is not emergent but mature enough to be institutionalized, if the international norms are under normative contestation by competing interpretations, then the international norm is subject to "the forces of natural selection" (Florini 1996, p.367). It is a natural corollary that the concern moves to the microscopic anatomy chart of the normative contestation at the global level, the positioning of the local agents in the war of normative contestation, the strategic practices of the local agents to defend their positions, and the expected result of normative contestation by the stickiness of existing norms or the normative shift to competing norms. Accordingly, in the face of the normative contestation at the global level, the local agent is subject to normative *position-setting* and *position-propelling* with strategic practices

Figure 3-5 Stages of norms

	Stage 1 Norm emergence	Stage 2 Norm cascade	Stage 3 Internalization
Actors	Norm entrepreneurs with organizational platforms	States, international organizations, networks	Law, professions, bureaucracy
Motives	Altruism, empathy, ideational, commitment	Legitimacy, reputation, esteem	Conformity
Dominant mechanisms	Persuasion	Socialization, institutionalization, demonstration	Habit, institutionalization

Source: Table 1 of Finnemore and Sikkink (1996: p.898).

Figure 3-6 Norm diffusion dynamics



Source: The author.

for the settlement and institutionalization of a certain international norm in normative contestation in a preferable direction. Particularly, the role of the local agent as a *position-setter* and *position-propeller*, being sided with a certain normative position and pulling the international norms toward a region-favorable direction, remains much unexplored.

Section 2. ANALYTICAL FRAME BY NORMATIVE CONTESTATION

3.2.1. Target norms

The theoretical ground of the genesis of institutional fragmentation is normative contestation. The distinctive normative pillars that constitute the global climate change institution, the UNFCCC/KP, are two founding norms on the appropriate actor and the appropriate behavioral response to mitigate climate change, and they are principle equity, represented by *common-but-differentiated-responsibility (CBDR)*, and *precautionary approach* (Biermann et al. 2009). The *CBDR* of the UNFCCC/KP defines who will bear the cost of mitigating GHG emission. The *CBDR* has two dimensions of 'common' and 'differentiated' responsibility of sovereign states. The 'common'

dimension implies that nation states face global risks commonly, so all the nations are held responsible for collaboration in risk reduction; The 'differentiated' dimension indicates that burdensharing in the collaboration is differentiated (Stone 2004). The 'differentiation' is said to have two grounding: "culpability" and "capability". The culpability implies that responsibility is to be laid on the basis of historical contribution to the problem of climate change, so the burden is laid on those who have put historical pressures. Meanwhile, the capability indicates that responsibility is differently distributed on the basis of ability-to-pay such as technological and financial resources (Okereke 2008, p.32). With both culpability and capability, the *CBDR* defines the range of legitimate burden-bearing actor in a manner that developed countries will take a leading responsibility and that developing countries are given consideration (UNFCCC 1992, Article 3(1) & (2)). ²⁴

The second norm, *precautionary principle*, is expressed by "if there is a threat, which is uncertain, then some kind of action is mandatory". Put differently, *precautionary approach* means that preventive command-and-control action is imposed regardless of uncertainty of the scientific proof of the yet-coming threat of harm. The precautionary approach has four definitional dimensions of i) threat, ii) uncertainty, iii) action, and iv) command dimension (Sandin 1999, p. 898). On the basis of this, the UNFCCC puts its priority onto nation-based emission reduction measures to stabilize GHG concentration without a full scientific certainty on the cause and adverse impact of climate change (UNFCCC 1992, Article 3(3)). The linchpin of this principle is how mitigation is to be achieved in a cost-effective way in the face of uncertainty (UNFCCC 1992, Article 3(3)). The precautionary principle defines the range of legitimate policy options for actions to mitigate the treat of climate change by target and time table: i) target by on average five per cent GHG emission reductions against 1990 levels from and ii) time table by the short term period of 2008 to 2012 as the first commitment.

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^{24 &}quot;Parties should protect the climate system ~ on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions" (UNFCCC 1992, 3(1)). "The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, ~ should be given full consideration." (UNFCCC 1992, Article 3(2)).

²⁵ "The parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. ~ lack of full scientific certainty should not be used as a reason for postponing such measures" (UNFCCC 1992, 3(3)).

3.2.2. Case selection: Asian region and Asian climate change institutions

At the moment, Asian region brewed over multiple climate change institutions, and these institutions have become the major ingredients of institutional fragmentation in global governance architecture on climate change. Out of those, the much-touted is the US-led Asia Pacific Partnership on Clean Development and Climate (APP). With the APP as a starter, regional climate change institutions in Asian region appeared in the latter half of the 2000s when the global climate change architectural path was under negotiation. The Asian climate change institutions have been unexplored much, and, furthermore, the overall path of the Asian climate change institutions remains obscure. Though appearing in the scholarly realm frequently, the APP does not have a position to represent *the* Asian regional institution. The delineation of all the Asian climate change institutions seems baffling, so only weighty climate change institutions in Asia are enumerated and classified in the table 3-1 below by the initiatives of nation-state and regional cooperative organization. Concerned regional initiators are the United State of America (US), Korea, and Japan, which produced unilateral nation-led institutions, and the Asian regional organizations of the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC), and the East Asian Summit (EAS) that announced declarations on regional climate change actions in 2007.

 Table 3-1
 Selected institutions for case study

Initiating Agent		Institutions
	The US	Asia-Pacific Partnership on Climate change (APP) in 2005 a
Individual		East Asia Climate Partnership (EACP) in 2008 b
Nation	Korea	with Global Green Growth Institute (GGGI) and Green Technology Center Korea
state		(GTCK)
	Japan	East Asian Low Carbon Growth Partnership (LCGP) in 2012 c
	ASEAN	ASEAN Declaration on the 13th session of the Conference of the Parties to the UNFCCC
Regional		and the 3rd session of the CMP to the Kyoto Protocol (2007) d
cooperative	APEC	Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean
Agency		Development (2007) e
	EAS	Singapore Declaration on Climate Change, Energy and the Environment $(2007)f$

Source: a. http://www.asiapacificpartnership.org/english/default.aspx

- b. http://eacp.koica.go.kr/
- c. http://www.mofa.go.jp/announce/event/2012/3/0314_01.html
- d.http://environment.asean.org/asean-declaration-on-the-13th-session-of-the-conference-of-the-parties-to-the-unfccc-and-the-3rd-session-of-the-cmp-to-the-kyoto-protocol-2007/
- e.http://www.apec.org/About-Us/About-

APEC/~/link.aspx?_id=C1E817728B23488D8F4FA801EC58FCC7&_z=z

f. http://www.aseansec.org/21116.htm.

Regional climate change institutions by the Asian nation states

Asia-Pacific Partnership on Clean Development and Climate (APP)

The APP made its appearance in 2005 when the KP became effective. The US, which did not ratify the KP, is a main initiator in the establishment of the APP, and there are five other founding members of Australia, China, India, Japan, and South Korea. Canada joined the APP later in 2007, and withdrew from the KP in 2011 at the COP 17 of the UNFCCC in Durban. The APP has a great implication in the studies of institutional fragmentation. When the APP unveiled its face, much concern was laid on the meaning of the APP to the UN-based climate change institutions of the UNFCCC/KP. Though the APP Charter itself indicated an intention "to complement and not replace the KP" (APP 2007, p.1), much of the research literature portrays the meaning of the APP as a competition to or a distraction from the KP (McGee and Taplin 2006; Lawrence 2007). That is, the appearance of the APP, an overlapping and competitive institution, ushered in institutional fragmentation in global governance architecture on climate change. There are many attempts to compare the UNFCCC/KP and the APP, but a comprehensive and theoretical approach to the understanding and the origin of the APP still remains as an ambiguous niche. Particularly, the exploration of the APP by the logic of normative fragmentation will reveal to what extent and in what path the APP formed normative contestation with the UNFCCC/KP and disclose the genesis of institutional fragmentation.

East Asia Low Carbon Growth Partnership (LCGP)

The LCGP has a special implication for institutional fragmentation. It is because Japan, one time fervent supporter of the KP with its leadership in the adoption of the KP in 1997,²⁶ also participated in the APP as a founding member of the APP. Japan has navigated between the UNFCCC/KP and the APP (van Asselt et al. 2009). However, its navigation ended when Japan announced in 2011 that it will not participate in the second commitment period of the KP. Instead, Japan launched a new

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²⁶ Tiberghien and Schreurs (2007).

regional climate change initiative, the *East Asia Low Carbon Growth Partnership* (LCGP), in 2012. What conceptually upholds the LCGP is *low carbon growth*, which is also a new growth model on the basis of energy-efficiency technologies in the context of global climate change challenge (MOFA 2012a). The LCGP is a collection of bilateral partnerships with Asian developing countries. Two distinctive and essential functions of the LCGP are market mechanism and technology mechanism. Notable is that the LCGP was born in the normative space where the war of normative contestation started by the UNFCCC/KP and the APP. Particularly, because the LCGP is the composite of bilateral cooperation, not connected with the multilateral cooperation-oriented UNFCCC/KP, the LCGP bears great relevance with institutional fragmentation.

East Asia Climate Partnership (EACP)

In 2008, South Korea launched the East Asia Climate Partnership, which is a collection of bilateral partnerships between Korea and Asian developing countries to support the adaptation of partner countries to climate change. In August, 2008, South Korea declared 'Low Carbon, Green Growth' as a national growth strategy (PCGG 2013a). The term, *green growth*, combining two seemingly incompatible objectives of economic growth and environmental protection, is a conceptual feed for the establishment of the EACP. The EACP has a special implication with regard to institutional fragmentation. It is because South Korea is the member of the OECD and the seventh largest GHG emitter globally (Energy Korea 2012), but South Korea was excluded from the list of Annex I countries bearing the GHG emission reduction obligation during the first commitment period of 2008-2012 under the KP. With its critical standing in the middle line between developing countries and developed countries, South Korea participated in the founding of the APP in 2005. In the context of stretched normative contestation by the UNFCCC/KP and the APP, the launch of the EACP and relevant other institutions such as the Global Green Growth Institute (GGGI) in 2010 and Green Technology Center Korea (GTCK) in 2012 all implicate the position of South Korea on what is appropriate in the action measures to tackle climate change.

Regional climate change institutions by the Asian Regional cooperative organizations

Regional cooperative organizations in Asia also have carved their own climate change institutions in response to the UN-based climate change regime in 2007. Important is that the year 2007 has a special implication in that it was just before the first commitment period of the KP began and that the procedural step on a roadmap for post-Kyoto framework was supposed to be made at the COP to the UNFCCC at Bali. Particularly, the normative space in the issue area of climate change has been stretched by normative contestation since the emergence of the APP in a competitive manner to the UNFCCC/KP. The institutions of regional cooperative organizations embody the regional position and action on the basis of multilateral convergence on the regional climate change policy. Asia allows many geological demarcations and watches overlapping co-governance by multiple regional cooperative organizations. Instead of covering the institutions of all the Asian regional cooperative organizations, the regional organizations where the afore-mentioned nation-states enjoy activating themselves comfortably are to be investigated. They are the APEC, the ASEAN, and the EAS. Three of these organizations made official declarations on climate change issue. Though informal, formal declarations are the "institutionalized forms of expression" (Ruggie 1998, p. 861) and the communicative actions that implicate what the nation states in the region collectively converge on the most appropriate action for regional climate change risks (Risse-Kappen 2000).

CHAPTER 4 NORMATIVE CONTESTATION IN SPECTRUM:

THE LOGIC OF INSTITUTIONAL FRAGMENTATION

This research sets the normative contestation as the logic of institutional fragmentation. A new climate change institutional package, the *East Asia Low Carbon Growth Partnership* (LCGP), has been recently developed. The LCGP has significant implications because it was initiated by Japan, which has navigated between the *Kyoto Protocol* (KP) and the *Asia-Pacific Partnership on Clean Development and Climate* (APP) but ended the navigation by announcing its intention not to participate in the second commitment period of the KP. This chapter investigates the position of the LCGP on the spectrum drawn by the KP and the APP which has undergone normative contestation on two norms of the common-but-differentiated-responsibility (CBDR) and the precautionary approach. This chapter unfolds the map of normative contestation in the first place with two institutions of the KP and the APP. Empirical results show that the normative stance of the LCGP is skewed toward the APP; however, the LCGP differentiates itself from the APP by its own functional properties and through its institutional fit with another regional institution, the East Asia Summit. The LCGP puts another complexion on global climate change governance.

Section 1. INTRODUCTION

The 1997 *Kyoto Protocol* (KP), which emerged from the 1992 *United Nations Framework Convention on Climate Change* (UNFCCC), heightened expectations for large-scale collective action with stringent mitigation measures in response to climate change.²⁷ However, the reluctance of the United States of America (US) and Australia to ratify the KP and the subsequent establishment of a competing institution, the *Asia-Pacific Partnership on Clean Development and Climate* (APP), led to a critical juncture that resulted in a departure from the unified UN based climate change

²⁷ The UNFCCC and the KP are two primary international agreements on climate change (UNFCCC 1992; KP 1997).

regime. Under this sway, Japan has taken the unusual position of participating in both the KP and the APP as the only developed nation bearing emission reduction obligations during the first commitment period of the KP (van Asselt 2007).

Recently, after negotiations on the post-Kyoto architecture stalled, Japan stopped leading a double life by announcing that it had no willingness to engage in the second commitment period of the KP. Instead, Japan presented a new climate change initiative, the *East Asia Low Carbon Growth Partnership* (LCGP). The implications of the LCGP loom large, because the LCGP was born at the close of Japan's "navigating" (van Asselt et al. 2009, p. 319) between the KP and the APP. Is it adjacent to the APP, complementary to the KP, or in the middle? The normative position of the LCGP has not been analyzed yet and remains obscure. Using a constructivist theoretical foundation and on the basis of previous assessments of the APP, this chapter attempts to identify the normative posture of the LCGP in comparison with the two institutions of the KP and the APP.

The chapter begins by describing Japan's activities in the global climate change regime and the recent establishment of the LCGP. Then, previous studies on the relationship between the APP and the UN-based climate change regime will be introduced. On the basis of the APP assessment, section four delineates an analytical frame to set the normative dimensions and normative positions of the LCGP. Finally, the normative positions of the LCGP and its implications for global and regional climate change governance will be explored.

Section 2. BACKGROUND

If the UNFCCC was the first global step to stabilize anthropogenic greenhouse gas (GHG) concentrations, the KP marked an "ascendance" (Bodansky 2011, p. 701) of regulatory coerciveness by imposing "hard targets and time tables" (Sands 1992, p. 271) onto 37 industrialized countries and the European Community with an average of five per cent GHG emission reductions against 1990 levels from 2008 to 2012. In order to adopt the KP, there was an inevitable chain of jostling intergovernmental negotiations. Japan negotiated very urgently and elicited the adoption of the KP in

1997 at Kyoto. The KP was symbolic for Japan's leadership (Tiberghien and Schreurs 2007) and Japan has been an undoubtedly strong supporter of it. In July 2005, the US, after failing to ratify the KP, presented the APP which was a new climate change institution composed of six founding countries.²⁸ Much of the research literature portrays the APP as having features that distract from the KP, though the APP *Charter* indicated an intention "to complement and not replace the KP" (McGee and Taplin 2006; Lawrence 2007).²⁹ Interestingly, Japan has also been an active participant in the APP where all the members, except Japan, were exempted from the mandatory reduction obligation. Accordingly, Japan has had one foot in the KP camp and the other in the APP's. However, Japan's dual life navigating (van Asselt et al. 2009) between the KP and the APP ended with the LCGP.

The establishment of the LCGP was first proposed by Japan at the East Asia Summit (EAS) Foreign Ministers' Consultation on July 22, 2011 (EAS 2011a). This proposition was made within a specific temporal context. At the domestic level, Japan's ambitious move for national GHG reductions through nuclear power expansion³⁰ was blocked in the wake of the Fukushima nuclear accident on March 11, 2011. The influential Japan Business Federation (Keidanren) made a policy proposal on July 14, 2011 to review Japan's GHG emission targets "from a zero base" and develop a bilateral offset mechanism (Keidanren 2011a, p. 1). At the Asian regional level, despite numerous initiatives and activities, there is not a cohesive cooperative mechanism that governs regional climate change such as the Directorate-General for Climate Action (DG CLIMA) of the European Commission.³¹ This has resulted in wide latitude in the interpretation of and responses to climate change in Asia. At the Association of Southeast Asian Nations (ASEAN) summit held in May 2011 in Jakarta, the climate change issue was not even included on the agenda (Erni 2011). Asia-Pacific Economic Cooperation (APEC) involvement in climate change was tilted to energy efficiency enhancement by the three pillars of the Energy Working Group, the Asia-Pacific Network for Energy Technology, and the Energy Security Initiative (APEC 2012a). ASEAN Plus Three and the ASEAN

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²⁸ The founding members are Australia, China, India, Japan, South Korea, and the US (APP 2014a).

²⁹ APP (2007, p.1).

The percentage of national generated electricity from nuclear power was planned to increase from 26% in 2007 to 50% in 2030 (METI 2010).

The DG CLIMA was established in 2010 to govern climate change issues of the European Union (DG CLIMA 2012).

Regional Forum also did not show much concern regarding climate change. At the international level, the UNFCCC faced an internal split on a post-Kyoto trajectory, as shown by the Copenhagen Accord and Cancun Agreements³² which signified a shift from a top-down and legally-binding path to a bottom-up approach (Bodansky 2011).

Out of this fluid situation, Japan once again expressed its desire for the LCGP initiative at the sixth EAS on November 19, 2011 (EAS 2011b). During the conference of the parties (COP) 17, the Ministry of Foreign Affairs of Japan (MOFA) released Japan's Vision and Actions toward Low-Carbon Growth and a Climate-Resilient World (MOFA 2011a) which essentially entailed the gist of the LCGP. This was reconfirmed in a statement by the Minister of Ministry of the Environment, Japan (MOEJ) at COP 17 on December 7, 2011 (MOEJ 2011). At the open symposium³³ held on March 3, 2012, Masahiko Horie, the Ambassador for Global Environmental Affairs of MOFA, mentioned four working mechanisms of the LCGP: networking; technology; finance; and a market mechanism. On April 15, 2012, the East Asia LCGP Dialogue was held in Japan, and three essential elements that comprise the LCGP were explicated: i) field-based low-carbon growth strategies; ii) technology and market mechanism incentivizing investments with an emphasis on the Bilateral Offset Credit Mechanism (BOCM); and, iii) knowledge networks among national governments, international organizations, local governments, research institutions, private companies and nongovernmental organizations (NGOs) in East Asia (MOFA 2012c). At the accompanying Side Event of the Dialogue on April 14, 2012, the operating entity of the technology mechanism was launched and the BOCM was explained.

The official document that expounds the vision and actions of the LCGP does not emphasize the complementarity of the LCGP with the KP (MOFA 2011a), unlike the APP whose Vision Statement explicitly notes complementarity with the KP. However, the publicly disseminated document on the BOCM indicated that this newly initiated market mechanism is for "complementing the existing Kyoto Mechanism" (MOFA 2012a, p. 4). With this as background, the

Copenhagen Accord (UNFCCC 2009) and Cancun Agreements (UNFCCC 2010).
 Symposium title is Dialogue with Global Negotiator: The Future of Climate Change Regime and Environmental

next section will refer to previous studies that analyzed the relationship of the APP to the UNFCCC/KP, which will be useful in order to understand the meaning of the LCGP.

Section 3. Previous Studies

When the APP first appeared on the stage of global climate politics, most scholarly attention focused on understanding what it was. Specifically speaking, there was concern as to whether the APP was a complement or a competitor to the UNFCCC/KP. Some directly brought the question of complementarity with the APP to the fore, and others referred indirectly to the question by asking about divergence, distraction, fragmentation, or contestation of the APP. McGee and Taplin (2006) tested the validity of the complementarity argument of the APP to the KP using regime interplay analysis. They concluded that the APP was a tributary regime that exerted a negative influence on the interests, norms, and ideas of the KP concerning five regime features and so refuted the complementarity. Analysis by van Asselt (2007) showed the competing characteristics of the APP against the UN-based climate change umbrella in terms of four key principles of differentiation: obligatory and non-obligatory actors; the impact of climate change; linkage with other multilateral regimes; and, the participation of environmental NGOs. Lawrence (2007) described the APP as a distraction to the UN-based climate change regime due to the absence of carbon emission mitigation, the non-legally binding and task-force based bottom-up framework, the focus on technology development, and the voluntary funding mechanism. Lawrence also pinpointed the weakness of the technology mechanism of the APP. In an analysis of global climate change governance systems, the APP is exemplified as an element of conflictive fragmentation with a loose hierarchical integration to the UN-based regime, norm conflicts, and actor constellation (Biermann et al. 2009). Overall, the results of such analysis are skewed toward a viewpoint that the APP has negative connotations as a distracting competitor to the UN-based climate change regime.

This is not to say that there are not positive interpretations of the APP. Kellow (2006) expounded that the APP is a better regulatory and negotiating format for the Asian region as it has

abundant coal resources and a resultantly higher interest in technology development mechanisms. Furthermore, recent studies have illuminated the meaning of the APP from a neutral standpoint. Hoffmann (2007) regarded the APP as a structure with social norms of appropriateness, and identified the normative positions underpinned by the APP in four normative dimensions. As a result, the APP with the normative positions of the no-regret principle, a market-based regulatory approach, and a mix of mitigation and adaptation is regarded as a new governance experiment comprising new social norms that are in normative contestation with the existing norms of the KP. McGee and Taplin (2009) revisited the APP with 15 specific criteria and described it as a representation of an alternative discourse of ecological modernization that is in discursive contestation with the green governmentality and civic environmentalism that are the main discourses of the KP. Notably, even within positive or neutral arguments, the APP competes with the KP for a more realistic and effective working model.

Therefore, regardless of attitudes that are positive, neutral or negative, it is safe to say that the APP is a competitor and not a complement to the UNFCCC/KP. Put differently, the APP stands the farthest away from the KP on the spectrum of acceptable climate change governance. This can help us to understand what is meant by the Japan-led LCGP at the end of Japan's oscillation between the KP and the APP. This chapter will analyze from a normative perspective the position of the LCGP in terms of global climate governance that spans from the KP to the APP. The next section describes the analytical frame to be used for this assessment.

Section 4. ANALYTICAL APPROACH

In order to assess the normative position of the LCGP along the spectrum from the KP to the APP, this research will further develop Hoffmann (2007) which claims that at each norm dimension the normative position of the KP and the APP are in normative contestation.³⁴ Before the assessment, three preparatory steps are required. Firstly, the theoretical meaning of norms will be defined.

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³⁴ Hoffmann (2007) was developed into Hoffmann (2011) with more governance experiment data.

Secondly, a set of comparison criteria from a normative aspect will be devised. Lastly, the definition of a normative position, the normative positions of the KP and the APP with regard to each of the criteria, and the way to pinpoint the normative position of the LCGP are described.

Firstly, Hoffmann (2007) regards an institution such as the APP as a certain pattern of governance sustained by norms. These are the substantive analytical constituents of constructivism, one strand of world political theories regarding international institutions. Constructivism defines norms as standards of "appropriate behavior" or "shared assessments" (Finnemore and Sikkink 1998, p. 891-892) and an institution as an embodiment of norms and measures (Bernstein 2002). Agents within an institution shape their identities through social interactions with other agents, interpret norms in their own way, and construct their own interests (Wendt 1995). If agents interpret existing conventional norms as inflicting a loss on their understanding of interests, they will initiate new norms "with alternative identities, practices, and sufficient material resources" (Hopf 1998, p. 180). These newly emergent norms enter normative space where existing norms are dominant, and competition between existent and new norms becomes inevitable. This phenomenon, termed "normative contestation" (Finnemore and Sikkink 1998, p. 897), generates a range of appropriateness or distance in normative space. A normative position is a certain pinpointed spot within the range drawn by existing and new norms in competition in normative space.

Secondly, institutions can have "cooperative or conflictual" inter-subjective identities (Wendt 1992, p. 399) and a "variety of social structures" (Narine 1998, p. 39) within one regime. Consequently, a comparative study of institutions needs comparison criteria. In constructivism, the institution is an "aggregation" of norms; if a norm is indicative of a single appropriate standard, the institution is an aggregated structure of norms (Finnemore and Sikkink 1998, p. 891). Accordingly, comparing institutions from a normative aspect requires the disaggregation of the institution by norms. In this research, I will utilize two distinctive norms of common-but-differentiated-responsibility (CBDR) and precautionary approach, which are two norms that are undergirding the UNFCCC and undergoing conflictive interpretation in the global climate change governance (Biermann et al. 2009). The CBDR defines "who should take responsibility for mitigating climate

change" and the precautionary approach defines "how such mitigation should be pursued" (Stevenson 2009, p.166). Along these lines, the term "normative dimension", used by Hoffmann (2007, p. 14), indicates one division of multiple norms that constitute an institution, and in this regard normative dimensions are used as comparison criteria. 35 In Hoffmann (2007), four normative dimensions are utilized: i) appropriate actors to enact governance between state actors or non-state actors; ii) appropriate responses to uncertainty between the no-regrets and the precautionary principles; iii) appropriate regulatory measures between command-and-control and market-based approaches; and, iv) appropriate priorities between mitigation and adaptation. This research will focus on two norms of the CBDR that relates to the normative dimension of the appropriate actors and the precautionary approach that is broken down to two normative dimensions of the appropriate regulatory measures and the appropriate priorities 36. More specifically, the appropriate actor dimension deals with the interpretation on who will be held responsible and empowered in the climate change action. The dimension of appropriate priorities reveals the preference in the climate change action between mitigation and adaptation; and, appropriate regulatory approaches. Each normative dimension will be specified using the rich resources of criteria-framing from previous studies, particularly that of McGee and Taplin (2009).

The third step concerns the normative position. Actors interpret conventional norms and propel existing or new norms that they regard as the most appropriate. The normative position is an underpinned ideational stance that is considered to be the most appropriate and that is steered by the actors in the range of appropriateness drawn by existing and new norms in contestation at each normative dimension (Hoffmann 2007). A bundle of normative positions shapes and characterizes a single individual institution. In this study, the range of appropriateness or the normative distance between the positions of the KP and the competing institution, the APP, is drawn at each normative dimension. The normative positions of the KP and the APP are inferred from previous studies mentioned in section three; and the normative position of the LCGP can be identified by a

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³⁵ The normative dimension is not an equivalent to the norm but a similitude to normative space in that a range of appropriateness is drawn by existing and new norms in contestation.

³⁶ It is because an appropriate response to uncertainty is embodied with relevance by two other dimensions; that of appropriate priority and appropriate regulatory approach.

"distillation of norms" (Müller 2004, p. 425) from official documents, presentations, and actual practices that reflect and envision what is regarded as appropriate by Japan. What follows is a delineation of the normative position of the LCGP along three normative dimensions.

Section 5. ANALYSIS

4.5.1. Appropriate Actor

The appropriate actor dimension is specified by two pillars: i) empowered actors: and, ii) differentiation of responsibility. In the actor empowerment pillar, on the one side, the KP embodies inter-governmental state-centric governance because state actors are given decision-making authority. Non-state actors are involved in implementation activities, but their representation at decisionmaking meetings is limited to observer status, though it is equally given among the non-state actors (KP 1997, Article 13(8)). On the other side, the APP takes a hybrid form of climate governance (Bäckstrand 2008). Private actors, particularly industry stakeholders, are not only the main implementers of APP goals as Task Force members but are also participants in the Policy and Implementation Committee (PIC) meeting that governs the APP and reviews the work of the Task Forces with government representatives. Unlike the KP, however, the representation of private actors is skewed toward industry actors, and civil society organizations are not represented in any implementation and decision-making meetings of the APP (McGee and Taplin 2009). Within this spectrum, the LCGP, a composite of bilateral state-to-state partnerships between Japan and Asian partner countries, seems to exemplify a state-centric governance format. However, non-state actors such as businesses, international organizations, research institutes, universities, and NGOs are invited to LCGP Dialogue meetings which oversee the general activities of the LCGP and are intended to encourage participation from non-state actors (MOFA 2011a; 2012b). The extent of the involvement of private actors stretches from implementation activities such as information-sharing, capacity-building and networking to decision-making activities that set overall frames for the LCGP;

notably, the carbon market mechanism of the LCGP stands on the basis of the bilateral offset mechanism that industry actors have pursued (Keidanren 2011a). What differentiates the LCGP from the APP is that civil society organizations are designed to be included (MOFA 2012b).

Secondly, with regard to the differentiation of responsibility, the KP adopts the UNFCCC principle of common but differentiated responsibilities and imposes different obligations on developed and developing countries. On the other hand, the APP takes a comprehensive stance that urges contributive climate change actions from developing countries such as China and India. However, due to its small and likeminded country-oriented membership, the APP does not include the least-developed countries, countries that are vulnerable to climate change, or African countries. The LCGP, like the APP, aspires for comprehensive participation from both developed and developing countries (MOFA 2011a). For this, a rhetorical term "leapfrog development" is used to indicate technology-driven economic growth, which differs from the energy-intensive economic growth of western developed countries such as the UK, Germany and the US. Leapfrogging developments can be observed in developing countries such as South Korea with liquid crystal display TVs, China with cellular phone production, and India with information technology; as well as in Japan with efficient energy-saving technologies (LCS-RNet 2012b). The LCGP has an institutional design with the possibility that developing countries with leapfrog developments can function as active contributors; however, the LCGP differs from the APP in the differentiation of responsibility among developing countries. The LCGP incorporates assistance to vulnerable countries such as the least developed countries, small island states, and African countries (MOFA 2011a). In particular, assistance to African countries vulnerable to climate change is emphasized. Japan expressed its plan to support African countries in cooperation with the African Union, the World Bank and the United Nations Development Programme under the existing framework of the Tokyo International Conference on African Development (TICAD) during the COP 17 side event in December 2011. Japan outlined the establishment of the African Green Growth Strategy as an African regional cooperation framework (MOFA 2011b). The normative position of the LCGP is summarized in Table 4-1.

4.5.2. Appropriate Priority

The next section focuses on whether institutional priority is given to mitigation or adaptation. In this normative dimension, a priority can be revealed from the relevant elements that characterize GHG targeting. Here, a distinct contrast is shown between the KP and the APP. Under the KP, with the aim of responding to climate change by reducing GHG emissions as a single ultimate purpose, an absolute quantitative reduction target is decided through international negotiations with legally-binding force. The APP, however, pursues GHG "intensity targets" that refer to emissions per unit of gross domestic product (GDP) (Olmstead and Stavins 2006, p. 36). A reduction in GHG intensity cannot guarantee a reduction in the total emission from an economy, even though attained. It is because if the GHG intensity target is less than the prevailing rate of domestic economic growth during a given period, then the absolute emissions from a national economy will have increased (McGee and Taplin 2006). Also, targets are set with national discretion, so they are neither legally-binding nor absolute. Climate change is regarded as one of several goals such as energy efficiency, energy security and economic growth under the APP, so reduction efforts are shifted to the development of environmentally-sound technologies that are mainly in energy-related sectors.

Under the flagship of the LCGP, Japan has reached joint bilateral statements with several East Asian countries such as India, Vietnam, Indonesia, and Thailand as well as with countries in the Mekong Region, and held consultations on the new bilateral carbon trading mechanism (MOFA 2012a). The targets set within bilateral cooperation depend on respective national circumstances, so scientific knowledge and roadmaps for low-carbon societies in East Asian developing countries are to be tailored on the basis of national and local capacity. As a result, the LCGP targets become aspirational rather than ones of absolute quantifiable emission reduction commitments. There are neither quantified GHG reduction targets nor explicit target years or even baseline years. Furthermore, in consideration of national priorities regarding economic growth in developing countries, the LCGP desires to reconcile GHG emission reductions with economic development (MOFA 2011a) through the adjacent concept of GHG intensity reduction. The LCGP, which is a

bilateral and regional partnership, also has non-legally binding status. Lastly, Japan has been a supporter of a sectoral approach (van Asselt et al. 2009) on the basis of the private sector's strong preference for this (Keidanren 2011b) which is reflected in the field-based approach of the LCGP (MOFA 2012c). The LCGP addresses the matter of climate change as a prime issue, and as there is a regional focus on East Asian countries and Africa, other issues such as renewable and energy saving technologies, transportation, forestry, energy security, disaster prevention, water, food security and economic growth are given great weight within the LCGP (MOFA 2011a). Therefore, the LCGP's priorities lean towards adaptation as indicated in table 4-1.

4.5.3. Appropriate Regulatory Measures

When it comes to appropriate regulatory approaches, the normative position of the LCGP is identified with the three mechanisms of technology, the carbon market, and finance. These mechanisms have been designed to interact under the KP to relax command-and-control regulatory stringency through an infusion of market-based incentives, while the APP is influenced by voluntary approaches.

Concerning the technology mechanism, elements of the LCGP share the same ground with the APP by encouraging technology development through demonstration and deployment projects in developed and developing countries; unlike the KP whose focus is technology transfer from developed to developing countries. The LCGP first focused on technology research and development institutions when it made an institutional linkage with the Asia-Pacific Network for Global Change Research (APN) for a scientific base camp on low-carbon technologies (MOFA 2011a). Also, a separate regional technology cooperative institution, the Low Carbon Asia Research Network (LoCARNet), was newly established at the side event of the East Asia LCGP Dialogue in April 2012 in Japan. The goals of the network are to promote science-science collaboration among researchers and science-policy interaction between scientists and policy-makers. In establishing LoCARNet, the Asia-Pacific Integrated Model Project Team from the National Institute for Environmental Studies and the International Research Network for Low Carbon Societies (LCS-RNet) from the Institute for

Global Environmental Strategies cooperated and pooled expertise. It is noteworthy that the proposal to establish LoCARNet was made by the LCS-RNet which itself is a non-legally binding knowledge-sharing network that is composed of 16 research institutes in seven countries³⁷ under the initiative of the G8 Environment Ministers' Meeting (LCS-RNet 2012a).

With regard to technology cooperation interaction, the LCGP ranges from a north-to-south unidirectional flow to interactive "south-south-north collaboration" (LoCARNet 2012, p. 3). The LCGP promotes technology innovation cooperation among developed countries (MOFA 2011a; 2012b) by improving and disseminating the best available technologies and developing breakthrough technologies (Keidanren 2011b) which can translate into north-to-north interaction. What is noticeable is the category of developing countries with leapfrog development in certain technology areas. Leapfrog development countries can participate in the cooperative activities of both technology development and transfer with other developing countries, which represents south-to-south interaction. For this type of network cooperation, intellectual property matters are governed by LoCARNet in a way that research collaboration is to be made by researchers "whose research capacity and scientific knowledge are firmly grounded in their home countries" and the full ownership on the collaboration outcome will be enjoyed only by these participating researchers (LCS-RNet 2012b, p. 3); from which it can be seen that issues of sharing intellectual property under the LCGP are handled on a case-by-case and a voluntary basis like the APP (APP 2007a).

The second mechanism is the carbon-offset mechanism. The KP operates compliance markets in both cap-and-trade allowance markets and project-based markets for trading carbon offsets under strict mandatory regulations. Though the APP operates technology development projects, carbon offsets are neither numerically accounted nor connected to any carbon offset market mechanism. Japan created a new flexible mechanism, called the BOCM which has fully-fledged carbon offset standards in the same way that the Clean Development Mechanism (CDM) of the KP is equipped with three essential standards: i) accounting standards; ii) monitoring, verification and certification standards; and, iii) registration and enforcement systems (Kollmus et al. 2008).

³⁷ France, Germany, India, Italy, Japan, South Korea, and the UK (LCS-RNet 2012a).

However, its governance structure regarding project cycles and the strictness of overall standards are dissimilar.

Starting from 2013, the BOCM will be based on a high-level bilateral joint committee between Japan and the other developing country.³⁸ In the project cycle, the joint committee works as a coordinator between Japan and the partner country and identifies applicable methodologies for the project. Third party verifiers such as the International Organization for Standardization (ISO) will conduct both validation and verification of projects. Registration of projects and credit issuance are to be acknowledged and carried out by each government involved (MOFA 2012a). In view of that, the BOCM is said to have a decentralized structure as "a diverse, open and multi-layered market mechanism" (MOFA 2012c) in comparison with the CDM.

From the perspective of project eligibility, ³⁹ the CDM does not allow any Official Development Assistance (ODA) project-funding but the LCGP is against the norm of financial additionality. ⁴⁰ The LCGP involves development agencies such as the Japan International Cooperation Agency (JICA) as financial sources for projects, so the dividing line between donor-driven ODA financing and additional financial resources for climate change can be blurred. Concerning accounting standards, project-specific additionality ⁴¹ is an important condition that can determine project approval under the CDM. However, the BOCM does not use the concept of additionality and has attempted to replace it with performance standards such as positive technology lists, benchmark approaches, nationally appropriate mitigation actions (NAMAs)⁴², market share, and diffusion rates of technologies (MOFA 2012a). In the validation process, positive lists will be a substitute for additionality testing. In addition, due to procedural differences, separate capacity-building activities such as education and training tailored for the BOCM are planned for partner

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⁴² UNFCCC (2007).

With an expected operation launch in 2013, Japan has implemented feasibility studies in 28 countries since 2010 (MOFA 2011a) and held bilateral consultations with East Asian countries in 2011 (MOFA 2012a).

³⁹ Eligibility defines the conditions on which projects/activities are allowed to obtain emission reductions (MOFA 2012a).

⁴⁰ Additionality in the financial mechanism is a condition that determines whether financial resources are new and additional (UNFCCC 1992, Article 4) to existing ODA commitments in consideration of developing countries who fear the diversion of ODA to public funding for climate change (Porter et al. 2008).

^{41 &}quot;Reductions in emission that are additional to any that would occur in the absence of the certified activity" (KP 2007, Article 12 (5(c))).

countries by the Ministry for Economy, Trade and Industry (METI) from 2013, and on the measurable, reportable and verifiable (MRV) system⁴³ in Asia, Latin America and Africa by the MOEJ (MOFA 2011a; 2012a). Therefore, although the BOCM is similar to the CDM in its functions, credits are acquired in a more flexible manner, the process is more streamlined and methodologies are more simplified, which makes the BOCM disconnected to the UN-based offset market.

Moving onto the financing mechanism, financial tools for the LCGP are still being explored (MOFA 2012c). Neither the UNFCCC, the KP, or the APP had any initial permanent financial mechanism, although recently the Green Climate Fund of the UNFCCC was established and the KP has started to operate the Adaptation Fund. The LCGP is likely to start with no permanent financing mechanism; however, it will be able to use resources from domestic, regional, and international development banks and agencies such as the Japan Bank for International Cooperation, Nippon Export and Investment Insurance, the New Energy and Industrial Technology Development Organization (MOFA 2011a), JICA, the Australian Agency for International Development, the Asian Development Bank, and the World Bank. With regard to funding obligations, the LCGP encourages the participation of developing countries which have leapfrog developments, and it seems that these countries will provide some financial resources or bear the costs of participation, as in the APP. The design of the financial mechanisms of the LCGP is in line with the differentiation of obligation among developing countries and not between developed and developing countries; and funding will initially be dependent on voluntary contributions.

⁴³ UNFCCC (2007).

 Table 4-1
 Normative Position of the LCGP

Norm	Normative Dimension		Normative Position	
INOIIII			The KP	The APP
CBDR		Empowered Actors	Public governance	Public-private hybrid governance (√)
	Actors			Skewed representation of non-state
			Equal representation of	actors
			non-state actors as observers $()$	by civil society organization
				exclusion
		Differentiation of responsibility	Differentiation between	
			developed	No differentiation $()$
			and developing countries	
			Differentiation among	No differentiation
			developing countries $()$	
Pre- cautionary Approach	Priorities		Mitigation	Adaptation $()$
		Priority by GHG	by a quantified and national	by an aspirational and sector-based
		reduction targets	GHG emission reduction target	GHG intensity target
			as a single primary goal	as one of multiple goals
	Regulatory Approach	Flexible mechanism	Mix of command-and-control	Voluntary approach (√)
			and market-based approaches	
			i) by North-to-South	i) by South-South-North interactive
			unidirectional technology	technology development and
			transfer mechanism	transfer mechanism $()$
			ii) by connection to the UN-	
			based compliance carbon	ii) no connection $()$
			offset market	
			iii) by obligatory funding	iii) by voluntary funding
			mechanism	mechanism $()$

Source: The author on the basis of Hoffmann (2007) and other studies referred to in section three.

Note: Cells with a check mark $(\sqrt{})$ indicate the normative position of the LCGP.

4.5.4. Double-edged Meanings

Complementarity of the BOCM to the CDM?

The first functional aspect is the complementarity of the BOCM to the CDM. The LCGP can provide developing countries with sequestration projects⁴⁴ that have not been dealt with under the CDM. In addition, opportunities to develop and implement customized national mitigation policies and action plans are fostered, which is in line with what NAMAs pursue. The BOCM also reduces transaction costs by procedural simplifications, and the alleviation of eligibility can be an experiment to test alternative carbon offset design. The least benefited, Africa⁴⁵, is also included as a bilateral partner in the BOCM.

However, private entities in Japan are likely to divert their investments to the nationally-initiated BOCM which has similar but easier-to-use functions than the CDM. This diversion may have a negative impact on the financial mechanism of the UN-based climate change regime. The Adaptation Fund, financial source of the KP, is from a share of proceeds with the CDM (UNFCCC 2012), so the size and success of the Adaptation Fund is dependent on the extent of CDM utilization of Annex I parties in the second commitment period (Mace 2005). Therefore, there is a high chance for the financial flow from Japan to the Adaptation Fund to be reduced due to the BOCM. Furthermore, the relaxing of financial additionality to the ODA by the BOCM may discourage developed countries from adhering to the KP despite the mounting pressure for additional public funding on top of ODA financing. The BOCM also requires a separate learning process, which can engender a contentious time and resource capture of developing countries between the CDM and the BOCM in consideration of the limited capacity of developing countries. Whether the BOCM will be a complementarity or an embodiment of a better market mechanism to the CDM awaits more analysis.

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⁴⁴ The CDM does not accept nuclear energy projects and sequestration projects other than afforestation and reforestation projects (Kollmuss et al. 2008). Under the BOCM, Japan established forest protection projects with Japanese companies such as Marubeni Corp (Bloomberg 2011).

⁴⁵ The project distribution of both CDM and voluntary offset mechanisms leave the African continent least benefited behind (Corbera et al. 2009).

Technology or Knowledge-sharing?

The peculiarity of the technology mechanism of the LCGP resides in its linkage with the financial mechanism under the knowledge-sharing initiative of the "East Asia Knowledge Platform for Low Carbon Growth" through which stakeholders gather expertise on green investments, green industries and infrastructure investment, and green finance (LCS-RNet 2012b). This linkage is targeted to nurture knowledge-sharing between the technology and financial mechanisms on the one hand and between stakeholders on the other; particularly between researchers, policy-makers and scientists. This institutional interaction is interpreted positively with regard to norm construction and diffusion for a low carbon growth path.

However, putting a knowledge-sharing network at the center of the LCGP poses the question as to how the technology mechanism of the LCGP is to be implemented. Low carbon technology requires a wide array of technologies by area, development stage and technology holder. As the APP derives its legitimacy from an exclusive focus on low carbon technology development with eight specific areas untapped by the KP, the LCGP needs to show a specific and legitimate stance to contribute to technology development and transfer.

Regional integration or global fragmentation?

The third aspect of differentiation is with regard to the LCGP as a region-wide integrative action. The APP has no close institutional fit with regional institutions such as APEC, ARF, or EAS where the US presence is identified. Conversely, the LCGP attempts a link with the regional framework of the EAS that covers the East Asian region,⁴⁶ and the LCGP is to link with ASEAN-centered institutions. The establishment of LoCARNet was proposed at the 13th ASEAN Plus Three Environment Ministers' Meeting on October 19, 2011. The BOCM was discussed at the 17th consultation between ASEAN Economic Ministers and METI of Japan on August 13, 2011 in Indonesia. The LCGP seems to be an umbrella institution that draws together regional institutions in

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The initial members were the ten ASEAN countries plus China, Japan, South Korea, India, Australia, and New Zealand. Membership was expanded by the inclusion of the US and Russia as full members at the sixth EAS in 2011.

Asia. Furthermore, the linkage of the LCGP to the EAS, which includes two Japan-led institutions in the fields of trade and the environment,⁴⁷ also exemplifies institutional connections across fields through climate change.

However, this horizontal linkage does not halt there as the LCGP has links with numerous international institutions, ⁴⁸ and stretches to other regions through the African Union and the African Adaptation Program (MOFA 2011a). These complex linkages mean that the LCGP is more than a regional cooperation institution for climate change. Furthermore, the LCGP is neither hierarchically nor horizontally connected to the UNFCCC/KP. As the normative positions of the LCGP are tilted to those of the APP, its knowledge-sharing mechanism can spread APP-oriented norms, ideas, and practices to Asian partner countries. This means that, from the perspective of global climate governance architecture (Biermann et al. 2009), the LCGP retains some fragmentation elements in a conflictive manner to the UN-based climate change regime.

Section 6. CONCLUSION

This chapter has attempted to identify the position of the LCGP in terms of normative dimensions which range from the KP to the APP. From the analysis it was found that the LCGP is normatively adjacent to the APP. Despite its similarity of normative position, however, the political leverage of the LCGP does not seem to be at the same level as the APP which has exercised its influence with seven member countries in the Asia-Pacific region undertaking technology development activities. In terms of geographical coverage, the East Asian region and the African continent are within the reach of the LCGP. In terms of institutional interaction, the LCGP forms a horizontal network with a variety of institutions linked through the term of low carbon growth. Vertically, the LCGP is linked with an Asian regional organization, the EAS. In terms of working mechanisms, the LCGP is functionally comparable to the KP with its own carbon offset mechanism, knowledge-sharing

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⁴⁷ The Comprehensive Economic Partnership in East Asia and the East Asia Summit Environment Ministers Meeting.
⁴⁸ Linked institutions include the Technology Network of International Energy Agency, International Partnership for Energy Efficiency Cooperation, International Renewable Energy Agency, Global Earth Observation System of Systems, Global Climate Observing System, the APN, the Asia Pacific Adaptation Network, Global Superior Energy Performance Partnership, the World Bank, and the Asian Development Bank (MOFA 2011a).

platform, technology development and transfer mechanism, and supportive financing mechanism. These working mechanisms of the LCGP resonate in terms of functional overlap and normative contestation with the mechanisms of the KP. Accordingly, the strides made by the LCGP may have more impact on the fundamentals of global climate change governance than that of the APP. This leads us to make a cautious judgment that the LCGP may be a distraction to the UN-based climate change regime, and that this distraction signifies that normative contestation of an appropriate global climate change governance model has begun not just at a talk-the-talk level but also at a walk-the-walk level.

The LCGP is at an incipient stage, so winning normative contestation hinges upon whether the working mechanisms are to be further concretized and functioned, whether the institutional linkages are to play a regionally integrating role in Asia, and, lastly, whether the LCGP is to differentiate itself from other climate change institutions with sectoral or functional outcomes by a substantive reduction of carbon emissions. The institutional capacity of the UN-based climate change regime to be reflexive as a result of this distraction will also determine the future projection of global climate change governance. There are scrutinizing eyes on the on-going footprints of both the UN-based and the non-UN based state-led regional institutions.

CHAPTER 5 NORMATIVE CONTESTATION IN ACTION:

GENESIS OF INSTITUTIONAL FRAGMENTATION

Asian region ushered in the institutional fragmentation in global climate change regime by generating competing institutions outside the dominantly existent institution of the Kyoto Protocol sitting on the UNFCCC: the *Asia-Pacific Partnership on Clean Development and Climate* (APP) in 2005, the *East Asia Climate Partnership* (EACP) in 2008, and the *East Asia Low Carbon Growth Partnership* (LCGP) in 2012. Then, why are competing and overlapping institutions created beside the extant dominant institution? This puzzling question on the genesis of institutional fragmentation has met the theoretical explanations by international relation theories. However, a full answer has not come yet. Thus, this chapter explores the genesis and evolution of institutional fragmentation on the constructivist ground of normative contestation for strategic social construction. Results show that the APP was created by a norm entrepreneur as an organizational platform to embody normative contestation and diffuse competing normative interpretation and that the EACP and the LCGP are the emulation of the APP by the norm leaders to support the contestant interpretation of the climate change norms.

Section 1. INTRODUCTION

Once, the 1992 *United Nations Framework Convention on Climate Change* (UNFCCC) and the 1997 *Kyoto Protocol* (KP) were the only story-tellers of global climate change action. Particularly, the KP was acclaimed for such dramatic story-telling that attracted the audience with its audaciously stringent and flexible regulatory measures to mitigate greenhouse gas (GHG) emissions. National GHG emission reduction obligation was imposed onto 37 developed countries and the European Community with an average of five per cent reduction target against 1990 levels and a short-term 2008-2012 time table. Though some, particularly the United States of America (US), were reluctant

to ratify the KP for strict regulatory measures and differentiated participation cost between developed and developing countries, most of the audience welcomed to be a part of the dramatic pathway, and finally the KP came into effect in 2005. At this juncture, surprisingly, the US gave birth to a new story teller, the *Asia-Pacific Partnership on Clean Development and Climate* (APP) with a different rule of participation and a differentiated functional target. The US saw the promising side of the APP to weave a complementary story on climate change action with energy sectoral low carbon technology development by comprehensive participation of both developed and developing countries. Yet, many literatures dubbed the APP as a competing story-teller to distract the ears and eyes of the audience (McGee and Taplin 2006; Lawrence 2007).

The appearance of the APP signaled institutional fragmentation in global climate change regime. The institutional fragmentation did not stop here in the Asian region. South Korea, which is also a founding member of the APP, created the *East Asia Climate Partnership* (EACP) in 2008 with a new policy vision of green growth in response to climate change. After that, Japan announced its non-participation in the second commitment period of KP in 2011 and instead in 2012 created the *East Asia Low Carbon Growth Partnership* (LCGP) for a competing story-telling with technology-oriented low carbon growth (Oh and Matsuoka 2013). Besides, numerous bilateral agreements on climate change among Asian countries have formed an intricate web of institutional complexity in the Asian region and triggered further the institutional fragmentation at the global level despite the existence of the UNFCCC/KP.

This phenomenon of institutional fragmentation add a question on the creation and development of international institution in a given issue area. Why is a competing institution created notwithstanding the existence of an already dominant institution in a given issue area? Why do competing institutions continuously emerge in climate change issue area, particularly, in the Asian region? Currently, logics behind the creation of competing and overlapping institution outside the dominantly extant institution have been neither comprehensively nor fully explicated theoretically. Accordingly, using the normative contestation for strategic social construction on the constructivist theoretical foundation, this chapter unfolds the genesis of institutional fragmentation. To begin with,

this paper explores international relation theories on the international institution and previous theoretical approaches to the genesis of institutional fragmentation mainly with the case of the APP. Reviewing both promise and limit of previous approaches, this paper applies the constructivist logic of norm entrepreneur's normative contestation for strategic social construction and delineates the creation of the APP, the EACP, and the LCGP besides the UNFCCC/KP in the climate change issue area. This chapter ends with the implication on the meaning of, the consequence of, and the response to institutional fragmentation.

Section 2. Institutional Fragmentation and Climate Change Regime

In world politics, when hegemony withered away, an alternative cooperative mechanism to the power-oriented order needed to sit on a vacant chair of global order. Then, the wind of institutionalism blew, and the institution occupied that seat. International institution has functioned as a provider of symmetrical information, a reducer of transaction costs in negotiation and bargaining, an enhancer of credible commitments, and a focal point of patterning legal liabilities (Keohane 1984). Regime is a special name of issue-specific institution (Young 1994). If a certain issue is recognized as a global problem and a condition surrounding the issue fosters international negotiations among actors involved, the negotiations produces an institution/regime in the form of treaties, conventions, and international agreements (Mitchell 2010). Institutional institution/regime, once established, takes a regulatory ascendance ladder by sitting a series of more specific and stringent institutional arrangements on the existing framework arrangement. Thus, international institution/regime exits and develops in a one-to-one correspondence to a singular global issue. By the issue-institution match, international society inherently having diverse issue problems became replete with institutions, which is characterized by institutional multiplicity, complexity, density, proliferation, and fragmentation.⁴⁹ Thus, scholarly concern moved from the core to the boundaries of an institution in interaction with the other institutions on an overlapping subject matter. Because

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⁴⁹ Ivanova and Roy (2007), Alter and Meunier (2009), and Biermann et al. (2009).

the interaction between two institutions can influence the effectiveness of each institution, the typology, consequence, and management of dyadic institutional interaction have been explored (Gehring and Oberthür 2009; Oberthür 2009). Then, a focus moved onto institutional/regime complex, "a network of three or more international regimes to a common subject matter" at an overarching systematic level (Orsini et al. 2013, p.29). Importantly, the boundary of regime complex is defined by a specific subject matter, not an issue area. If issue areas indicate sets of issues "dealt with in common negotiations and by the same, or closely coordinated, bureaucracies", the subject matter is "often narrower in scope than an issue area" (p. 30). 50 The singular issue area draws a boundary of an individual regime, and the subject matter can invite an overlapping of different issueoriented regimes. Thus, the regime complex has a horizontal, overlapping and indecomposable structure (Raustiala and Victor 2004) and harbors conflictual or synergistic nature of the linkage among the institutions at the center of a specific subject matter (Orsini et al. 2013, p.32). Because different institutions emerge in response to different issue problems, an appropriate response to regime complex is a coordination among the concerned institutions (Zürn and Faude 2013). A division-of-labor through functional, sectoral, or spatial differentiation among institutions is suggested to bring out positive coordination results to institutional/regime complex (Oberthür and Stokke 2012).

Meanwhile, at the overarching level of analysis, a new concern arose on the institutional complexity within a given singular issue area, and this is termed institutional fragmentation. This is a new and different ontological entity from the institutional fragmentation on a subject matter by regime complex. It is because the logic of one-to-one match between a single institution/regime and a single issue area fails by the creation of multiple and overlapping institutions besides the central institutional arrangement in the given issue area. This new ontological entity opens a door for diverse epistemological and methodological approaches, so the institutional fragmentation is inevitably susceptible to "conceptual richness" (Zelli and van Asselt 2013, p.3). Overarching system of multiple institutions in a given issue area is defined as global governance architecture, and the

⁵⁰ Definition of issue areas are originally quoted from Keohane (1984, p.61).

institutional fragmentation broadly refers to a phenomenon that international policy domain in a singular issue area is marked by "a patchwork of international institutions" with divergent character, constituencies, spatial scope, and subject matter. In this regard, the first scholarly step was made in grasping the degree of institutional fragmentation with criteria- and typology-making (Biermann et al. 2009, p.16). Yet, the fragmentation study has waited for moving from the typological stage of assessing fragmentation degree to the stage of exploring the genesis, consequences, and management of institutional fragmentation. In parallel, a theoretical turn has come beyond "linguistic turn" (Zelli 2011; Zelli and van Asselt 2013, p.3).

The institutional fragmentation is exemplary in climate change issue area. The climate change regime firmly grounded itself in the *United Nations Framework Convention on Climate Change* (UNFCCC), which was agreed in 1992 to stabilize greenhouse gas concentrations on the basis of the first assessment report of the Intergovernmental Panel on Climate Change (IPCC) that scientifically proved human impact on climate change. The subsequently agreed *Kyoto Protocol* (KP) was a reinforcing institutionalization of a singular climate change regime. However, right after the KP became effective in 2005, the *Asia-Pacific Partnership on Clean Development and Climate* (APP) was created in July 2005 by the initiatives of the US and Australia, both of which did not ratify the KP, and the participation of China, India, Japan, and South Korea as founding members. Notably, the APP is interpreted as a competitor to the UNFCCC/KP (van Asselt 2007), which marks a start of institutional fragmentation in the climate change issue area. Under a snapshot picture of numerous institutions densely living in the climate change issue area, there it says, 'the global governance architecture on climate change is cooperatively fragmented' (Biermann et al. 2009).

However, the institutional fragmentation has not stopped since picture-taking. Particularly, Asian region watched the creation of the *East Asia Climate Partnership* (EACP) by South Korea in 2008 and the *East Asia Low Carbon Growth Partnership* (LCGP) by Japan in 2012. Besides, numerous bilateral agreements on climate change between the Asian countries have been formed besides the multilateral cooperative institution of Kyoto Protocol. This observation leads us to pose two questions. Why did the APP, an overlapping or competing institution to the dominantly existing

institutions of the UNFCCC/KP, emerge? This question fleshes out the next question. Why do overlapping or competing institutions continuously emerge in climate change issue area, particularly, in the Asian region? These questions relate to the genesis of the institutional fragmentation, on which the theoretical exploration just started. Accordingly, with these puzzling questions, the next section explores previous theoretical approaches to the origin of the institutional fragmentation mainly with the case of the APP.

Section 3. Previous Studies

The question of why a competing institution is created in a given issue area just started being touched by three distinctive international relation theories (IRTs): neo-realism, neo-liberal institutionalism, and constructivism. In neo-realist viewpoint, the structure of world politics is anarchistic without a central orderer, and this anarchical structure conditions the rationality of nation states to pursue higher relative gains over the others (Waltz 1979). Any institution set up by the agents cannot be a substitute for the anarchy but a "reflection of the distribution of power in the world" where the interests of hegemonic nation state are exercised, reflected, and reproduced (Mearsheimer 1995, p.7). Thus, the institution lives from its birth to death with the intention of hegemon. If the institution cannot work as the hegemon's power-carrier to diffuse its own plots, then, an expected path is that the hegemon exits negotiations, discards the extant institution, and sets up a parallel and competing institution by exploiting its agenda-setting power and maneuvering of weaker states (Benvenisti and Downs 2007). In this viewpoint, the APP is explained to be driven by the skewed distribution of abundant coal resources in the Asian region and the resultant interest in clean coal technology development (Kellow 2006). Along this line, national economic dependence on coal resources and the geographical distribution of coal across the states in the US are explicated to relate to the discontents with the Kyoto Protocol's uniform regulatory measures that potentially endanger coal industry and coal-dependent economic growth and the creation of the APP with sectoral focus on clean coal technology development (Skodvin and Andresen 2009). Yet, above all, behind the

emergence and continuation of legitimacy-deficient mini-lateral forum like the APP other than the UNFCCC/KP in climate change issue, necessarily, there should be hegemonic nation's power (Karlsson-Vinkhuyzen and McGee 2013).

In neo-liberal institutionalism, despite an anarchical political structure, cooperation is possible by the formation of institution which facilitates political exchanges through the reduction of transaction costs of negotiating, monitoring, and information-collecting and -sharing (Keohane 1984). The institution with its own internal hierarchy can substitute the anarchy within the boundary of a certain issue area and elicit cooperative agent behaviors. Despite some difference, the neoliberal institutionalism together with the neo-realism stands on a function-oriented ground that institution is created by the rational and interest-maximizing actors in the process of liquidating the demand-andsupply of institution and is originated from the design efforts for expected consequences (Mattli 1999; Pierson 2000b). On the step of both function-oriented approach to the institution, the creation of additional and multiple climate change institutions are attributable to the diverse problems associated with climate change issue, the diverse interests of the actors, and the different national or regional capabilities on the basis of divergently trodden-paths and organizational practices. Particularly, the APP is described as a club-type institution functionally intended to produce club goods of low emission technology development cooperation (Keohane and Victor 2011). In this approach, the term, diversity, dilutes a negative connotation of fragmentation. Besides, in the borrowing of non-functional approach to the creation of a countervailing institution in renewable energy issue area (Van de Graaf 2013), the creation of the APP can be explained to be driven by institutional capture and hedging; if the UNFCCC/KP are perceived as being change-impermeable due to institutional capture by particular interests of certain nation states and interest groups, then dissatisfied actors create a new competing institution, the APP, on the basis of domestic preferences. This institutional capture is the source of abandoning the existing path-dependent institution and adding a new institution. Important is not the institutional capture itself but the perception of relevant actors on the capture.

Meanwhile, in the constructivist approach, actor forms a mutually constitutive relation with

political structure; the actor interprets the structure and forms his/her identity; this identity is subjective, stable, and "inherently rational" (Wendt 1992, p. 397). This identity determines the actor's positional willingness to support, inaction, or change the structure and induces a certain action strategy. Institution, which is a process of social construction by the instantiation of actors' identity through practices, has "inherently discursive dimension" that is reflexive of the concerned actors' discursive, sociological, and ideational realm of rationality (Wendt 1987, p. 359). In this vein, the creation of international institution is grounded on norms, ideas, and perception. Thus, the creation of a competing institution can be expounded by ideational contestation. Many literatures compared the APP to the UN-based climate change umbrella and extracted normatively and discursively competing characteristics of the APP in terms of issue-specificity, principle of equity, precautionary approach, procedural legitimacy on the participation of environmental nongovernmental organizations (NGOs), and multilateralism in conjunction with universal participation.⁵¹ Thus, the creation of the APP is the representation of a "counter norm" (Karlsson-Vinkhuyzen and van Asselt 2009, p. 205). As a step further from normative comparison, the creation of the APP is attributable to the incongruence between climate change norms and the Australian domestic conditions and interests in economic growth and to the embodiment of Australia and the US' effort to construct an alternative process of climate governance (Stevenson 2009). Thus, constructivist approach explicates the creation of the APP by ideational contestation and globaldomestic normative incongruence.

These IRT-based explanations have competed and complemented explaining the creation of competing institutions, but they do not suffice to clarify the creation of a competing institution. The neo-realism approach cannot explain the creation of normatively different aspect of competing institutions and similarly patterned partnerships that Japan and South Korea erected besides the USinitiated APP against the UNFCCC/KP. Also, having power to establish an institution is one thing, and creating a competing institution outside a prevailing one is a different matter. 52 The function-

van Asselt (2007), Hoffmann (2007), McGee and Taplin (2009), McGee (2011).
 In case of biodiversity issue area, the US does not even participate in the Convention on Biological Diversity and any resultant related Protocols.

oriented neoliberal institutionalism approach is weak in explaining the creation of institutions that are perceived to be legitimacy-deficient or normatively-conflictive in relation to the existing institution. Also, in the non-functional approach, what determines the perception of institutional capture is not only a particular interest but also an ideational element such as principles and ideologies. In this regard, the constructivist approaches have filled up explanatory lacuna of the rational approaches by exploring the ideational aspects of competing institution in comparison with an existing institution and explicating the domestic normative incongruence as a source of the creation of a normatively contestant institution. However, also, normative contestation is one thing, and the normatively competing institution-building is the other. The fact that the normative contestation has occurred indicates that the existing norms were neither powerful nor internalized yet to work as the logic of appropriateness, which renders us to ask why the existing global norms were not internalized. Also, the creation of normatively contestant institution leads us to ask why the normative contestation was not resolved within the existing institution. Furthermore, the contestation is not at the norm-versus-norm level but at the policy range level. The current constructivist approach is in lack of explaining the causal process of why and how normative contestation occurs and leads to the creation of a competing institution besides the existing institution.

These theoretical promises and limitations have four implications to ponder over. Firstly, the genesis of institutional fragmentation cannot be detached from interest-oriented strategic actors. The negotiation, establishment, and implementation of institution take huge costs, so non-participation in the existing institution and creation of additional institution cannot be born without power, material capability, and strategic bargaining. Secondly, the genesis of institutional fragmentation cannot be apart from normative and ideational dimension. The constituents of the institution are not only materials and procedural rules but also ideational elements such as norms (or principles), ideology, discourse, and culture that shape the appropriateness of behaviors. Thus, institutional fragmentation necessarily deserves a look on the contestation of appropriateness. Thirdly, the emergence of new institution is not only consequence-oriented but also appropriateness-oriented. That is, newly emerging institution is originated from an existing institution as well as an

expected future function. Fourthly, both rational approaches and constructivist approach stand in limping leg to explain the creation of competing institution. Thus, a proper way is to make the strategic agent and the social constructive agent get married and bear a new explanatory mechanism. On the basis of these implications, this chapter hypothesizes that the emergence of competing institution in a given issue area is the "strategic social construction" that combines the constructivist's "contested nature of normative change and normative influence" with interest-oriented rational choice in three specific ways (Finnemore and Sikkink 1998, p.914). The next section unfolds the logic of normative contestation to analyze the institutional fragmentation in climate change issue area.

Section 4. ANALYTICAL FRAME

Social construction implicates a mutually-constitutive relation between institution and agent.⁵³ The institution is neither statically given to nor separable from the agents/actors but dynamically shaped and instantiated by the interpretation and the practices of the agents (Wendt 1987). The substantive elements of the institution are collectively-shared norms and ideas. Agents recognize a structure, conceive their identities through social interactions with other agents within the structure, interpret norms and ideas in their own way, and shape their own interests (Wendt 1995). The accreted elements can work as a deterministic logic of appropriateness to influence the agent behaviors (March and Olsen 1996). However, by the change of the agents' interpretations and instantiating practices, institution can be reconstituted or sometimes de-constituted. If the constructivism meets the agent acting by the logic of expected consequences as well as the logic of appropriateness, the agent becomes not only a reasoned selector among conflictingly appropriate behaviors but also a strategic player to construct a new institution.⁵⁴ In this regard, "strategic social construction" refers to processes where "actors strategize rationally to reconfigure preferences, identities, or social

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⁵³ Institution is a "structure of identities and interests" (Wendt 1992, p.399).

⁵⁴ The constructivism stands in the middle ground in-between not only structuralism and individualism but also materialism and idealism (Adler 1997).

context" (Finnemore and Sikkink, 1998 p.888).

Norms, defined as the standards of "appropriate behavior", are the constituents of the international institution (Finnemore and Sikkink 1998, p. 891). Norms have a dual quality of structuring agents and being constructed by the agents (Wiener 2007). On the one hand, the norms define "a range of legitimate policy options" that works as "structural constraints" to actor behavior (Klotz 1995, p.461-462). On the other, the norm is always laid under re-affirmation by the agents' interpretation, sometimes, "conflictive interpretations" (Wiener 2004, p.212). Thus, robust norms work as the logic of appropriateness, and the actors have a high conformity to the norms, exactly speaking, to the range of legitimate policy options. However, if the international norms define the range of behavioral choice too narrowly, the actor is likely to experience a collision between the norms and the interests and to transform him/herself into a fighter against the structural constraints (Klotz 1995). The agent, being a norm fighter, re-reinterprets the international norms and the too narrowly defined range of legitimate policy options as inappropriate and then presents "competing values and understanding of what is good, desirable, and appropriate", and this is when and where strategic normative contestation burgeons at the global level (Finnemore 1996a, p.342).

The normative contestation occurs only by the existence of a norm entrepreneur who unfolds three types of strategic behaviors to insert competing normative claims into normative space where existing claims dominate. The first tactic is issue-framing to divert the existing understanding of the issue in a new way. Secondly, deliberately inappropriate acts are organized to explicitly represent the normative contestation. Thirdly, the norm entrepreneur constructs a standing "organizational platform" through which new normative interpretations are promoted with specific objectives and agendas (Finnemore and Sikink 1998, p. 899). New norms themselves have "no real staying power" (Checkel 1999, p. 552), so, through this organizational platform with resources and leverage, the norm entrepreneur utilizes persuasion mechanism to lead not only critical states to become norm leaders but also weak or developing countries to re-think what has been considered appropriate as inappropriate. Then, there comes a norm tipping point when one-third of the total states adopt the new normative claims or when critical states endorse them. Then, the competing normative claims

come to cascade through socialization whose distinctive indications are the emulation of heroic practices, the praise for norm conformance, and the ridicule for normatively deviating activities. Particularly, the strategic behaviors of the norm entrepreneur contagiously spread. Also, the norm entrepreneur(s) forms a network with international organizations, and norm leaders activate themselves as agents who persuade others to accept new norms and policies. The contestant normative claims are institutionalized in international law, rules of multilateral organizations, and bilateral foreign policies. Then, finally, the normative contestation is liquidated in a way that the competing normative claims displace the existing ones and work as a new logic of appropriateness that harbors no normative disputes (Finnemore and Sikink 1998). This logic of normative contestation can serve as a good window to look at the norm entrepreneur's strategic actions to widen the range of legitimate policy options and to create a competing institution. The next section will delineate the Asian agents' normative contestation on climate change norms and the creation of a competing institution in climate change issue area.

Section 5. ANALYSIS

There are three founding principles of the 1992 UNFCCC working as normative essentials in the issue area of climate change, and they are i) global problem of climate change, ii) principle of equity, and iii) precautionary approach (Biermann et al. 2009). Firstly, an ultimate objective, which defines the range of cooperative commitment target, is the stabilization of GHG concentrations in response to the global problem of climate change. This objective is based on international scientific consensus by the first and particularly the second assessment report of the Intergovernmental Panel on Climate Change (IPCC) that explicated the causal relation between human activities and global warming and problematized climate change.⁵⁵

Principle of equity is well embodied in "common but differentiated responsibilities and

⁵⁵ The first assessment report of the IPCC served as a basis to establish the formal negotiation process of Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC), and the second assessment report provided an evidence of discernible human impact on global warming (IPCCFACTS 2013).

respective capabilities" (CBDR) which has two dimensions of 'common' and 'differentiated' responsibility of sovereign states (UNFCCC 1992, Article 3(1)). The 'common' dimension indicates that global public goods are at risk so that international cooperation with universal participation is necessary. The 'differentiated' responsibility dimension renders burden to the rich on the ground of polluter-pays-principle (or historical contribution to problems) and ability-to-pay (Stone 2004). The CBDR defines the range of legitimate participant in the commitment, and the UNFCCC allocated the cost of burden-sharing mainly to industrialized developed countries which are listed as the Annex I parties. Non-Annex I parties, equivalent to developing countries, are exempted from any obligatory commitments (UNFCCC 1992, article 4(2)).

Meanwhile, *precautionary principle* means that, to the yet-coming threat of harm, regardless of the scientific uncertainty, action is prescribed and imposed in a mandatory manner. This principle comprises four dimensions of i) threat, ii) uncertainty, iii) action, and iv) command (Sandin 1999). The precautionary approach under the UNFCCC defines legal-binding mitigation commitments as legitimate and actionable policy options without a full scientific certainty (UNFCCC 1992, article 3(3) & 4(2)). Specification of commitments peaked by the dramatic adoption of the 1997 Kyoto Protocol (KP) that mandatorily imposes a national emission reduction obligation with a quantified target and a 2008-2012 time table to thirty seven Annex-I parties against the problem of climate change (KP 1997, article 3). However, from the beginning process of the principle-driven negotiation on the range of policy options, the US formed normative contestation.

5.5.1. Normative contestation within the UN-based negotiation venue

On the ground of international process of problematizing climate change by science-based epistemic communities, the afore-mentioned normative essentials appeared and underwent definitional stage for right-kind commitments in the 1989 Noordwijk ministerial meeting and later in the 1990 Bergen Conference on Sustainable Development where particularly the quantitative target-setting for emission reduction by industrialized countries was debated. Unlike most European countries together with Canada, Australia, and New Zealand, the US' administration with Republican

presidency in the late 1980s and the early 1990s had a sulky face with regard to domestic emission reduction target and time-table approach by industrialized countries (Bodansky 2001). The US was the only one of two reluctant nation states in setting a domestic emission reduction target out of member countries of the Organization for Economic Cooperation and Development (OECD). On the ground of its previous sponsorship on climate system research and IPCC establishment, the US preferred scientific research approach to the target & time-table approach (Depledge 2005). At the national level in the US, there were mobilizing activities by conservative think tanks with resources, publication capacities, scientific expertise, and significant venues to entrepreneur skeptics on whether climate change is real problem. These activities were successful to re-construct the previously problematized global warming issue as 'non-problematic' issue in the 1990s (McCright and Dunlap 2000). At the international level, from the first to the fifth session of the INC/FCCC, the US took a position to oppose the internationally-defined target and time-table (Bodansky 1993). Despite the reluctant stance, because the UNFCCC drew only founding principles of the CBDR and precautionary approach and layouts and relegated negotiation on specific commitments to subsequent legal instruments, the US ratified it in 1992.

In 1993, a democratic party with environment-friendly position seized the power, which aroused an expectation that the US would exercise leadership in the international climate change negotiation. At the national level, Clinton administration proposed an energy tax, measured by British Thermal Unit and taxing on all fuel sources on their heat content, as a way to reduce GHG emission and to raise budget. Yet, this proposal failed to pass the Congress of democratic majorities (Erlandson 1994). Under this domestic condition, the democratic administration replaced tax-based climate action with technology-oriented, energy-related, and public-private partnered approaches (White house 2013). In the international scene, the US attempted to broaden the 'action' dimension of precautionary approach other than the target and time-table at the tenth INC/FCCC held in 1994, half a year before the first Conference of Parties (COP) to the UNFCCC;⁵⁶ the US suggested "common actions" to incentivize and normatively develop the cooperation on low-carbon and

⁵⁶ INC/FCCC was firstly convened in February 1991 to prepare for effective framework convention on climate change with appropriate commitments and related instruments (INC/FCCC 1991a).

efficient-energy technologies by Annex I parties and to bring out both public and private sectors in technology-related policy making (CAN 1994). In the 'mandatory' dimension, the US insisted flexible approach (McGee and Taplin 2009). Meanwhile, regarding the CBDR, the US attempted to re-interpret the 'differentiated responsibility' dimension and broaden the range of the GHG emission reduction responsibility-bearer; the US emphasized the "broader leadership" by further differentiating the developing countries by "the more advanced developing countries" at the tenth INC/FCCC (CAN 1994). However, the result of the first COP (COP-1) to the UNFCCC (so-called Berlin Mandate), held in 1995, indicated that only the developed countries, classified as Annex I parties, are to be under the obligation on the basis of historical contribution to climate change; also, the Annex I parties' setting of quantified reduction target within specific time-frames was defined as the range of legitimate policy option; the commitments by the Annex I parties were to be institutionalized in the form of the Protocol by the proposal of the Alliance of Small Island States.⁵⁷ Luckily, normative re-interpretation on the mandatory dimension was resolved by the COP decision to design a pilot phase for activities implemented jointly among Annex I Parties and with non-Annex I Parties. 58 Yet, at the COP-2 to the UNFCCC in 1996, the US expressed that, while the international scientific process by the IPCC provides the best science to tell us a discernable human impact on climate change, the international policy process by the UNFCCC harbors shortcomings. With regard to the CBDR, the US emphasized the participation of all countries of both developed and developing countries. In the 'action' dimension on the precautionary approach, the US recommended that the target-setting needs to be binding but realistic and verifiable within a medium-term boundary, and in the mandatory dimension, the US explicitly opposed mandatory policies and measures and seek flexible and cost-effective market-based mechanism (Wirth 1996).

Noteworthy is that the environment-friendly Clinton administration faced the Congress under the Republican control by election result in November 1994. In a series of international negotiation toward the Protocol with a binding target and time-table, several months prior to the

⁵⁷ For reference, see paragraph 1(d), 2(b), 2(a), and 5 of the Decision 1/CP.1 (UNFCCC 1995).

⁵⁸ By Joint implementation, one developed country acquires credit and meet the GHG emission reduction target by participating in the project from which emission is reduced in the other developed country. See also, Decision 5/CP.1 (UNFCCC 1995).

Kyoto conference, the Senate Resolution 98 of the US Senate (so called, Byrd-Hagel Resolution) was passed in July 1997, explicitly elucidating the US contestant position against any treaty that would i) impose mandatory GHG emission reduction for the US without also imposing such reduction for developing nations or ii) result in serious harm to national economy (Senate 1997). Under this context, on October 17, 1997, the US formed a bilateral climate change pact with Argentina, which indicates the Clinton Administration's position on international climate change regime.⁵⁹ The US position was elucidated by the President Clinton's announcement that re-affirms "the problem (climate change) is real" scientifically and contains three normative elements. Firstly, with regard to 'action' dimension of the precautionary approach, the US would commit to the binding target and 2008-2012 time-table. In the 'mandatory' dimension, the US supported flexible mechanisms of joint implementation and international emission-trading system, because these market-based regulatory approaches would be conducive to the environment and the economic growth of developing countries. Secondly, on the CBDR, sticking to the further differentiation of more advanced developing countries, the US would not bear binding obligation without the meaningful participation of key developing nations (Clinton 1997). Noteworthy is that the US' support of target & time-table and further differentiation of developing countries is basically driven from its support of international emission-trading system; target & time-table is a requisite to cap (or limit) the emitted amount of pollutants in emission-trading; and the number of participants determines the effectiveness and the extent of leakage of emission-trading system.

This normative position of the US was led to the negotiation of the Kyoto Protocol (KP) at the COP-3 in 1997 in Kyoto, Japan. Firstly, reflexive of this US' effort to re-define 'action' and 'mandatory' dimensions of the precautionary approach, the KP, on the top of the uniform emission reduction target & time-table, added the flexibility package of emission trading, by which Annex-I parties are allowed to use certified emission reductions from project activities in developing countries to meet their reduction commitments (KP 1997, article 12(3(b))). However, developing countries, supportive of the developed countries' leadership role in domestic emission reduction,

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⁵⁹ The US and Argentina signed the Presidential Declaration of Bariloche.

were recalcitrant to the flexible mechanism, so the flexible mechanism was to be "supplemental to domestic action" (KP 1997, article 6(1(d))). Secondly, concerning the CBDR, the US's further differentiation of developing countries in the emission reduction target-setting was not resolved, because there was fierce resistance by Group of 77 (G77), representing the position of developing countries, against any imposition of commitments to developing countries within the UN negotiation process (Bodansky 2001). However, this normative contestation on the CBDR did not disappear. At the COP-4 in 1998, Argentina, being the US' ally through bilateral climate change pact, suggested voluntary commitment of adopting the GHG emission target and time-table, which signified a meaningful, though voluntary, participation of developing countries. Later at the COP-5 in 1999, Argentina made its plan of national voluntary commitment through an intensity target which means emission reduction per unit of gross domestic product (GDP). Thus, the total emission amount changes by the annual GDP growth and differs from the KP's absolute and fixed reduction target (Bouille and Girardin 2002). The proposal of voluntary commitments for meaningful participation of developing countries, however, did not find a place in the series of UN-based negotiation till the COP-6 in 2000 by the strong opposition from the G77/China.

5.5.2. Normative contestation in non-UN negotiation venues

During the time the KP awaited the ratification from member states after its adoption in 1997, the CBDR and the precautionary approach went through normative contestation by the Republican presidency of the US. In 2001, the then president, George W. Bush, explicitly announced that the US has no intention to abide by the KP by framing the KP as a "flawed treaty". With regard to the CBDR, the US again called for further differentiation of cost-bearer among developing countries; the more advanced developing countries such as China and India need to take the cost of mitigation on the basis of future contribution to problems. Also, at this time, the US walked head-on into the 'uncertainty' dimension of the precautionary approach in the first place by questioning the scientific proof of causality between manmade carbon emission and climate change. Then, in the 'action' dimension, the US pursued technology development as an appropriate mitigation action rather than

target & time-table (White House 2001). Investment in development and transfer of low carbon technologies is grounded on no-regrets principle that justifies action for economic reason in the face of scientific uncertainty (Hoffmann 2007). Furthermore, technology development also legitimizes comprehensive participation of both developed and developing countries.

After the formal announcement of non-ratification of the multilateral cooperative treaty of the Kyoto in 2001, the US introduced its plan to set business-as-usual 18 % GHG intensity reduction target by 2012 on February 14, 2002 (White House 2002a). This target, once already shown in the Argentina's voluntary commitment, is an alternative approach to the fixed GHG reduction target. The GHG intensity measures the GHG emissions per economic activity or per unit of GDP (Olmstead and Stavins 2006, p. 36). Notable is that the GHG intensity approach is a complex of normative contestation on the CBDR and the precautionary approach. Firstly, it implies that an effective national action to climate change is possible without harm to economic growth. Unlike the fixed national GHG reduction target which accompanies a trade-off between GHG mitigation action and economic growth, the GHG intensity target is described as 'neutral' to economic growth and 'dynamic'. Secondly, the manner that 18% of GHG intensity reduction goal is pursued is on a voluntary or pledge-and-review basis. Thirdly, intensity target can be attained through cleaner technology adoption, sequestration, and market-based incentive mechanism. Fourthly, because the GHG intensity target is neutral to the economic growth, not only developed countries but also developing countries are implicated to pursue the intensity approach (White House 2002a).

Under this GHG intensity approach, the US unfolded institutionalization activities in two levels: Clear Skies Initiatives at the domestic level and Global Climate Change Initiative at the global level. Clear Skies Initiatives intends to apply market-based approach to air pollution to "modernize" the command-and-control system of the Clean Air Act at the center of the power plant emissions (White House 2002b). In order to meet the Initiatives that require a 70 percent reduction of sulfur, nitrogen and mercury pollutants from power plants by the year 2018, what was launched in 2002 is Clean Coal Power Initiative (CCPI) that provides public-private co-financing for new clean coal technologies (NETL 2013). Carbon emission reduction is not a direct target but a side benefit of

technology application of, for example, coal gasification or carbon capture technologies to the coal power plants. Then, in 2005, Energy Policy Act (EPA) of 2005 stipulated voluntary commitments from significantly energy-consuming industrial sectors to reduce energy intensity (EPA 2005, Sec 106). The technical criteria for the CCPI are set forth in the EPA of 2005: the coal-based gasification technology projects will receive at least 70 percent of the government financing such as gasification combined cycle, gasification fuel cells and turbine combined cycle, gasification coproduction, hybrid gasification and combustion (EPA 2005, Sec 402(b)). This has provided for the sector-based intensity target approach.

Under the Global Climate Change Initiative, the US intended to integrate the US domestic goals and policies with those of other nations. The US started forming bilateral partnerships on climate change (McGee and Taplin 2008). In February 2002, the US and Australia formed the Climate Action Partnership, and Australia elucidated its position to support the US's climate change actions to boost new technology to mitigate climate change in consistency with economic growth (AG 2002). Along this line, in June 2002, Jon Howard of Australia formally announced in Parliament that Australia would not ratify the KP (POA 2002). Australia also reinterpreted the 'differentiated responsibility' dimension of the CBDR by focusing on future contribution to climate change by developing countries apart from historical contribution by developed countries (Stevenson 2009). The GHG intensity approach was re-affirmed in the Joint Statement on Enhanced Bilateral Climate between the US and South Korea (DOS 2002a). The US formed the High-Level Consultation on Climate Change with Japan in 2001 and at the second Consultation meeting shared a common position in three normative dimensions; in the 'action' dimension of precautionary approach, they emphasized research and development in climate-related science and technology; in the 'mandatory' dimension, market mechanism was pursued; and, in the 'differentiated responsibility' dimension of the CDBR, they support the participation of all countries, including developing countries. Particularly, they tried to make developing countries engaged in the alternative negotiation venues where developed countries have a salient negotiation power such as bilateral consultation

⁶⁰ Energy intensity refers to "the primary energy consumed for each unit of physical output in an industrial process" (EPA 2005, Sec 106(b)).

meetings, G8, International Energy Agency (IEA), and World Summit on Sustainable Development (DOS 2002b). Notably, the G8/G20 is understood as a separate international negotiation forum, having the US as one of the members and forming its own climate change package deal on the basis of no-regrets approach to the abatement of GHG emissions outside the UN process (Carin 2011).

As a step further, the US together with Australia initiated the establishment of the Asia-Pacific Partnership on Clean Development and Climate (APP) to work as a standing organizational platform to diffuse the contestant interpretations of norms at the regional level. The APP made an official appearance in 2005 for facilitating cooperation on the investment, development, deployment, and transfer of low carbon technology among Asia-pacific partners. To be noteworthy is that year 2005 has two implications; by the ratification of Russia, the KP became effective; and, negotiation on the commitments of Annex I parties in the second commitment period was to start at the COP-11 in 2005 in accordance with the article 3(9) of Kyoto Protocol that says the consideration of the subsequent commitments shall commence at least seven years before the end of the first commitment period, the year 2012. No doubt, international society was shock-ridden by a sudden appearance of the APP comprising six founding members: the non-ratifying nations of the US and Australia to KP and the ratifying nations of Japan, China, India, and South Korea. Under this actor constellation, none of the member states in the APP was under the nationally allotted emission reduction obligation of the KP during the first commitment period of 2008-2012 except Japan. This actor constellation represents the inclusion of critical states "without which the achievement of the substantive norm goal is compromised" (Finnemore and Sikkink 1988, p.901). China and India are the most touted states that are rapidly-growing developing countries with high potential of future contribution to climate change problem. South Korea, being the member of the OECD and the seventh largest GHG emitter globally, was excluded from the list of Annex I countries bearing the GHG emission reduction obligation during the first commitment period (Energy Korea 2012). Accordingly, these three states are very critical in that they can be classified to the more advanced developing countries. Institutional design to include 'potentially further advanced countries' implicates the extended range of policy options in the interpretation of the 'differentiated responsibility' of the CBDR.

Meanwhile, against the 'threat' dimension of the precautionary approach, the APP framed increased energy demands as a challenging threat which engenders such accompanying challenges as air pollution, energy security, and GHG intensities (APP 2007a), so the issue of climate change is framed together with primarily energy security issue. In the 'action' dimension, the APP embodied the technology development other than the national GHG reduction target & time-table as appropriate mitigation action measures. Its functionality is the production of the energy-related technology development and deployment in eight specific sectors: cleaner fossil energy, renewable energy and distributed generation, power generation and transmission, steel, aluminium, cement, coal mining, and buildings and appliances (APP 2007b). This has two implications: one is that interest is toward mitigation by technology development, and the other is that target-setting is toward sector-based, not nation-based, target (more insertion on the sector-based target).

Notably, energy-related technology development and deployment necessitates the salient participation from industry stakeholders as well as government which provides credible financial commitment to overcome market barriers in large-scaled and time-consuming investment decisions, so the APP takes a co-participation of government and private sectors (Bäckstrand 2008). Accordingly, technology development required re-interpretation of the 'common responsibility' of the CBDR and extended the range of legitimate participant from the nation-state to both nation-state and non-state actors. To undertake this extended range of participants, the internal structure of the APP is composed of the Policy and Implementation Committee (PIC) for policy-setting, management & review on the cooperative works, and decision-making at the top and the Administrative Support Group for coordination of the APP's communication and activities (APP 2007a). For the actual work to be carried out, appropriate Task Forces are formed by the decision of the PIC. The non-state actors are main participants of both the PIC and the Task Forces. Because of the functional target of technology development and the range of main participants opened to the business stakeholders, the APP obscures the nation-based obligations of GHG reduction under the KP and takes a pledge-and-review process that does not punish non-compliance. Thus, against the 'command' dimension of the precautionary approach, the APP explicates itself as a "non-legally

binding framework" on the basis of "non-legally binding Charter" with voluntary participation for climate change action (APP 2006, p.1). Accordingly, the APP has worked as an organizational platform to embody and diffuse the extended range of legitimate policy options with different interpretation of the CBDR and the precautionary approach.

Besides the APP working as a regional platform that embodies the normative contestation, the US created global organizational platform, the Major Emitters and Energy Consumers Process (MEP), set up in May 2007 with fifteen countries of both developed and developing nations as members to deal with climate change together with energy security and economic growth (White House 2007). As its name suggests, the MEP erases the dividing line between developed countries and more advanced developing countries by bracketing them as 'major emitting economies'. With a focus on technology development, the US initiated multilateral climate technology development partnerships on methane, hydrogen energy, carbon capture, and nuclear power (McGee and Taplin 2009). Also, the US formed a bilateral green partnership with India in 2009, Indonesia in 2010, and China in 2011 for cooperation in combined issues of energy and food security, energy technology, and climate change (White House 2009, 2010, 2011).

5.5.3. Penetration of the APP to the UNFCCC/KP

In 2005 when the APP appeared, within the UN-based negotiation track, there came out two negotiation processes: the Parties to the KP set up an Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), and the Parties to the FCCC launched a Dialogue on long-term cooperation action to address climate change by enhancing implementation of the convention (LCA). If the former is formal but exclusive negotiation process on post-Kyoto commitments with the exclusion of the US which is a non-Party to the KP, the latter is an informal but inclusive negotiation process to engage the non-Parties to the KP, particularly the US, in the open discussion for broader participation on four themes of sustainable development, market-based mechanism, adaptation, and technology (Wittneben et al. 2006). In the first workshop of the LCA, the US noted the necessity of broadening climate change actions through integration

with the other actions on energy security, pollution abatement, and economic competitiveness in sustainable development context and, for this, exchanging experiences on public-private partnerships and bilateral and multilateral cooperation on technology development, deployment and transfer (LCA 2006a). Japan, the founding member of the APP, mentioned that the LCA is grounded on the recognition that climate change negotiations become multilayered by the emergence of the APP and the other international undertakings that complement the UNFCCC (LCA 2006b).

In 2007, the APP extended its existence through institutional linkage with the regional cooperative organization, the Asia-Pacific Economic Cooperation (APEC) and membership extension by the joining of Canada to the APP as the seventh Partner. 61 Also, having the second ministerial meeting in October 2007 at New Delhi, the APP reported that the APP made accomplishment within a short time frame by implementing 18 flagship projects with 110 collaborative projects. Emphasized was that this accomplishment was attained through the 'partnership of equals' in terms of country participation scope and the 'public-private sector collaboration' in terms of participation level. Also, it was noted that the APP provides 'practical solution' with such activities as sectoral assessments, capacity building, and technology research and demonstration (APP 2007). The US showed its full support of the APP by the announcement of \$45 million commitment for the APP at this meeting and its plan of annual funding at this level (DOS 2007). The APP was understood as distracting the UN-based, particularly Kyoto-oriented, climate change negotiations in Bali, Indonesia in December 2007 (SCC 2007). In the same year, the COP-13 produced Bali Action Plan which is a ground work to make an 'agreed outcome' on the current and future climate change pathway. 62 With regard to the CBDR, the existing terms of Annex-I and non-Annex I, which specifically and statically categorizes who bears the obligation, disappeared in the Bali Action Plan. Instead, those terms were replaced by developed country parties and developing country parties that have open-ended categorization, from which it was argued that the possibility of

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⁶¹ In the Darwin Declaration of the APEC Energy Ministerial Meeting in 2007, the APP was welcomed (APEC 2007a), and the Building and Appliances Task Force of the APP was given a guest status for collaboration at the Energy Working Group Expert Group on Energy Efficiency and Conservation of the APEC (APEC 2010a). Canada withdrew from the KP in 2011 at the COP-17.

⁶² Bali Action Plan initiated a "process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session" (UNFCCC 2007, Decision 1/CP.13(1)).

re-definition on developed and developing countries was opened. Concerning the precautionary approach, developed countries are given a menu of options to choose; in terms of action dimension, the level of action can be national or international, and the range of actions can be quantified emission reduction or others; in terms of mandatory dimension, the actions can be legally-binding commitments or voluntary actions, and the acknowledgement of actions is result-based or effort-based (UNFCCC 2007, para 1(b); Rajamani 2008). Furthermore, after the mitigation action, the notion of enhanced action on adaptation came after the enhanced action on mitigation (UNFCCC 2007, para 1(c)). Then, what followed is an enhanced action on technology development and transfer to support the actions of both mitigation and adaptation (UNFCCC 2007, para 1(d)). Thus, the Bali Action Plan can be described as a broadening of the narrowly defined Kyoto policy options, influential now (then in 2007), up to and beyond 2012.

Stepping on the Bali Action Plan, the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) was established to initiate a negotiation process for long-term cooperative action, now, up to and beyond 2012 (UNFCCC 2007, para 2). The US revealed more concretely that the interpretation of the CBDR, particularly the differentiated responsibility, needs to be commensurate and evolutionary with the changing context of global economy from 1992 to 2008, which implicates the engagement of developing countries with high profile of both economic growth and GHG emission in the mitigation action. Furthermore, in terms of precautionary approach, the US expressed that the goal be on a 'long-term' basis and 'at all levels' and that the mitigation action needs to be 'nationally appropriate', 'measurable, reportable, and verifiable', and 'sector-based' (AWG-LCA 2008a). Notable is that Japan, member state of the APP, suggested the utilization of the APP's practices of sectoral technology identification, technology introduction and diffusion assessment, and production and reduction forecast, and sectoral GHG reduction target-setting in the steel sector for mid-term sector-based target-setting (AWG-LCA 2008b). For the legal-instrument for post-Kyoto, the US communicated its preference of having 'implementing agreement', comparatively softer and less legal-binding than the Protocol-type

instrument, under the UNFCCC beyond the 2012 (FCCC 2009). The UN shows its departure from the normative position drawn toward the Kyoto Protocol.

At the third ministerial meeting held in Shanghai China in October 2009, the APP reported the implementation of 175 collaborative projects with flagship projects and emphasized the importance of technology to tackle climate change. The APP partner countries expressed their willingness to work toward a successful outcome at the COP-15 held in Copenhagen in December 2009 (APP 2009). Then, the COP-15 was held in 2009 to reach the 'agreed outcome' for now, up to and beyond 2012. The Copenhagen Accord, which is the result of the COP-15, requires both the Annex I parties to commit to implementing the economy-wide quantified emission targets for 2020 and the non-Annex I parties to implement mitigation actions. Only, least developed countries and small island developing countries are given discretion to take mitigation action voluntarily and with support (UNFCCC 2009, para 4 &5). Accordingly, further differentiation of developing countries is made in terms of responsibility-bearing. Furthermore, on the delivery of GHG reduction, there is not a specific and unified standard but an equivocal guideline of measurable, reportable and verifiable manner which renders a wide range of interpretation. The Annex I parties are to communicate their 'economy-wide', not 'national', target to the Secretariat for compilation (UNFCCC 2009, para 4). Notably, the enhanced action on adaptation was re-emphasized, and the paragraph on the adaptation comes earlier than the paragraph on the enhanced action on mitigation (UNFCCC 2009, para 3, 4, and 5). Also, for the country-driven enhanced action on technology development and transfer, it was decided to set up a Technology Mechanism (UNFCCC 2009, para 11). The Copenhagen Accord, brewing contentions due to the broadened range of norm-driven policy options, was neither adopted by the COP nor thus acknowledged as a legal instrument. Though the US supported the Copenhagen Accord as a legitimate negotiation outcome for the Post-Kyoto pathway, developing country parties stick to the decision of the AWG-LCA as a legitimate negotiation outcome. For the lack of legal status of Copenhagen Accord, the 'legally' agreed outcome' as the COP decision with legal status was deferred to the COP-16 in 2010 (Rajamani 2010).

The US, regarding the Copenhagen Accord as a progress, consistently reiterated the US' support of legally-binding outcome only under the condition that all Parties bear the obligations (AWG-LCA 2010). The COP-16 in 2010 conferred the legal status to the Cancun Agreement which reflected the Copenhagen Accord and contained the negotiation outcomes of the AWG-LCA and the AWG-KP. With regard to the CBDR, there came parallel action pathway in the responsibilitybearing by both developed country and developing countries. Concerning precautionary approach, developed country Parties are given discretion to choose nationally appropriate mitigation "commitments" or "actions", and developing country Parties are to take nationally appropriate mitigation 'actions' only (UNFCCC 2010, para 36 & 48). Particularly, there exist no numerical specifics with regard to the GHG emission reduction target, time-frame, and base year. This came through the leveling-down of developed countries' stringent obligation and the extension of their menu of options and the leveling-up of developing countries' responsible action (Rajamani 2011). At the COP-16, the adaptation obtained the same priority position as the mitigation had enjoyed (UNFCCC 2010, para 2(b)). The Cancun Agreement draws a future trajectory that deviates from the Kyoto's differentiated obligation between developed and developing countries and mandatory target & time-table approach (Rajamani 2011).

Ironically, the APP stopped living its life in year 2011 as if to accomplish its existential objective to contest the Kyoto. With the final session of the PIC on April 5, 2011 in Bangkok, Thailand, the APP formally completed the joint work, and the projects under implementation were to continue and transferred to other multilateral or bilateral fora (APP 2014b). The COP-17 held at the end of year 2011 at Durban fleshed out more concretely the 2010 Cancun Agreements and launched the Ad-Hoc Working Group on the Durban Platform for Enhanced Action to formulate "a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" for post-2020 climate regime (UNFCCC 2011b, para 2). In an enhanced action on mitigation, two things are reaffirmed: one is that the efforts on mitigation are ensured to be applicable to "all Parties", and the other is that the "options for a range of actions that can close the

(mitigation) ambition gap" are to be explored (UNFCCC 2011b, para 7). At this time, the notion on the enhanced mitigation comes prior to the enhanced action on adaptation.

5.5.4. Further fragmentation by norm leaders

The creation of the APP spawned the additional regional institutions, competing with the UN-based climate change institutions. South Korea and Japan, both of which formed bilateral partnership on climate change and participated in the APP as founding members, created a similarly patterned regional partnership. South Korea, creating the East Asia Climate Partnership in 2008, announced in 2009 that it would show its commitments to climate change action on a voluntary basis. Japan, after its announcement of non-participation in the second commitment period of the Kyoto mechanism, presented the East Asia Low Carbon Growth Partnership.

Korea and the East Asia Climate Partnership

South Korea was exempted from the obligation to meet national GHG emission reduction target during the first commitment period under the KP. However, the pressure for South Korea to be included in the list of Annex I countries and to participate in the second commitment period was amounting (Winkler et al. 2006). In this context, firstly, in 2008, the then President Lee framed the issue of climate change in linkage with the issue of energy security as simultaneous threats to both economic growth and environmental protection and declared 'Low Carbon, Green Growth' as a new national policy vision. The green growth is explained to improve the quality of life by greening both ecological, industrial, and living area and to enhance international contribution by helping developing countries to attain economic growth and environmental protection (PCGG 2013). The term, green growth, originally used at the fifth Ministerial Conference on Environment and Development (MCED) in Asia and Pacific under the auspices of United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP) in 2005, intended the harmonization of 'poverty eradication' and 'environmental sustainability' of the UN Millennium Development Goals

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⁶³ South Korea joined the OECD in December 12, 1996 (OECD 2014).

for developing countries (UN-SDNP 2013). Notable is that green growth is appropriate for underdeveloped countries in an imminent need of economic growth for poverty elimination and in the face of environmental degradation. Thus, there is an argument that this concept is improper for South Korea whose economic level has been far over poverty line (Yun 2009).

By putting green growth as a policy vision, firstly, green growth, which is basically targeted for developing countries, works as a pretext for South Korea to frame itself as still 'developing countries', not ready to be Annex I parties during the second commitment period. In 2009 at the COP 15 to the UNFCCC, Korea expressed its plan of voluntary commitment by GHG emission reduction by 30% below the business-as-usual level by 2020 (WEG 2009). By this announcement, South Korea showed its meaningful participation as 'further advanced developing countries' and instead blocked mandatory responsibility in the second commitment period under Kyoto mechanism. Secondly, with regard to the post-2012 climate change regime, Korea emphasized that a focus should be laid on 'how to reduce' the GHG emissions, not on 'how much' to reduce (WEG 2009). This action is unsupportive of the mandatory GHG emission reduction of 'command' dimension in the precautionary approach.

With this normative stance, South Korea proposed the establishment of the East Asia Climate Partnership (EACP) at the G8 expanded summit meeting in Toyako Japan in July 2008 and launched it in December 2008 (EACP 2013). The EACP is a collection of bilateral partnerships between Korea and Asian developing countries to support the adaptation of partner countries to climate change in five focused sectors of water management, waste management, low carbon energy, low carbon city, and forest & biomass. The bilateral projects under the EACP are undertaken by Korea International Cooperation Agency which implements grant aid and technical cooperation program of Korean government. The EACP was launched with fifteen kick-off projects in 2008, and twenty projects and nine international organization cooperation projects were under way as of 2011 (EACP 2012). South Korea put a focus on the support of developing countries through public-private partnership and the adaptation measures rather than mandatory national target & time-table based mitigation. South Korea has been with closer attachment to the G20, which is regarded as an

alternative climate change negotiation for to the UNFCCC process, as Korea utilized the G20 to propagate the concept of industry-favored green growth (Kim and Chung 2012).

If this is an international platform to diffuse the vision of green growth, South Korea established the Presidential Committee on Climate Change (PCGG) in February 2009 as a domestic organizational platform to formulate the Framework Act on Low Carbon, Green Growth, which replaced the status of a basic law of the Framework Action Sustainable Development (Yun 2009). On the ground of changed law, 3% of GDP was utilized in the Green New Deal projects to boost economic growth. Accordingly, so it is within the bounds to say that South Korea made its organizational platforms stand in the extended range of policy options by the US and diffused its normative interpretations to Asian developing country partners.

Japan and with East Asia Low Carbon Growth Partnership

In 2007 when formal negotiation for the content of the second commitment was to be initiated at the COP-13 to the UNFCCC, Japan launched *Cool Earth 50*. The Cool Earth 50 has three pillars of long-term strategy for GHG reduction, proposition of three principles for the post-Kyoto climate change structure, and national-level initiative to achieve KP target. Particularly, three principles are i) comprehensiveness in participation scope, ii) flexibility and diversity of framework, and iii) compatibility between environmental protection and economic growth (MOFA 2007). Subsequently, Japan announced *Cooperative Initiative for Clean Energy Sustainable Growth* which has four pillared working mechanisms at the 3rd East Asia Summit (EAS) in November 2007 (EAS 2007*a*). They are i) promotion of energy efficiency and conservation, ii) promotion of biomass energy, iii) clean use of coal, and iv) eradication of energy poverty by ODA energy support (Akahoshi 2008). These principles imply Japan's normative position on the CBDR and the precautionary approach.

In the first workshop on the LCA, Japan expressed the importance of constructing an effective framework that leads to maximum GHG emission reduction "by all major emitting countries" with regard to the CBDR and pursuing "sector-by-sector approach" for energy efficiency

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Yun (2009) criticized that green growth takes a conceptually subordinate position to the sustainable development.
 The then Prime Minister, Shinzō Abe made a proposition, titled "Fueling Asia – Japan's Cooperation Initiative for Clean Energy and Sustainable Growth" at the 2nd EAS.

with detailed benchmarks and best practices that erase and transcend the dividing line between Annex I and non-Annex I (LCA 2006b, p.3). As the Bali Action Plan extended the range of legitimate policy options, with regard to the CBDR, Japan expressed its view that the terms of developed country parties and developing country parties need to be re-defined and that the scope and criteria to require developing country parties to take action need to be identified. With regard to the precautionary approach, Japan expressed that the international action needs to have a long-term target to halve global GHG emission by 2050 "as a non-legally binding shared vision" and to pursue a sectoral intensity target as a mid-term target in a measurable, reportable, and verifiable way (AWG-LCA 2008b, p.4). Japan formally expressed its intention to reduce its own GHG emission target in accordance with Copenhagen Accord and not to participate in the second commitment period of Kyoto Protocol in its letter to the Executive Secretary of the UNFCCC in 2010 (MOFA 2010). On the basis of COP-16 that noted the quantified economy-wide emission reduction targets of Annex I Parties for 2020 to be implemented, Japan set 25% GHG reduction target by 2020 with a base year 1990 on a premise of comprehensive participation of all major economies (FCCC 2011). Japan announced its non-participation in the 2nd commitment period of the Kyoto Protocol during the COP-17 in December 2011 and instead unveiled Japan's Vision and Actions toward Low-Carbon Growth and a Climate-Resilient World, which works as a conceptual ground of the East Asia Low Carbon Growth Partnership (LCGP) (MOEJ 2011; MOFA 2011).

Japan proposed the establishment of the LCGP at the EAS Foreign Ministers' Consultation in July 2011 (EAS 2011a). Then, on April 15, 2012, the LCGP made an official debut at the East Asia Low Carbon Growth Partnership Dialogue meeting where national governments, international organizations, local governments, research institutions, private companies and NGOs in East Asia are allowed to participate to discuss a new regional model of low carbon growth. The *low carbon growth* is a new political vision for economic growth on the basis of energy-efficiency technologies in the context of global climate change challenge (MOFA 2012d). Yet, it is not unnatural to see the low carbon growth as an offshoot of the former initiatives of Japan.

The gist of low carbon growth is "leapfrog development". Unlike the western type of

energy-intensive development, Asian countries have unfolded technology-driven economic growth such as Japan with efficient energy-saving technologies, China with cellular phone production, India with information technology, and South Korea with liquid crystal display TVs (LCS-RNet 2012b). What is implicated is that developing countries as well as developed countries experiencing leapfrog developments can be crucial contributors to climate change action, so Japan also inserts contestant normative claims on the CBDR by supporting the further differentiation of responsibility on advanced developing countries. Furthermore, with regard to precautionary approach, regional action for low carbon growth is not emission reduction through target & time-table but low carbon technology development and transfer.

The LCGP has worked as an organizational platform to prioritize Japan's bilateral support to developing countries in Asian region rather than nationally allotted Japan's emission reduction within the boundary of the KP. Two distinctive and essential functions of the LCGP are market mechanism and technology mechanism. Japan created Bilateral Offset Credit Mechanism (BOCM) after the UNFCCC/KP's Clean Development Mechanism (CDM) where developed countries can earn certified emission reduction credits through projects to support developing countries and trade the earned carbon offsets under strict regulations in the compliance carbon markets. The BOCM and the CDM bear similarity in the work flow of project cycle. Yet, the BOCM has a decentralized governance structure in comparison with the CDM (Oh and Matsuoka 2013). The BOCM is grounded on a high-level bilateral joint committee between Japan and the partner developing country. Thus, the joint committee takes an equivalent coordinating position of CDM Executive Board. In the case of project verification, designated operational entity is replaced by third party verifiers such as International Organization for Standardization (ISO). Certification and issuance of the credits, done by the CDM Executive Board, are undertaken by each government involved (MOFA 2012b). Alongside this decentralized governance structure, governance procedure is also differentiated by lessened rigidity. In the case of accounting standards taken as an example, project-specific additionality⁶⁶ of carbon reduction is replaced by performance standards such as positive technology

^{66 &}quot;Reductions in emission that are additional to any that would occur in the absence of the certified activity" (KP

lists, benchmark approaches, nationally appropriate mitigation actions (NAMAs), market share, and diffusion rates of technologies (MOFA 2012b). The BOCM is a unique regional experiment of market mechanism and simultaneously a diffuser of different market mechanism from the multilaterally operated CDM.

Meanwhile, Low Carbon Asia Research Network (LoCARNet) was instituted for technology cooperation. Notably, the LCS-RNet, an entity that proposed the establishment of the LoCARNet, is itself a non-legal binding knowledge-sharing network operating under the G8 Environment Ministers' Meeting (LCS-RNet 2012a). The LCGP aspires for "south-south-north collaboration" by the comprehensive participation of not only developed countries but also developing countries that experience leapfrog development on the basis of technology-driven economic growth (LoCARNet 2012, p. 3). The LoCARNet forms a linkage with the other institutions such as the Asia-Pacific Network for Global Change Research (APN) that works for an international scientific base camp on low-carbon technologies (MOFA 2011). Furthermore, "East Asia Knowledge Platform for Low Carbon Growth" was established for both science-science knowledge-sharing and knowledge-diffusion from science to policy (LCS-RNet 2012b). The LCGP is a collection of the East Asian region-wide bilateral partnerships to diffuse the low carbon growth with flexible mechanism of carbon offset and technology cooperation to Asian developing countries. The low carbon growth implicates normative claims on the comprehensive participation of both developed and developing countries by technology cooperation as appropriate mitigation measures. Accordingly, in the extended menu of options, Japan chose national and regional action by low carbon technology development and transfer in a voluntary and effort-based manner, rather than the legal-binding international action by national quantified GHG emission reduction target-setting. The LCGP would not have emerged without the extension of normative scope on the appropriate actors and actions on climate change in the UN-based negotiation process and without the proto-type institution of the US-initiated regional climate change institution of the APP.

2007, Article 12 (5(c))).

Section 6. CONCLUSION

This chapter explored the genesis of institutional fragmentation with newly created competing climate change institutions in Asia to the dominantly existent institutions of the UNFCCC/KP on the ground of normative contestation for strategic social construction. From the analysis, it was clarified that the genesis of institutional fragmentation is to broaden the range of policy options, because the change of policy options is not possible within the given institution due to the lack of swaying power. More specifically speaking, climate change norms of the CBDR and the precautionary approach define the range of legitimate policy options too narrowly, which constrains the US behavior too tight and engenders relative loss to economic interest. Then, the US transformed itself into a norm entrepreneur and formed normative contestation to broaden the range of policy options at the UN negotiation process. Yet, the normative contestation was not liquidated within the UN negotiation process, the US searched for alternative non-UN-based negotiation venues for brewing contestant normative claims. Here arose a new institution, the APP, as an organizational platform to embody and diffuse the US' contestant interpretation on climate change norms and the subsequently redefined range of policy options and implementation contents. Within the APP, the boundary of climate change issue gets fuzzy by strategic framing with the other issues such as economic growth and energy security. The CBDR that draws an appropriate boundary for burden imposition between developed and developing countries on the basis of historical contribution to problems is rendered helpless with a new interpretation of future contribution to problems, so a boundary of responsibility-bearing between the developed countries and the advanced developing countries is erased. Compulsory national emission reduction target and time-table approach that fleshes out the precautionary approach has been contested by the focus on climate science, voluntary target & timetable setting, differentiated target of intensity reduction, and differentiated mitigation measures of low emission technology development. This normative contestation resulted in the extension of menu of options to choose. Also, the subsequent creation of similar institutions is the norm leaders' act of emulating the norm entrepreneur. These institutions also embody the contestant normative

interpretations. This means that the agent, dissatisfied with the existing institution with the narrowly defined range of policy options, not only show non-participation but also strategically creates an alternative institution that embodies a more broadly and alternatively defined range of policy options. Accordingly, *institutional fragmentation is what actors, particularly, nation states, make of it* for the change of an existing institution.

The institutional fragmentation with norm life cycle of norm emergence, cascade, and internalization by normative contestation leads us to make a judgment that contestant normative interpretations already entered norm cascade stage at least in the Asian region from such observed socialization phenomenon as emulative institutional-building by norm leaders, network formation between and among the institutions with contestant norm interpretations, and bilateral cooperation through persuasive actions from norm leaders toward Asian developing countries. If the contestant interpretations become internalized at the global level, as a natural corollary, the Kyoto Protocol that embodies the existing norm interpretation becomes feeble to stand by the competing institutions that materialize the contestation. Noteworthy is that the appearance of the APP aroused both the ridicule from supporters of the UNFCCC/KP and the emulation from the supporters of the contestant norm interpretation, which represents the socialization phenomena. This means that both the existing and the contestant normative claims are at the norm cascade stage in the climate change issue area. Each camp with its own organizational platforms is competing for the entrance to the global normative internalization. Particularly, the camp of norm entrepreneurs will operate the competing institutions of the APP, the MEP, the EACP, and the LCGP until the existing organizational platform of the KP dysfunctions and inevitably goes through institutional change. Also, the widened normative spectrum will open more widely a room for re-interpretation of the existing norms and the persuasion of further norm followers toward the contestant interpretation. The consequence of institutional fragmentation entails the institutional change of the existing institution.

Then, what should be an appropriate response to this institutional fragmentation? a stoppage or a continuation of the institutional fragmentation? Because the institutional fragmentation is a process of intentional normative reconstruction, the stoppage of fragmentation is attained by the

reflection of the contestant normative claims, which means a salient change in the policy agendas and functions of the UNFCCC/KP. However, normative change within the existing institution does not occur easily. Because the supportive institutions of the existing norm interpretation can be created to undergird the existing range of policy options and oppose normative shift, institutional fragmentation will bolster normative contestation with institutional complexity until the UNFCCC/KP safeguards or relinquishes its policy options: status quo or further institutional fragmentation. Meanwhile, between these two extremes, there is a third way, the management of institutional fragmentation by a coordinated functional linkage between the UNFCCC and the fragmented institutions for division-of-labor (van Asselt and Zelli 2012). This linkage can reveal institutional differences and similarities, provide institutional interaction, diffuse norms, rules and practices, and bring out economies of scale through homogenization of rules and practices. Regardless of these benefits, however, the linkage management casts a series of questions of who should be authorized to take a coordinating role, whose norms, rules, and policies get standardized, who should take transaction cost before and after the linkage, and, the most importantly, whether the institutional designers of fragmented institutions have willingness to form a linkage.

Institutional fragmentation is a process made by norm trailblazers to make an alternative road of appropriateness with newly created competing institutions as strategic normative carriers. The contestant norms already spread by contagion in the Asian region. By this gust of institutional fragmentation wind blowing from the Asian region, how will the UNFCCC/KP close or open the policy window for future governance architecture? Will it repair or stick to the current institutional processes to negotiate further commitments, review the adequacy of the KP, and form dialogue on long-term cooperative action? How will the supporters of the UNFCCC/KP negotiation process such as the environmental NGOs respond to the institutional fragmentation in order to block the cascading of contestant normative claims? The constructivist approach to the institutional fragmentation on the ground of strategic social construction not only adds new look on the creation of competing institutions but casts more baffling questions to those who face two roads of appropriateness for a right-kind global climate governance architecture.

CHAPTER 6 NORMATIVE CONTESTATION AND ITS PATH

FORWARD: EVOLUTION OF INSTITUTIONAL

FRAGMENTATION

Global climate change regime has experienced normative contestation on the measures to mitigate

climate change. The unresolved normative contestation engendered institutional fragmentation by

the creation of competing and overlapping climate change institutions. In the midst of institutional

fragmentation, region has risen up as an alternative vessel of setting and constructing a certain

normative position on the appropriate actor and actions. In this regard, the regional climate change

institutions can work as a building bloc, a site of resistance, or both to the global structure. Currently,

the position of the Asian vessel in the face of normative contestation of global climate change regime

remains obscure. Thus, this chapter will investigate the normative implication of the Asian climate

change institutions, declared by the Asian regional cooperation organizations, to see what their

normative positions are and how they instantiate their positions with practices. Results show that

Asian regional climate change institutions work as a site of resistance with conflictive normative

positions to the global climate change regime.

Section 1. Introduction

Global governance on climate change has experienced normative contestation on two international

norms of common but differentiated responsibilities and respective capabilities (CBDR) and

precautionary approach. They are two defining normative pillars that undergird the UN-based

climate change institutions of the 1992 United Nations Framework Convention on Climate Change

(UNFCCC). On the basis of the UNFCCC, the 1997 Kyoto Protocol (KP) specified legitimate

collective action measures to mitigate the climate change by an imposition of national greenhouse

gas emission reduction target and time table onto thirty seven developed countries. By the teaching

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and enforcing role of legal-binding institutions of the UNFCCC/KP, climate change norms and subsequent policy options have been going regional until the year 2005 when finally the KP became effective. However, in the same year, a new institution, the Asia-Pacific Partnership on Clean Development and Climate (APP), emerged with a competing policy options of cooperation on low emission technology development with comprehensive participation of both developed and developing countries. The existence of the APP signaled the start of normative contestation at the international level. The normative contestation led emergence of innumerable regional institutions with a certain normative position somewhere in a stretched normative spectrum. There are regional institutions that are diagnosed with a favorable normative stance toward the UNFCCC/KP; in the case of Europe, mandatory regional carbon reduction institution was set up, and region-wide collective actions have been made on the basis of highly integrated regional capacity (Groenleer and Schaik 2007; EC 2008). Accordingly, the region received an attention as a vessel to brew over political, managerial, and normative developments that accrue to global governance on climate change (Conca 2012). Particularly, the region can pull not only synergistically but also conflictingly the normative currents of global climate change governance under swaying normative contestation. The gist is that the region can now be reversely going global as a normative building bloc, a site of resistance, or both to the existing UN-based climate change regime.⁶⁷

It is in the midst of normative contestation that Asian regional organizations made formal declarations on climate change in 2007. However, the way the Asian regional organizations go global has not been fully analyzed yet. Specifically, obscure is the meaning and significance that the Asian region ascribes to institutional fragmentation of the global climate change regime. Accordingly, this article draws normative position of the Asian regional organizations with regard to the afore-mentioned international norms of *CBDR* and *precautionary approach* to see how the Asian region goes global. Prevailing theoretical approach to international norms has mainly focused on norm diffusion path from global to regional dimension with already firmly and solely defined international norms. The regional organization as a local agent is found to work as an intentional

⁶⁷ Acharya (2012) explicated that region can work as a building bloc, a site of resistance, or both to the global structure.

localizer of international norms by liquidating normative contestation between international norms and existing regional norms. However, this prevailing approach has not been attentive to international norms whose interpretation is vibrating by normative contestation at the global level. Particularly, the global governance on climate change is fragmented by the existence of multiple institutions standing somewhere in the spectrum of normative contestation. In the face of normative contestation, regional organizations play a local agent role of re-interpreting the international norms, normatively positioning in the spectrum of legitimate policy options, and instantiating its normative position by practices. Normative position of the regional organization can go global and influence two competing forces that constitute the normative contestation.

This chapter looks at the Asian regional organizations' position-setting and -propelling in the face of normative contestation of climate change norms and explores the Asian region's implication to global climate change governance. It begins by defining what normative contestation is, reviewing the local agent role in liquidating normative contestation at the regional level, and venturing the local agent role in the normative contestation at the global level. What then follow are the delineation of normative contestation in global climate change governance and the emergence of Asian regional climate change institutions. This chapter argues that Asian regional organization in the face of global normative contestation defines its identity, sets normative position on the basis of regional norms and practices, and propels the normative position through institutionalizing practices. Along this line, climate change institutions, declared by three distinctive Asian regional organizations of the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC), and the East Asia Summit (EAS), are the embodiment of the normative positioning and propulsion in the climate change normative contestation. On the basis of these institutions, the normative position and institutionalizing practices are to be distilled with regard to the CBDR and the precautionary approach. The analytical result will provide a comprehensive description of the Asian regional organizations' normative position. This chapter will end with conclusion with some implication on the institutional fragmentation in global climate governance.

Section 2. NORM, NORMATIVE CONTESTATION, AND AGENT ROLE

In constructivism of international relation theories, norm is a "structure of meaning-in-use". ⁶⁸ Put simply, norm is no better than structure. Thus, norm harbors characteristics that a structure in the constructivism holds. In the constructivist understanding, structure is mutually constitutive with agent. The agent recognizes and interprets the structure, defines its identities and interest in terms of the structure, forms collective understanding through social interactions with the other agents, and instantiate the collective understanding on the structure through social practices (Wendt 1995). Thus, ontological status between the structure and the agent is same (Wendt 1987). Because of this mutually constitutive relation, constructivist focus on international structure is not material but intersubjective one which is composed of "shared understandings, expectations, and social knowledge". The thickness of inter-subjective structure varies by the *degree of sharing* among the agents on the rules and the perception of issue or threat (Wendt 1994, p. 389). The agents' practices instantiate the inter-subjective structure in a reinforcing manner; cooperative behaviors will thicken and deepen the existing inter-subjective structure; and conflictive behaviors will either obscure or fragment the existing inter-subjective structure.

Because of the mutually constitutive relation with the agent, the norm has dual qualities of constraining the agent and being constructed by the agents (Wiener 2007). On the one hand, if the norm is institutionalized, the norm exists as a relatively stable structure and has restraining power. It is because the institution is a more stabilized structure that is experienced to have an ontological status *relatively* above the agents and to work as "coercive social facts" to the agents (Wendt 1992, p.399). Here, ontological relation between the norm and the institution becomes tight; if a norm is defined as a "single standard of (appropriate) behaviors", then an institution is an "aggregation" of multiple norms (Finnermore and Sikkink 1998, p.891). Accordingly, the institutionalized norm can work as the logic of appropriateness that leads agents to a certain behavioral boundary, and the agent becomes a norm follower under the logic of appropriateness (Wiener 2007). That is, the norm

⁶⁸ Jennifer Milliken, cited in Contessi (2010: p.324).

becomes an explanatory variable of agents' behavior of common action. Yet, noteworthy is that the norms do neither directly determine nor constrain the agent behavior. Instead, the norms define "a range of legitimate policy options", and this defined range of legitimate policy options works as "structural constraints" that limit the agent's behavioral choices (Klotz 1995, p. 461-462). The agents are structured by the norms to do their practices within the defined range of policy options, and the practices within the range reinforce the norms. In this regard, the norm is "collective understanding that make(s) behavioral claims on actors" (Checkel 1999, p.551).

On the other hand, the norm does not always exercise constraining power over the agents. The norm can also provide a cause of fighting from the agents. If the norm defines range of behavioral choice too narrowly, then, the agent can transform him/herself into a fighter against the structural constraints (Klotz 1995). The agents re-interpret norms; the norms redefines the range of legitimate policy options; and, the changed range of policy options reshapes the institution with different interpretive flesh and blood on the basis of the same bone structure. Importantly, the fighter challenges not the norm directly but the defined range of legitimate policy options by widening a too narrowly defined range of policy options, shifting a focus of the issue to redefine the range, or forming a competing norm. The fighting can be nicely redressed by a more refined jargon, "normative contestation", which means a "strategic social construction that aims at undermining or displacing an accepted or emerging inter-subjective meaning through the formulation by actors of competing discursive interventions that challenge the meaning of norms that embody conflictive interpretations of values" (Weiner 2004; Contessi 2010, p.325-326). Accordingly, the agent becomes a norm entrepreneur giving rise to normative contestation (Wiener 2007), and the normative contestation is the agents' destructive construction. The normative contestation never occurs in a normative vacuum. A new competitive norm or interpretation is forged by the norm entrepreneurs to enter normative space where extant norm or existing interpretation is already dominant (Finnemore and Sikkink 1998). Competition for normative dominance between the existing interpretation and the new one is therefore highly "political" (Finnemore 1996b, p.342).

Normative contestation has been mainly dealt with in the diffusion of established norms

from global to domestic or regional scale. International organization plays a role of teaching international norms, and, the international norms replace existing domestic norms (Finnemore 1998). However, the international norms are not always diffused but sometimes rejected, which is attributable to the normative contestation between new international norms and existing domestic norms and practices (Finnemore and Sikkink 1998). Liquidation of normative contestation is partly dependent on the role of local agents who construct a fit between international norms and existing local norms and practices (Checkel 1999; Risse-Kappen 1994) or reconstruct international norms on the basis of prior local beliefs and practices. This reconstruction process is known as localization. The localization theory has enjoyed an explanatory rendezvous in the Asian region as international norms such as 'collective action' on human right and 'common security' are not diffused without being filtered through Asian region variants such as regional history, norms, culture, practices, and economic and political variation among nations (Acharya 2004). This vein of approach to normative contestation has some characteristics: i) international norms are deemed as stable and better at the global scale, ii) normative contestation happens in a top-down process of diffusing international norms against existing domestic or regional norms and practices, iii) normative contestation is observed within a regional or a domestic vessel, iv) contestation is at the norm level (norm-versusnorm), v) normative contestation is already resolved in case studies, and vi) this regional or domestic normative contestation mainly focuses on the explanation of different institution-building across regions. Thus, international norms come to compete with domestic and regional norms for normative dominance in a regional vessel. Here, the role of local agents in the liquidation of normative contestation between transnational norms and regional norms works as an explanatory variable that casually determines a degree of international norm diffusion. By strategic hands of the local agent, the doom of the international norms is diverged from lamentable rejection to new-faced localization or successful plantation.

However, this prevailing literatures on normative contestation can have a lesser explanatory fit in such cases that i) international norms are just emergent and in definitional stage or under normative contestation at the global level, ii) normative contestation occurs by the emergence

of competing institutions to challenge the international norms in a bottom-up process, iii) normative contestation is made not at the norm level but at the level of legitimate policy options, iv) normative contestation is still an on-going entity, and v) normative contestation between global and regional scale influences the global institutional change across time. Recently, focus has been extended to normative contestation drawing a bottom-up path of norm diffusion dynamics. At the center of the newly emergent international norm of 'Responsibility to Protect (R2P)', the Asian local agents of China and Japan not only liquidated top-down normative contestation on the basis of domestic norms but also exerted a bottom-up normative contestation in the interpretation of the international norm at the global arena. By this bottom-up normative contestation, China reconfirmed its support of the R2P and changed the level of discussion on further normative commitment to R2P from the Security Council to the framework of the General Assembly in order to veil its veto exercise at the Security Council. Also, China strengthened decision process by putting an application of R2P under approval of the Security Council. In the case of Japan, an existent local norm of 'human security' and the transnational norm of R2P went through top-down normative contestation but did not result in localization. Thus, Japan reemphasized the existing norm of human security at the global level and tried to narrow application areas of the R2P (Prantl and Nakano 2011). Important is that this bottom-up normative contestation happens in the case of newly-emergent norms. Because the norms are in definitional stage, local agents fight against the range of legitimate policy options such as decision procedures and arenas of application. The local agents set its position on the basis of existing domestic norms and localized norms and propel their normative positions through a singular international negotiation venue.

However, in the case of international norm which is not emergent but mature enough to be institutionalized, if the international norms are under normative contestation by competing interpretations, then norm interpretations are also subject to "the forces of natural selection" (Florini 1996, p.367). Agent perceiving the normative contestation of the structure re-interprets and defines its identity, forms collective understanding with the other agents, and instantiates a certain interpretation with specific practices. This agent behavior can reinforce or fragment the existing

inter-subjective structure. It is a natural corollary that concern moves to the positioning of local agents in the international war of normative contestation, the strategic practices of local agents to defend their positions, and the expected path of normative contestation toward normative stickiness or normative shift. Accordingly, in the face of normative contestation at the global level, local agent is subject to normative *position-setting* and *position-propelling* with strategic practices for the settlement and institutionalization of a certain interpretation under normative contestation in a preferable direction. Particularly, local agent role as a *position-setter* and *position-propeller*, being sided with a certain normative position and pulling the international norms toward a region-favorable direction, remains much unexplored. Accordingly, this study, cognizant of the times of normative contestation at the global scale, will look at the forces of normative positional selection by regional organization. The next section will delineate the normative contestation and the subsequent institutional fragmentation that global governance on climate change is now undergoing.

Section 3. NORMATIVE CONTESTATION IN GLOBAL CLIMATE GOVERNANCE

In global political dimension of climate change issue area, normative contestation has been proliferating, since climate change *issue* was perceived as a threat to human security and collective action to stabilize anthropogenic greenhouse gas (GHG) concentrations was necessitated (Biermann and Gupta 2011). This normative contestation was markedly seen in two constitutional phases in the development and change of climate change regime: 1991-1995 is the first constitutional period that leads to the adoption of the Kyoto Protocol, and the second constitutional period ranges from 2005 to the present (Bodansky and Rajamani 2013). In the first constitutional phase, the intergovernmental negotiation committee for a framework convention on climate change (INC/FCCC) was set up on the ground of the resolution of the 45th United Nations General Assembly to negotiate an effective framework convention on climate change (INC/FCCC 1991a). Five sessions of the INC/FCCC were convened from February 1991 to May 1992, and, during the sessions, contentious issues were "common but differentiated" responsibilities of developed and

developing countries, the content and the manner of binding commitments, and financial mechanism, and technology transfer (ENB 1995). Afterwards, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 and became effective in 1994. Distinctive is that the UNFCCC rose up on the basis of two founding norms of principle of equity, which is implicated in common-but-differentiated-responsibilities and respective capabilities (CBDR), and precautionary approach (Biermann et al. 2009). The CBDR is indicative of who will bear the cost of mitigating GHG emission. This principle is interpreted in a manner that developed countries will take a leading responsibility and that developing countries are given consideration (UNFCCC 1992, Article 3(1) & (2)). ⁶⁹ The *precautionary approach* means an imposition of mandatory action to prevent an uncertain threat despite a lack of scientific proof (Sandin 1999). The linchpin of this norm is how mitigation actions are to be achieved in a cost-effective way in the face of uncertainty (UNFCCC 1992, Article 3(3)). These two norms define "a range of legitimate policy options" (Klotz 1995). Under the UNFCCC, the CBDR defines industrialized developed countries as the legitimate scope of responsibility bearer on the basis of historical contribution to climate change and their ability-to-pay and classifies them to Annex I Parties. Developing countries are exempted from responsibility and classified to non-Annex I Parties. Meanwhile, precautionary approach defines the range of legitimate mitigation policy by the set-up of legal-binding commitments with national carbon emission reduction target and time-table.

However, the definition on the legitimate policy options went through normative contestation in the series of INC/FCCC. The simple division of developed countries and developing countries was contested by further differentiation of "the more advanced developing countries" from general developing countries on the basis of responsibility arising from future contribution to the problems (Stevenson 2009, p.166). This contestation is assumed to broaden the range of

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⁶⁹ "Parties should protect the climate system ~ on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions" (UNFCCC 1992, 3(1)). "The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, ~ should be given full consideration." (UNFCCC 1992, Article 3(2)).

⁷⁰ "The parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. ~ lack of full scientific certainty should not be used as a reason for postponing such measures" (UNFCCC 1992, Article 3(3)).

responsibility bearer. Also, the command-and-control regulative measure of target and time-table approach was contested by market-based incentive approach. Market-based incentive regulatory measures put a price tag on the emitted pollutants and form a pollutant market such as carbon market, so the polluters have incentives to reduce the marketable goods of pollutants. Thus, the flexibility is given to not only nation states but also private sectors, which are the regulatees at the domestic level, by the formation of global carbon market (McGee and Taplin 2009). At the end of this normative contestation on the range of legitimate policy options, the first COP (COP-1) to the UNFCCC, held in 1995 in Berlin Germany, concluded that the burden would be laid only on the developed countries, and developing countries are exempted from any new commitments; the content of responsibility is quantified national GHG reduction target and 2008-2012 time-table; global commitments were to be institutionalized in the form of the legally-binding agreement of Protocol; instead, market-based incentive mechanism was inserted through a pilot phase for activities implemented jointly among Annex I Parties and with non-Annex I Parties (UNFCCC 1995).

On the ground of the COP-1 decision, the 1997 Kyoto Protocol (KP) finally encoded and structurally narrowed the range of behavioral choices. With regard to the CBDR, only thirty-seven industrialized developed countries are defined as legitimate responsibility bearer. Meanwhile, normative contestation circling the precautionary approach was resolved, and the range of legitimate policy options was broadened by the paralleled measures of both command-and-control and market-based incentive regulation; the national carbon emission reduction targets during the first commitment period of 2008-2012 were imposed to the developed countries (KP 1998, Article 3); at the same time, attached as supplementary measures were the flexible mechanisms of joint implementation (JI), international emissions trading, and the clean development mechanism (CDM) by which the cleaner technology is to be transferred from developed countries to developing countries in response to the climate change problem. This global-scale flexible mechanism is supposed to widen the boundary of mitigation action in a cost-effective manner. In addition to GHG emission mitigation measures which are the functional thrust of the UNFCCC/KP, adaptation measures are recommended (KP 1998, Article 10 (b)). Standing on the resolved normative

contestation of two principal norms, the UNFCCC/KP have been the central institutions that embody the legitimate range of "qualitative" and "quantitative" commitments to tackle climate change (Stevenson 2009, p. 167). By the ratification of Russia in 2005, the KP became effective, and joyful expectation of actual implementation of commitments culminated.

However, festivity did not last long. Joy was overshadowed by an emergence of separate multilateral and coalitional institution outside the UNFCCC/KP in the same year of 2005. The Asia-Pacific Partnership on Clean Development and Climate (APP) was established by the initiative of the US and Australia which did not ratify the KP and four other founding members of Japan, China, India, and South Korea. Main objective of the APP is multilateral cooperation on low emission technology development in eight energy-related sectors. Notably, the APP is an aggregation of two competing policy options against the previously defined range of legitimate policy options of the UNFCCC/KP (van Asselt 2007). With regard to the CBDR, the founding members enlivened the 'once failed' competing range of further differentiated responsibility bearer. The APP put the same burden on both the developed countries and the more advanced developing countries of China, India, and South Korea under the APP (APP 2014a). For measures to tackle climate change under the precautionary approach, the founding members brewed over voluntary approach against the combined regulatory measures of the command-and-control and the market-based incentives. The binding national carbon emission mitigation target and time-table is erased and replaced by technology cooperation in development and transfer on a voluntary basis (Lawrence 2007). With this contestant normative position, the APP is classified as one of the elemental institutions that fragment the UN-based climate change regime in a conflictive manner (Biermann et al., 2009). Particularly, the existence of the APP with contesting policy options outside the dominantly existing institutions of the UNFCCC/KP indicates a start of institutional fragmentation in the climate change issue area. Accordingly, the UNFCCC/KP is not a single platform to diffuse the climate change norms and the defined range of the legitimate policy options. The APP itself was a proclamation that it can tell what the appropriate range of policy options are in response to climate change. The APP formed and widened the spectrum of appropriateness with competing interpretation against the normative

posture of the UNFCCC/KP (Oh and Matsuoka 2013).

Noteworthy is that the year 2005 is the start of the second constitutional phase to negotiate post-Kyoto climate change agreement on the ground of the article 3(9) of Kyoto Protocol which indicates that the negotiation on the commitments for subsequent periods shall start at least seven years before the end of the first commitment period (2008-2012) (KP 1997). Along this line, in 2005, two negotiation processes for the post-Kyoto climate change agreement were set up: Parties to the KP set up an Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), and the Parties to the FCCC initiated a Dialogue on long-term cooperation action to address climate change by enhancing implementation of the convention (LCA). Accordingly, the year 2005 is indicative of normative contestation on the range of legitimate policy options to tackle climate change at the center of two norms of the CBDR and the precautionary approach not only within the UN-based climate change negotiations but also outside the UN negotiation process by the emergence of competing climate change institutions.

In the face of normative contestation at the global scale in the second constitutional phase, numerous climate change institutions have come out. Though different in their format, these institutions cannot exist outside the normative space whose range of legitimate policy options are drawn and extended by two pillars of the UNFCCC/KP and the APP. The emergent institutions inevitably situate themselves somewhere in the range of legitimate policy options in normative contestation. This position-setting, however, is done by the agents that perceive and re-interpret global norms under normative contestation, define their "perceived positions" in the normative contestation, take the roles on the basis of the normative position, and instantiate the roles by practices (Haas 2001, p.26). The institution born after the year 2005 is therefore a representation of the normative position of the agents involved in normative contestation and at the same time a structure which the agents aspire to be constitutive of and constrained by. The agents involved in the institutional-building are not delimited to the nation states but extended to non-state actors such as business, environmental NGOs, cities, and citizens. However, most importantly, the agent role of regional cooperative organization (hereafter regional organization) cannot be omitted. Parties to the

UN are classified into five regional groups of Africa, Asia, Central and Eastern Europe, Lain America and the Caribbean stats, and the Western Europe and Other Group. However, within the UN negotiation process, only the presence of the European Union (EU) is markedly recognized. Twenty seven members of the EU members gather to form a common position for the international climate negotiations, and the country of the EU Presidency with six month term, express the EU position (UNFCCC 2014). In the first constitutional phase, the EU advocated the leading role of developed countries in responsibility-bearing and the binding commitments with a target and time-table approach (Bodansky 2001).

In the face of the second constitutional phase, the European Commission (EC), one of the three pillars of the EU, made a communication in 2005 to the European Council to form the EU position toward the post-2012 climate framework. In recognition of the interpretive contestation between developing countries and the US on the CBDR, the EC suggested that the EU should play a role in resolving this impasse. Along this line, for a post 2012 climate change agreement, a broadened scope of participation by "meaningful participation of all developed countries and the participation of developing countries" on the basis of CBDR was suggested. The EC recommended that the GHG emission reduction target of the EU should hinge upon the level and type of participation of other major emitting countries. With regard to the precautionary approach, the scope of international action was suggested to be widened. Target & time-table approach with marketbased instruments, which would continue to be a backbone of post-2012 international climate agreement, should be complemented by additional sectoral policies such as the climate-friendly technology and aviation and maritime transport (EC 2005, p.11). As a follow-up, the EC made another communication to the European Council that the EU should suggest a 30 % GHG emission reduction target of developed countries by 2020 with 1990 as a base year in order to ensure the stabilization of GHG concentration within the 2°C limit for the post-2012 international climate regime. At the same time, developing countries, particularly major emerging economies, were suggested to reduce the growth of emissions and the absolute amount of GHG emission after 2020, except the least developed countries. Regardless of the international negotiation on this target, the EU was recommended to pursue a 20 % reduction target with the same time frame with the supplemental targets of EU energy efficiency increase by 20 % and EU renewable energy increase by 20 % by 2020. On the ground of target & time-table approach, the EC communicated that the EU emission trading scheme is the major tool for developed countries to flexibly meet their target and that domestic trading schemes should be linked to the EU scheme (EC 2007).

Ahead of the UN climate conference at the end of 2007 where the negotiation on the post-Kyoto climate agreement was to be launched, on the ground of EC Communications, the European Council affirmed that the post-Kyoto agreement should be grounded and broadened on the Kyoto Protocol architecture. Along this line, the EU endorsed some elements that have normative relevance with the founding principles of the CBDR and precautionary approach for the post-2012 climate framework. With regard to the CBDR, the EU assured that developed countries should take a lead by taking a 30% reduction by 2020 with the 1990 year as a baseline and that developing countries also need to address the increasing share of GHG emission. The EU would endorse an EU target of a 30% GHG reduction by 2020 with 1990 as a base year under the condition that developed countries also have comparable target and that "economically more advanced developing countries" also have contributory commitments in the GHG reduction. With regard to the precautionary approach, the European Council reaffirmed its support of the quantified national GHG emission reduction target and time-table approach as a central piece of an international carbon market, and the Europe commission was invited to review the EU Emissions Trading Scheme (EU 2007, para 29-35).

The EU, at the regional level, initiated region-wide action in a top-down manner under the *Environment Directorate-General* of the European Commission that enforces legally-binding EU environmental laws; and then it established the *Directorate-General for Climate Action* (DG CLIMA) in 2010 to govern regional climate change issues solely (DG CLIMA 2013). The EU created regional institutions to function under mandatory UN carbon reduction compliance regime. These include the EU Emission Trading Scheme (ETS) which acts as a regional compliance carbon market and the independent EU-wide commitments of GHG emission reductions, renewable energy share increases, and energy efficiency increases of at least 20% by 2020 under the slogan of '20 20 20 by 2020' (EC

2008). Though the EU is in an effort to expand the range of policy options with regard to the CBDR and the precautionary approach, the EU assured that the expansion needs to be grounded on the Kyoto architecture. Though agreeing to the expansion of participation of enhanced developing countries in the mitigation efforts, the EU argues that developed countries should take a lead. Also, the EU supported the global target & time-table approach with the other supplemental mitigation measures such as technology development and transfer and has shown a leading role of putting stringent mitigation obligations with targets and time-table onto the European member states through institutional linkage with the UNFCCC/KP. Accordingly, the EU has become a synergistic and cooperative building bloc toward the UNFCCC/KP (Biermann et al. 2009). The EU made a clear normative position set and propelled through the institutional-building that are within the range of policy options of the UNFCCC/KP.

Meanwhile, a bit different picture is drawn in the Asian region which can be described as having shared layers of governance by the existence of multiple regional organizations such as the ASEAN, the APEC, and the EAS, and the SAARC with overlapping membership, functions, and geographical coverage. None of the Asian regional organizations represents the Asian region and has been given official authority at the UN climate change negotiation table. Interestingly, however, in 2007 when a procedural step to draw a roadmap for post-Kyoto framework was supposed to be taken at Bali, the Asian regional organizations all at once made formal declarations to show their positions. The ASEAN made the ASEAN Declaration on the 13th session of the Conference of the Parties (COPs) to the UNFCCC and the 3rd session of the COPs serving as the Meeting of the Parties (CMP) to the Kyoto Protocol (2007). The EAS announced the Singapore Declaration on Climate Change, Energy and the Environment (EAS 2007c) in line with the EAS' Cebu Declaration on East Asian Energy Security (EAS 2007b). The APEC also expressed the Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development (APEC 2007b) that brought about the Fukui Declaration on Low Carbon Paths to Energy Security (APEC 2010b). Despite these formal declarations, the agent role of the Asian regional organizations has received less attention, and, thus, the Asian regional organizations' positions in the face of global normative contestation remain

obscure and presumably divergent. In this regard, this research will investigate whether the Asian region works as a building bloc, a site of resistance, or both (Acharya 2012) to the UNFCCC/KP which has been undergoing normative contestation. Noteworthy is that Asian regional climate change institutions commonly have the nature of informal institutions that does not enforce a constraint on the behaviors of actors in a legally-binding manner but express aspirational commitments within the continuum of hard-soft legality. (Abbott and Snidal 2000). Particularly, the Asian climate change institutions take the form of official joint statements, formal declarations, initiatives, and practices. Though informal, they are "institutionalized forms of expression" (Ruggie 1998, p. 861) and communicative actions that implicate what nation states in the region collectively positions as the most appropriate (Risse-Kappen 2000). Accordingly, the inference of normative positions from the Asian regional organizations' formal declaration and relevant practices can be justified. The next section will unpack the Asian regional climate change institutions and distill the normative positions of the Asian regional organizations on two climate change norms of the CBDR and the precautionary approach.

Section 4. ANALYSIS

6.4.1. The ASEAN

The ASEAN boasts of the longest history of taking a lead in cooperation for peace and stability in Asian region since 1967, and its member states are ten Southeast Asian nations of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam (ASEAN 2013a). ASEAN came to have a community form, sustained by three pillars of Political-Security Community, Economic Community, and Socio-Cultural Community (ASEAN 2003). The founding principle that determines the ASEAN members' code of conduct is noninterference (Acharya 1997).⁷² Non-interference originates from western respect for the equality-of-

For the study on the continuum of hard-soft institutions, refer to Abbott and Snidal (2000).
 The other principles other than the non-interference are shown in Treaty of Amity and Cooperation in Southeast

sovereignty of nation states and rights-to-exclusive sovereignty. The ASEAN member states, having common experience of liberation from colonial and military intervention, have shown strict preference for and adherence to the non-interference (Ramcharan 2000). Noteworthy is that the non-interference on the ground of sovereignty comprises the logic of regional disintegration (Tranholm-Mikkelsen 1991). This principle has been practiced in the ASEAN in a manner that ASEAN member states do neither take an open fault-finding of nor support domestic illegal opposition movements in a neighboring state. Adherence to non-interference has explicated two aspects of the ASEAN. One is that the non-interference has been regarded as one of variables to explain the different degree of institutionalization between the ASEAN and the EU exemplar in that the ASEAN has formed a diplomatic community rather than a political and functional integration (Acharya 2004; Funston 2000). The other is that non-interference is the source of the institutional in-effectiveness of the ASEAN in regional collective behaviors in economic and social dimension (Aggarwal and Chow 2010; Funston 2000).

Before the member countries of the ASEAN embraced an issue of climate change as a real regional threat (Gerstl and Helmke 2012), ASEAN has struggled the regional issue of haze pollution that arises from slash-and-burning forest fires, particularly, in Indonesia, since 1991. Making use of the Singapore Declaration, ASEAN expressed its commitments to functional cooperation in environmental issue areas of trans-boundary pollution, natural disasters, forest fires and anti-tropical timber campaign from the perspective of sustainable development. Also, ASEAN expected their environmental commitments to be reflected in the result of the United Nations Conference on Environment and Development held in 1992 at Rio de Janeiro (ASEAN 1992, para 7). On the basis of strong complaints by Singapore and Malaysia, ASEAN framed the haze as a broad environmental issue of air pollution and in 1995 generated the ASEAN Cooperation Plan on Trans-boundary Pollution (CPTP), under which measures to address haze problem such as information-sharing and biomass-burning period regulation are included. Yet, the 1997 haze crisis by land and forest fires mainly in Indonesia led the ASEAN to adopt non-binding haze-specific Regional Haze Action Plan

Asia (ASEAN 1976, article 2).

(RHAP). The RHAP provides specialized assistance by setting a time-table for the member states to make national plans of preventive measures by March 1998 and refurbished the regional early warning and monitoring mechanism (RHAP 1997). The RHAP received both hailed and dubious look; the RHAP on the basis of voluntary specialized assistance could work as an efficient instrument without sanctions (Florano 2004); yet, the RHAP was ineffective because the member states underwent neither domestic legal change nor legal enforcement. Indonesia, the major culprit of regional haze pollution, did not show tangible domestic action under the RHAP, and the haze persisted (Aggarwal and Chow 2010). The RHAP has a face of soft-law with assistance-based content.

Then, in 2002, the ASEAN concluded making a legally-binding regional treaty, the ASEAN Agreement on Trans-boundary Haze Pollution (ATHP) (ATHP 2002). Yet, this Agreement failed to effectively work. Firstly, there is no specific compliance rule to reduce haze such as target and time-table. Secondly, there is no enforcement mechanism through sanction on member states in case of non-compliance. Thirdly, there is no willingness from the major polluter, Indonesia, which did not ratify the Agreement, though the rest of ASEAN member states ratified the Agreement. All these reasons are attributable to the regional principle of non-interference that bases itself in the respect-for-sovereignty and consensual decision-making (Aggarwal and Chow 2010). The ATHP has a face of hard law in the continuum of legality, but it lacks the authority to elicit the commitments from the member states. From the perspective of legality, it remains a vacant hard shell.

The regional norm and normative practice in the haze pollution draw a shadow in the ASEAN's regional and global response in the issue area of climate change. Under the UN-based climate change institutions in the first constitutional phase that led to the adoption of the Kyoto Protocol where a legally-binding GHG reduction target & time-table is only to the developed industrialized countries on the interpretation of two major principles of the CBDR and the precautionary approach, developing countries asserted their exemption in the international action on climate change on the basis of adherence-to-sovereignty, right-to-development, and intragenerational equity (INC/FCCC 1991b). The ASEAN member states, classified into the grouping of

developing countries, are exempted from any commitments under the UNFCCC/KP. From the perspective of the ASEAN, the UNFCCC/KP is an international hard law with non-commitments from developing countries. It is not surprising that the existing interpretation of the CBDR and the precautionary approach was diffused without friction by the ASEAN member states at the regional level.

However, since 2005 when the issue area of climate change experienced the institutional fragmentation started by the appearance of the Asia-Pacific Partnership on Clean Development and Climate (APP) and the second constitutional period commenced, ⁷³ the existing UN-based normative claims of the CBDR and the precautionary approach came to be under re-interpretation. In response, in November 2007, the ASEAN announced the ASEAN Declaration on the 13th session of the COPs to the UNFCCC and the 3rd session of the CMP to the Kyoto Protocol. On the ground of the declaration, the ASEAN has announced a series of Joint Statements to the subsequent sessions of the COPs to the UNFCCC in 2009, 2010, and 2011. In this declaration, ASEAN indicated its recognition of climate change as a threat to the regional attainment of sustainable development and the Millennium Development Goals and its collaborative role in ensuring the outcome at the COP-13 to the UNFCCC and the CMP-3 to the KP held in 2007 at Bali (ASEAN 2007, preface). ASEAN indicated that the establishment of the post-Kyoto arrangement needs to be in consideration of the CBDR (ASEAN 2007, clause 1). In its Declaration, identifying itself as a complex of "developing countries", ASEAN urged the Annex-I Parties to the UNFCCC to take a lead in national emission reduction commitments on the basis of historical responsibility and economic capability (ASEAN 2007, clause 3); particularly, Annex-I Parties need to put their commitment of quantified national emission reduction into action (ASEAN 2007, clause 3). Only in the matter of climate change impacts and adaptation strategies, all countries, including developing countries, are indicated to change their national behaviors (ASEAN 2007, clause 8). With regard to the precautionary approach, ASEAN respected scientific findings of the Fourth Assessment Report of the IPCC and reaffirmed GHG mitigation as a primary purpose (ASEAN 2007, preface). Also, ASEAN indicated its efforts to

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⁷³ The establishment of the APP was announced in July 2005 at the 38th ASEAN Ministerial in Vientiane, Laos (APP 2014a).

forge the post-Kyoto arrangement to "avoid the gap between the first and the second commitment periods" during which the Annex-I Parties need to meet quantified national emission reduction targets (ASEAN 2007, clause 2). Also, ASEAN regarded the KP's flexible mechanism of Clean Development Mechanism as an instrument for climate-friendly technology development and transfer and sustainable development (ASEAN 2007, clause 7). The national adaptation through an incorporation of climate change impact in their development policing and strategies by all countries is emphasized (ASEAN 2007, clause 8).

Noteworthy is that in the result of the COP-13 to the UNFCCC, held in 2007, the range of policy options with regard to the CBDR and the precautionary approach experienced the extension.⁷⁴ Concerning the CBDR, the existing terms of Annex-I and non-Annex I, which specifically and statically categorizes who bears the obligation, disappeared in the Bali Action Plan. Instead, those terms were replaced by developed country parties and developing country parties that have openended categorization. Concerning the precautionary approach, Annex I Parties can enjoy an extended menu of actionable options; the level of action can be national or international, and the kind of actions can be quantified emission reduction or others; also, the actions can be legally-binding commitments or voluntary actions, and the acknowledgement of actions is result-based or effortbased (UNFCCC 2007, para 1(b); Rajamani 2008). In 2009 when the COP-15 was to reach the 'agreed outcome' for now, up to and beyond 2012 on the basis of the 2007 Bali Action Plan, ASEAN showed its support of previous narrow range of options for the Annex I Parties. ASEAN recalled the commitment responsibility of developed country Parties, which is stipulated in Article 4.2 of the UNFCCC, to take a lead in modifying longer-term trends in anthropogenic emissions on the ground of historical responsibility and economic capability (ASEAN 2009, preface and clause 3). Also, ASEAN expressed its worries on the Annex I Parties' existing and future unilateral policies and measures on climate change for their potential negative influence on the developing countries' sustainable development (ASEAN 2009, clause 5). Only all Parties, including developing countries,

⁷⁴ The COP-13 produced the Bali Action Plan to initiate a "process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session" (UNFCCC 2007, Decision 1/CP.13(1)).

are urged to reflect the integrated coastal and ocean management approach in their national effort in line with the Mando Ocean Declaration of the World Ocean Conference (ASEAN 2009, clause 7). ASEAN recognized the scientific causality between human impact and climate change on the ground of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and affirmed the UNFCCC as "the basic framework" and the KP as "legal instrument for international community" (ASEAN 2009, preface). Along this line, ASEAN urged the mitigation commitments from the Annex I Parties by taking deeper and early cuts of national GHG emissions (ASEAN 2009, clause 3).

Then, the COP-15, held in 2009, produced the Copenhagen Accord which required the commitments from both Annex-I Parties and non-Annex-I Parties. The Annex I parties are required to commit to implementing the economy-wide quantified emission targets for 2020 and the non-Annex I parties to implement mitigation actions. Only, least developed countries and small island developing countries are given discretion to take mitigation action voluntarily and with support (UNFCCC 2009, para 4 &5). With regard to the mitigation action on the ground of precautionary approach, there is not a specific and unified standard but an equivocal guideline of measurable, reportable and verifiable manner. The Annex I parties are to communicate their 'economy-wide', not 'national', target to the Secretariat for compilation (UNFCCC 2009, para 4). However, the Copenhagen Accord was not acknowledged as a legal instrument, so the decision on 'legally' agreed outcome' was deferred to the COP-16 held in 2010 (Rajamani 2010). Under this context, ASEAN Leaders' Statement on Joint Response to Climate Change was announced in April 2010. Here, ASEAN expressed its recognition that "Southeast Asian region" is vulnerable to the adverse effect of climate change (ASEAN 2010a, preface). ASEAN reaffirmed the CBDR and continued calling on developed countries to take a lead in making more ambitious commitments, supporting developing countries, and ensuring their unilateral policies and measures not to negatively influence the sustainable development of developing countries, and fulfilling their obligations under the UNFCCC. Also, a full consideration by developed countries on the least developed countries and those most affected by climate change was urged (ASEAN 2010a, preface and clause 3~6). ASEAN only

encouraged developing countries to implement Nationally Appropriate Mitigation Actions on a voluntary basis (ASEAN 2010a, clause 7). Meanwhile, ASEAN affirmed the UNFCCC as "legal framework" and the KP as "legal instrument for international community" (ASEAN 2010a). As an extension, ASEAN urged all parties to discuss appropriate provisions for "a legally binding agreement" to stabilize the global temperature to below 2 degrees Celsius (ASEAN 2010a, clause 1). Developed countries were called upon to show leadership in setting "specific and binding targets" for national GHG emission reduction in mid-term and long-term time-table (ASEAN 2010a, clause 1 and 3). This is not to say that adaptation is not weighted other than the mitigation. Notable is that adaptation measures are incorporated within the frame of sustainable development (ASEAN 2010a, clause 1 & 17). Noteworthy is that ASEAN reaffirmed that the ASEAN can contribute to the mitigation emissions through the agreement on and effective implementation of Reduced Emission from Deforestation and Forest Degradation (REDD)-plus mechanisms (ASEAN 2010a, clause 9).

The Cancun Agreement, the outcome of the COP-16 to the UNFCCC in 2010, obtained the legal status. With regard to the CBDR, there came parallel action pathway in the responsibility-bearing by both developed country and developing countries. Concerning precautionary approach, developed country Parties are given discretion to choose nationally appropriate mitigation "commitments" or "actions", and developing country Parties are to take nationally appropriate mitigation 'actions' only (UNFCCC 2010, para 36 & 48). Particularly, there exist no numerical specifics with regard to the GHG emission reduction target, time-frame, and base year. The Cancun Agreement draws a future trajectory that deviates from the Kyoto's differentiated obligation between developed and developing countries and mandatory target & time-table approach (Rajamani 2011). Ahead of the COP-17 held at the end of year 2011 at Durban, ASEAN announced Joint Statement and emphasized again that Southeast Asian region is vulnerable to climate change (ASEAN 2011, preface). ASEAN urged developed countries to take a lead to the global challenge of climate change on the ground of the CBDR and (ASEAN 2011, clause 6). With regard to precautionary approach, considering the scientific findings of the Fourth Assessment Report of the IPCC, the Joint Statement explicated that "legally-binding agreement" needs to be secured in a manner that the emission

reduction target is specifically quantified and nationally imposed. Developed countries are called upon to take a deeper cut of 25% to 40% on the GHG emission with the 1990 level as a baseline (ASEAN 2011, clause 1 and 3). ASEAN reaffirmed that the adaptation as well as the mitigation strategies are to be incorporated into national development strategies and policies in the context of sustainable development (ASEAN 2011, clause 9). The ASEAN has continuously elucidated this normative position of foreign policy of climate change directly to the COPs to the UNFCCC and the CMP to the KP.

On the basis of this external normative position, the ASEAN ventured two regional initiatives. In the Socio-Cultural Community pillar, ASEAN Working Group on Climate Change (AWGCC) was established as a regional consultative platform to implement *ASEAN Climate Change Initiative* (ACCI). The ACCI, adopted in 2009, is ASEAN-wide actions for policy and strategy formulation, information-sharing, capacity-building, and technology transfer with regard to climate change (Letchumanan, 2010). Meanwhile, in the pillar of the ASEAN Economic Community, endorsed in the same year was *ASEAN Multi-Sectoral Framework on Climate Change: Agriculture, Fisheries and Forestry Towards Food Security* (AFCC Framework) (ASEAN 2009). The AFCC Framework was designed to complement the ACCI and to be implemented by ASEAN Ad-Hoc Steering Committee on Climate Change & Food Security (ASEAN 2013b). The AFCC Framework is to integrate scattered ASEAN's sectoral climate change activities not only in agriculture, fisheries, livestock and forestry but also environment, health, and energy sectors and to reflect mitigation and adaptation strategies into socio-economic development (ASEAN 2013b).

However, despite being driven in support of the UNFCCC/KP, none of the ASEAN initiatives entails a region-wide legal-binding emission reduction target & time-table. Particularly, the ACCI "lacks the mandate" to enforce stringent climate change actions to ASEAN member states (Manila Bulletin 2011), though there is a positive sign that a new partnership, ASEAN for a Fair, Ambitious and Binding Global Climate Deal (A-FAB), was formed between ASEAN, Greenpeace Southeast Asia and Oxfam to deliver non-vague commitments of ASEAN with legal obligations and to strengthen the position of ASEAN as a regional block at the UNFCCC (A-FAB 2014a; 2014b).

Furthermore, it is dubious whether the AWGCC, which takes not a mandatorily empowered organization but a form of working group, can implement the ACCI across the other working groups within the Socio-Cultural Community and also other internal organizations across the other pillars of the Economic Community and the Political-Security Community.

Notably, in 2007 when the ASEAN announced its Declaration on climate change, the thirteenth COP to the UNFCCC produced the Bali Action Plan in which the 'reducing emissions from deforestation in developing countries' (REDD) mechanism for developing countries to participate in mitigation (UNFCCC 2007).⁷⁵ This was a big stride forward toward mitigation actions. Firstly, mitigation is committed by developing countries with an emphasis on carbon emission cutbacks rather than on carbon sinks. Secondly, this type of action is a 'compensated reduction' from the standpoint of developing countries which will receive financial compensation for deforestation reduction (Paul 2009). This means that carbon reduction from 'sovereign' resource of forestry becomes a financial source.

ASEAN showed a quick formation of its position in response to the REDD mechanism. The ASEAN Regional Knowledge Network (ARKN) on Forests and Climate Change was established in 2008 on the basis of a decision made by the ASEAN Senior Officials on Forestry (ASOF). The ARKN recommended developing a position paper and framed a draft of the ASEAN Common Position Paper on REDD. This position paper was adopted by the ASOF and submitted by Indonesia on behalf of ASEAN member states at the fourteenth COP to the UNFCCC held in December 2008 (ASEAN 2010c). In this position paper, ASEAN, defining itself as a 'strong forestry block' of developing countries, indicated its existing region-wide activities and expressed outwardly its preferences for methodological issues, policy approaches, positive incentives for REDD and the role of Annex I countries. Particularly in consideration of national circumstances and capacity, it was noted that choices on methodologies for defining baseline or reference emission levels and policy approaches for a range of mitigation activities had to be left open. Regarding the readiness of

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⁷⁵ A way for developing countries to participate in mitigation actions by reducing emissions from deforestation was suggested at COP 11 by Papua New Guinea and Costa Rica (UNFCCC 2005). With additional functions, the REDD mechanism was developed into REDD-plus mechanism. Plus activities are related with funding/investment for tropical forests, which store carbon, increase sequestration, create rain, moderate weather conditions and protect biodiversity rather than emission reductions (UNFCCC 2009, para 6 &8).

developing countries, positive incentives were to be diversified by fund-based as well as market-based approaches. Also mentioned was the need for support from Annex I countries for the enhancement of the readiness of developing countries in capacity building, improvements to infrastructure, technology transfer, and exchanges of knowledge and experience for developing countries (ASEAN 2008).

In response to the REDD-plus mechanism, produced at the fifteenth COP to the UNFCCC, the draft 'ASEAN Common Position Paper on REDD-plus in Developing Countries' was prepared and submitted. ASEAN actively expressed its view that the decisions of the Bali Action Plan and the KP have to be balanced (ASEAN 2010b, para 1). While the equity principle of CBDR was reiterated on the mitigation of GHG emissions, consideration on national circumstances on the REDD-plus mechanism was reemphasized (ASEAN 2010b, para 2 & 3). ASEAN revealed its preference for the elements of the REDD-plus modalities (ASEAN 2010b, para 6), which were incorporated into the Cancun Agreement, which was the outcome of negotiations at COP 16 to the UNFCCC held in Cancun in December 2010. To be specific, firstly, the common position of ASEAN was that methodological approaches need to be flexible and phase-based and the choice of phase and elements of a phase need to be under national discretion. This is shown in paragraphs 71, 73 and 74 of the Cancun Agreement (UNFCCC 2010). Secondly, the linkage with financial sources needs to be fund-based, market-based, or a combination of both depending on national circumstances. This is related to the development of one or more market-based mechanisms and one or more non-marketbased mechanisms at COP 17 (UNFCCC 2010, para 80 & 84). Thirdly, a balance was emphasized between the actions of developing countries and the support of developed countries in the ASEAN position paper, which has some connection with paragraph 76 of the Cancun Agreement.

To summarize, during the time the UN-based climate change institution was formed and specified, the ASEAN underwent its own experiment to regulate haze problem and make hard-law treaty. Regional norms of sovereignty and non-interference led the ASEAN's Haze Agreement to remain as hard-law without compliance rules, enforcement rules, and commitment from major actor, Indonesia. The norms of the CBDR and the precautionary approach, defining the imposition of GHG

emission reduction target & time-table onto developed countries as the range of legitimate policy options, did not conflict with ASEAN's existing regional norms, because ASEAN member states were identified as developing countries. In the face of contestant normative interpretation on the CBDR and the precautionary approach, ASEAN made a Declaration and defended the existing normative position which is primarily claimed within the UN-based negotiation process. With defending normative position, ASEAN made regional initiatives, but their institutional effectiveness is not warranted due to the lingering shadow of regional norms. The shell with no flesh at the global level is replicated at the regional level. Indonesia, the laggard in the regional collective action not only on haze pollution but also on climate change for its hesitance in bold mitigation action, has been highly active in the REDD plus mechanism where mitigation measures by reducing deforestation of national 'sovereign' resource of forest is financially compensated. ASEAN has been active in internally converging a regional stance on the modalities of the REDD plus mechanism. ASEAN's regional focus on the REDD plus mechanism is largely attributed to the norm congruence between the respect-for-sovereignty and the compensation-for-sovereign-resource. The normative contestation on the CBDR and the precautionary approach at the international level provides a good condition for ASEAN to sail ASEAN way on the subject matter of forest within the issue area of climate change.

6.4.2. The APEC

The APEC, comprising twenty one member economies residing around the Pacific Rim, appeared in 1989. Because major objective of the APEC is laid on the pursuit of open trade, favorable investment and business environment, and economic integration: in a nutshell, trade liberalization (APEC 2014a). The 1994 Bogor Declaration envisioned a phase-based region's path toward trade liberalization through the commitments from developed member countries by 2010 and from developing member countries by 2020 (APEC 1994). The course of APEC toward the attainment of what was indicated in Bogor Declaration implicates two principles (or norms) that undergird the

actions of the APEC members: open regionalism and voluntarism (Aggarwal 2000). 76

International institution for multilateral cooperation on trade-liberalization, World Trade Organization, pursues trade liberalization on the norm of 'reciprocity'. 77 Yet, the open regionalism, also indicative of an aspiration for regional trade liberalization, takes 'concerted unilateralism'. The concerted unilateralism means that APEC members are given discretion in the decision on timetables and priorities toward a common objective of free trade by 2010/2020 (Ravenhill 2010). Though being differently termed, concerted unilateralism is part of reciprocity. Under the WTO's interpretation of reciprocity, member governments directly and bilaterally balance the benefits; but individual member government under concerted unilateralism takes a balancing-of-benefit in an indirect, group-based, and discretionary manner; the reciprocity is diffused over multiple member countries. Under the concerted unilateralism, individual member government can re-interpret its right and obligation; (Aggarwal 2000; Keohane 1986). The other principle of the APEC, voluntarism, has multi-dimensional implications; action is taken on voluntary basis; decision-making is based on flexibility and consensus, not on voting; the APEC does not have an authority to enforce and sanction the member government for non-compliance; the commitments are not legally-binding (Aggarwal 2000). To summarize, APEC has brewed over an expectation that the action of member governments within APEC is on a concertedly unilateral and flexible basis, and this constitutes what shapes the Asia-Pacific regional cooperation to multilateral cooperation.

Yet, the Asia-Pacific way of the unilateralism-based open regionalism and the flexibility-based voluntarism has been under doubtful eyes. In terms of effectiveness in collective action, Asia-Pacific way toward trade liberalization has been thought of as failure at the regional level in comparison with WTO way at the global level. Also, rather than reaching the point of being a regional identity, the Asia-Pacific way has the risk of being a legitimate instrument to disguise the inability of leading APEC member states to collective action over individual interest (Acharya 1997). That is, the Asia-Pacific norms of concerted unilateralism and flexibility have been hardly regarded

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⁷⁶ There is a different view on two distinctive APEC principles. Ravenhill (2010) set 'open regionalism' and 'concerted unilateralism'. Here in this article, the author sees the open regionalism being inclusive of the concerted unilateralism.

⁷⁷ Reciprocity means that the imposition of obligation on one's action is contingent on the action of another and that the exchanged actions are roughly equivalent (Keohane 1986).

as elements for Asian regionalism to effectively work as a building bloc to multilateralism toward trade liberalization. Thus, the common objective of trade liberalization in the APEC has had the potential to be extended to trade facilitation and economic and technical cooperation (Ravenhill 2010). However, despite the failure of Asia-Pacific way of trade liberalization, APEC has brewed over the norms of concerted unilateralism and flexibility in the regional action for cooperation.

Then, what happened when these existing regional norms met the climate change norms of the CBDR and the precautionary approach of the UNFCCC/KP? In the midst of a leaning drive for regional industrialization and economic harmonization, APEC embraced climate change issue with a concern on natural disasters that materialize global warming impact and influence fossil fueldependent economic growth in Asian region (APEC 2014b). In this vein, in 2007, there came out Sydney APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development where the issue of climate change is framed with pre-existing regional issues of economic growth and energy security (APEC 2007b, Preface). The APEC does not frame the APEC region by the terms of use in the UNFCCC. Instead, it weighed importance in terms of world population concentration in APEC region by 41 per cent and its varying degrees of economies. On the basis of this regional identity, APEC on the ground of concerted unilateralism met the CBDR and underwent re-interpretation. With regard to the common responsibility of the CBDR, APEC provided a separate paragraph under the title of "comprehensiveness" whereby "concerted international action with all economies contributing to shared global goals" on climate change is in need. Meanwhile, concerning on differentiated responsibility between developed and developing countries, APEC does not take differentiation by emphasizing "differences in economic and social conditions" under the title of "respect for different domestic circumstances and capacities" (APEC 2007b, Future international action). Accordingly, APEC pushed comprehensive participation by both developed and developing countries in the regional climate change action.

The precautionary approach met the 'flexibility' on the ground of voluntarism. The APEC provided a separate paragraph of "flexibility" and supported global efforts to be exerted in a per se approach. Firstly, the APEC replaced nation-based GHG emission reduction target by sector-based

targets and time tables in two areas: energy intensity reduction by 25% with 2005 as a base year by the year 2030 and forest cover increase by 20 million hectares of all types of forests by 2020 (APEC 2007b, Action agendas). Secondly, time table is made on a long-term basis. Thirdly, APEC pursued these sector-based targets and time tables in a non-legal binding manner. Alongside the regional mitigation goals set in a sector-based, long-term, and non-legal binding way, fourthly, APEC emphasized the role of low and zero emission energy sources and technologies in the reduction of GHG emission. In this regard, regional cooperation on development, deployment and transfer of clean technologies was indicated. Fifthly, other than mitigation, the APEC brought adaptation to the fore and framed the adaptation as a priority for domestic development. The APEC noted the adaptation measures need a support from an international community in terms of policy exchanges, financing, capacity-building, and technology transfer. Areas for adaptation measures to be applied are energy efficiency, forest, low emission technology and innovation, alternative low carbon energy uses, energy security, trade in environmental goods and services, civil aviation transport, policy analysis capability, marine and coastal resources, etc (APEC 2007b, Annex). Accordingly, despite the affirmation of its commitment to the UNFCCC, APEC regarded the UNFCCC as "an appropriate multilateral forum for international negotiations on climate change" (APEC 2007b), so the institutional legality of the UNFCCC is much diluted. The legally-binding target & time-table approach to the global climate change action is unsupported by the APEC.

This normative position of the APEC in the issue area of climate change was further extended and institutionalized in the regional cooperation in the issue area of energy cooperation under the notion of "low carbon path to energy security" (APEC 2010a). Regional energy cooperation was intended to reduce adverse environmental effects from energy supply and use in the context of regional socio-economic growth from 1990 at the center of the Energy Working Group (EWG) (APEC 2013c). The 4th APEC Energy Ministers' Meeting proposed 'sustainable energy development policies' to reduce environmental impact of energy development, and emphasized the integrity with the pre-existing priorities of economic growth and energy security to reduce GHG emission in the context of UNFCCC. Then, the APEC Energy Security Initiative was framed by the

EWG and endorsed by APEC Leaders in 2001 (APEC 2010a, message para 2). This initiative with an objective to secure the region from short-term energy supply volatility and disruptions and design long-term measures in sub-sectors of energy energy efficiency, clean energy uses, and energy infrastructure (APEC 2010a, message para 2; APEC 2013).

The energy efficiency sub-sector showed an extensive stride forward by setting a regionwide energy intensity reduction target⁷⁸ and establishing knowledge platform of APEC Energy Standards Information System (ESIS) to provide information on energy efficiency standards and labeling in the APEC region (APEC 2010a, instructions para 10). Furthermore, the APEC Energy Peer Review Mechanism was set up in May 2007 to assess energy efficiency and to frame cooperative energy efficiency design at the regional level as well as the Collaborative Assessments of Standards and Testing for the energy-intensive appliances in collaboration with the Major Economies Forum (MEF) (APEC 2010a, instructions para 9). In the sub-sector of energy technology development sector, the Asia-Pacific Network for Energy Technology was established in 2008 for research and information-sharing on renewable energy technologies, cost-effective carbon capture and storage, clean coal technologies, and smart-grid technologies. In the sector of alternative and low carbon energy uses, a variety of initiatives were taken in terms of renewable energy options assessment, criteria development for performance-based biodiesel standards, Nuclear Power Emissions Reduction Potential Study. In this sector, institutional linkage with the international partnerships such as the US-initiated APP was devised (APEC 2007b). In the Darwin Declaration of the APEC Energy Ministerial Meeting in 2007, the APP was welcomed (APEC 2007), and the Building and Appliances Task Force of the APP was given a guest status for collaboration at the Energy Working Group Expert Group on Energy Efficiency and Conservation of the APEC (APEC 2010b).

The afore-mentioned activities of the APEC can be delineated by *sector-based institutionalization* in line with economic growth and climate change with internal technology-development initiatives, regulatory measures, and information platform and the *institutional linkage*

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⁷⁸ 25% reduction by 2030 with year 2005 as a base year (APEC 2007b) and 45% reduction by 2035 (APEC 2012b).

with relevant regional and global institutions by the centrifugal role of APEC EWG. The APEC's regional focus on the energy sectoral technology development has tight relation to its contestant normative position to the existing interpretation of the CBDR and the precautionary approach due to the normative incongruence with existing regional norms of 'concerted unilateralism' of open regionalism and 'flexibility' of voluntarism. The APEC pushed the regional norms of 'concerted unilateralism' and 'flexibility' in the energy sectoral technical cooperation at the regional level. Furthermore, in the Bali Action Plan as a result of the thirteenth COP to the UNFCCC held in 2008, the cooperation between the UNFCCC and the APEC as one of intergovernmental processes was recommended for synergistic result under the mechanisms for technology transfer (UNFCCC 2007; Annex I-Para 19(a)). Later, with a focus both on development and transfer of technology at the fifteenth COP to the UNFCCC in 2009, it was decided to establish Technology Mechanism (UNFCCC 2009; Para 11), whose constituting components were set and embodied (UNFCCC 2011b; Para 117). This alludes to the role of the APEC which extensively devising and putting the general concept of energy sectoral commitments of the UNFCCC/KP into practice at the regional level, and affecting in return the structure of the technology development and transfer mechanism of the UNbased climate change regime. Therefore, in the midst of the normative contestation in the interpretation of the CBDR and the precautionary approach at the international level, the APEC experimented the Asia-Pacific way through the subject matter of energy in the issue area of climate change.

6.4.3. The EAS

The EAS is a recently constructed regional cooperative organization. The EAS started from 2005 initially with sixteen member states of ten ASEAN countries, plus three countries of China, Japan, and South Korea, and three other countries of Australia, New Zealand, and India (MOFA 2013). Later, the EAS was expanded by the joining of the US and Russia as member states at the sixth EAS in 2011. The EAS is a leaders-led forum, and actual practices are made through ministerial meetings for economic, foreign, and environmental regional policies. The EAS also aggregated its position on

climate change action by adopting Singapore Declaration on Climate Change, Energy and Environment at the 3rd Summit on November 21 in 2007 (EAS 2007c). In this Declaration, the EAS grasped the UNFCCC/KP as a "core mechanism" to address climate change matter at the global level and affirmed its commitment (EAS 2007c, preface). The EAS recognized that regional economic development ushered in not only the sustainable development poverty eradication in the region but also such challenges as energy security and environment & health threats, and the climate change is framed as an inter-related threat with two existing environmental and health threats (preface). The EAS described the EAS region as having "vulnerability to climate change" (EAS 2007c, clause 7). On the basis of this, the EAS, with regard to the CBDR, revealed its normative position by indicating that "all countries should play a role". Though it was noted that "developed countries should continue to play a leading role", any obligatory action for developed countries under the UNFCCC/KP is not mentioned. What is pursued is the "comprehensive" burden-sharing of both developed and developing countries (EAS 2007c, clause 1 and 6).

On the precautionary approach, the EAS favorably accepted the Fourth Assessment Report of the IPCC and noted that international community is in need "to urgently act to address the growth of global greenhouse gas emissions". Yet, like the APEC, the EAS did not bring forth nation-based binding emission reduction target and time table but instead pursued formulation of "voluntary energy efficiency goals" by 2009 (clause 8(b)) and set the increasing cumulative forest cover by at least 15 million hectares by the year 2020 (clause 9(b)) as main targets to be achieved. The EAS promised commitments to GHG concentration stabilization "in the long run" (clause 2) and upheld an attainment of "a long-term aspirational global emission reduction" (clause 3). Also, deployment of clean technology in the region and development of carbon mitigation technologies were suggested (clause 7 (b) and 8 (d)). Beside the emission reduction activities, the EAS emphasized the necessity of raising "adaptive capacities" of developing countries as "a critical issue" and laying priority not only on mitigation but also adaption. Particularly, the EAS explicated that "sustainable development facilitates adaptation" (preface and clause 4).

In this regard, the EAS unfolded institutionalization of its normative position in two areas

of energy and urban planning. In the energy sector, EAS set five distinctive goals to tackle regional energy security matter: intensified energy efficiency, open and competitive regional energy markets, investment in energy resource, GHG mitigation through effective policies and measures, and infrastructure with involvement of private sectors (EAS 2007b, goals). Yet, the EAS is a dialoguebased forum (EAS 2005), so its internal hierarchy was scanty. Thus, EAS Energy Ministers' Meeting (EMM) was organized in response, and the first meeting was held on August 23, 2007 for energy cooperation (EAS 2007d). Also, the EAS tried to achieve an aspirational energy intensity reduction by forming a linkage with ASEAN Center for Energy (ACE) and Economic Research Institute for ASEAN and East Asia (ERIA) (EAS 2007c, para 8(b)). Particularly, the EAS set EAS Energy Cooperation Task Force with the ASEAN Energy sectoral mechanism (EAS 2007c, para 6). Meanwhile, in the urban planning sector, the EAS Environment Ministers Meeting (EMM) was established. At the first EAS EMM on October 9, 2008 "Achieving Environmentally Sustainable Cities in East Asia" was set as a main theme to actualize regional environmental cooperation (EAS 2008, para 4). In response, High Level Seminar on Environmentally Sustainable Cities was established for cooperative meeting (EAS 2012). In its first meeting in March 2010, five regional recommendation activities were set: i) East Asian Model Cities initiative, ii) clearinghouse for related data and information, ii) public and private sector forum, iv) capacity building program, and iv) EAS ESC Awards on the basis of performance indicators. For actual implementation, ASEAN ESC Model Cities Programme was implemented with a utilization of existing funding mechanism, the Japan-ASEAN Integration Fund (JAIF). Under this program, the EAS designed a linkage with the ASEAN Working Group on Environmental Sustainable Cities and the ASEAN-Japan Dialogue on Environmental Cooperation. The EAS is in an attempt to expand an application of this Programme from the ASEAN countries to the other EAS member countries (Oh 2013).

6.4.4. Analytical Result

To summarize, regional climate change institutions made by the Asian regional organizations are disentangled by their normative positions in the range of legitimate policy options in the table 6-1. In

the regional perception, the UNFCCC is a hard bed-rock for the ASEAN to sit on, because the ASEAN embraced the climate change issue as a threat to the attainment of regional sustainable development. However, the APEC relaxed the constraining legality of the structure by putting the UNFCCC just as an appropriate multilateral forum for negotiation and does not explicitly define itself in the categories of the UNFCCC. The climate change is framed as one of interlinked challenges of economic growth and energy security. The EAS stands in-between the ASEAN and the APEC. On the basis of these perceptions, with regard to two norms of the CBDR and the precautionary approach, the ASEAN's normative position in the range of legitimate policy options shows a support of the policy options of the UNFCCC/KP. On the CBDR, the ASEAN categorized its region as a composite of developing countries vulnerable to climate change and emphasized differentiated responsibility between developed and developing countries. Participation on the basis of common responsibility is conditional to the leading commitments of the developed countries. However, the APEC brought comprehensiveness in the legitimate range of participation to the fore by emphasizing common responsibility and respective capabilities. The EAS stands in-between. Concerning the precautionary approach, the ASEAN put a priority on mitigation on the basis of scientific proof of the 4th assessment report of the IPCC. The ASEAN supported the nation-based quantified emission reduction target and short-term time table to be imposed on the developed countries in a legally-binding manner in the first place and the mitigation by technology through low-carbon technology transfer from developed countries to developing countries in the second place. The adaptation is embraced in the context of sustainable development. Meanwhile, the APEC emphasized the scientific uncertainty and supported the adaptation in the context of different domestic development and capabilities. The mitigation by target & time table is reshaped by sectorbased regional target and time table on a long-term basis with much discretion. Also, mitigation action by technology is pursued in the early stage of technology development. The EAS also stands across the contestation. On the basis of divergent normative position, the regional organizations propelled their positions through region-wide practices. The ASEAN continuously declared a joint statement toward the UN negotiation process and made the ASEAN region-wide climate change initiatives. Meanwhile, the APEC showed an extensive energy-sectoral institutionalization and a linkage with the MEF and the APP which are regarded as contestant climate change negotiation forums against the UNFCCC/KP in terms of legitimacy and power (Karlsson-Vinkhuyzen and McGee 2013). The EAS also built international organizations to implement the competing policy options and, interestingly, formed a linkage with the ASEAN organizations.

 Table 6-1
 Position-setting and -propelling by Asian Regional Organizations

Normative Space		Normative Position		
		ASEAN	EAS	APEC
Common but	Common	Conditional participation	Comprehensive	Comprehensive
Differentiated	responsibility	Conditional participation	participation	participation
Responsibilities and respective	Differentiated Responsibilities	Differentiation	Differentiation	No differentiation
capabilities	Respective capabilities	Respective capabilities	Respective capabilities	Emphasis on different domestic capacities
Precautionary Approach d	Uncertainty	Scientific proof of the 4 th assessment report of IPCC	Scientific proof of the 4 th assessment report	No mentioning
	Action	Mitigation	Adaptation & Mitigation	Adaptation
		Nation-based emission	Sector-based regional	Sector-based regional
	i) Mitigation by	target and time table	target and time table	target and time table
	Target & Time table	On a short-term basis In a legally-binding	On a long-term basis	On a long-term basis
	time table	manner	In a voluntary manner	In a voluntary manner
	ii) Mitigation by	Technology Transfer	Technology	Technology
	technology	From developed countries	development	development
	iechnology	to developing countries	cooperation	cooperation
	iii) Adaptation framing	Sustainable development	Sustainable development	Domestic development

Source: The author on the basis of the analysis

Section 5. CONCLUSION

In the face of normative contestation in global climate change governance, this chapter went over the Asian regional organizations' response by extracting their normative positions and the positionpropelling practices on the basis of the formal declarations on climate change. With two distinctive norms of the CBDR and the precautionary approach, the normative positions and related practices were figured out. The analytical result showed that three Asian regional organizations have different normative positions and have propelled divergent regional practices. This analytical result breeds some implications. Firstly, there exists a divergence in normative position even within the Asian region. The normative position spans from positive projection of the UNFCCC by the ASEAN prism to the competing one by the APEC prism. The divergent normative positions in Asian region can make the Asian nation states not only enjoy plural normative and actionable choices but also exploit coming across multiple positions: normative shopping. What is worse, normative navigation can lead to normative confusion and inaction. Secondly, divergent normative positions in the region are ultimately subject to normative isomorphism through positional interaction on the basis of overlapping memberships. Then, whose position will win over the other positions? It depends on the regional organization's internal institutional build-up and external outreach. Currently, APEC has had extensive institutionalization, and the EAS formed institutional interaction with ASEAN organizations. Of course, ASEAN has its internal initiative, the ACCI, but it "lacks the mandate" to enforce stringent climate change actions within ASEAN (Manila Bulletin 2011). ASEAN is more exposed to normative contagion by EAS and APEC through the actual cooperative practices. How can ASEAN propel the role of arguing a non-derailment from the UN-based climate change regime in Asian region? It is a challenging question to ponder over further. Thus, the Asian regional position is more likely to be tilted toward those of APEC and EAS. Thirdly, normative position and interaction in the Asian region can influence the UNFCCC/KP. Particularly, the loop of the global climate change structure, closed and locked by the UNFCCC, is slackened and opened by EAS and APEC whose regional institutions are not nested within the UN-based climate change institutions. This leads us to the question of whether the Asian region works as a cumulative bloc (Conca 2012) or a harbinger of change (Hurrell 2007) to the existing global climate change regime. From the analytical result, it is within bounds to say that the Asian regional organizations lead a *normative shift* in the interpretation of the CBDR and the precautionary approach that undergird the current UN-based climate change institutions.

Unlike the prevailing theoretical approaches to the local agent's role in the liquidation of normative contestation between international norms and existing local norms and practices, this chapter looks at the local agent's action in the face of the international norms under contestation. Firstly, fluidic international norm, which is itself an amorphous structure under normative contestation, led local agent to perceive the norm, define its identity within the structure, and set its normative position in the widely extended range of legitimate policy options, and propel its position through actual practices. These practices instantiate what is regarded as appropriate behavior in the Asian region in response to the climate change issue. In this case, the regional organization does not confine itself to a liquidator of the normative contestation in the regional vessel but a director of normative contestation at the global scale. This research with the international norms in normative contestation in the global dimension tells us an importance of the life stage of norms in the study of global-regional norm diffusion dynamics. Secondly, prevailing study has focused on the normversus-norm contestation, but, in the case of global governance on climate change, normative contestation occurs at the level of legitimate policy options on the ground of the same international norm. By dissecting the policy dimensions on the basis of the international norms, the normative positions of the Asian regional organizations is easily recognized and compared. Further look on the discursive practices by the local agents to extend or shift the range of legitimate policy options needs to be focused. However, this chapter is in lack of causal explanation of the divergence of normative position among Asian regional organizations. The causal explanation needs to be helped by topdown diffusion logic of localization by the power of existent regional norms and the role of the local agent.

CHAPTER 7 CONCLUSION

Section 1. SUMMARY

It may not be an exaggeration that the study of world politics is driven by an insatiable aspiration for a lexicon of 'international cooperation' that promises security, peace, and the betterment of human life. International cooperation, however, takes a hard labor from the perspective of participants, because international society is presumed to be anarchistic and egoistic nation states are in conflicts. International cooperation is an antonym of international conflict. Thus, world politics is about studying the *spectrum* that ranges along a continuum from conflict to cooperation, the *causal mechanism* that leapfrogs from conflict to cooperation, and the endless *dynamics* of navigation between conflict and cooperation.

In the anarchy, when there is not an order-setter, the labor of bringing in cooperation into international society is concentrated on a single nation state with muscles and gold. A sturdy state actor issues a power-driven order, then, the cooperation is accomplished at the center of the hegemon, and international traffic jams are liquidated. However, if the concentration of power withers, international society needs a different mechanism of setting an order other than the power. What comes after the power is *institution* which boasts of its capability to draw out international cooperation. The institution seemingly can work like a panacea to all the relational illness prevalent in the power-driven, self-centered, and state-oriented international society. On the ground of the very interest-maximizing disposition, the state actors erect an institution in the concerned problematic issue to solve the matter in a cooperative manner. The institution can work as a means for actors to attain efficiency through transaction cost reduction in the negotiation, contracting, and implementation (Keohane 1984). The institution provides an efficient and effective arena for the nation states to cooperate. Accordingly, a great portion of the international cooperation is the study of the international institution, more exactly speaking, individual or single international institution.

In this regard, the genesis of an individual institution is originated from its expected function and consequences. That is, the ground of institutional genesis is an expectation of a certain function that a certain design form of institution is supposed to perform, and the function is collective action by the involved actors under that institution. Once an institution is established, the institution can work as a structure that provides both constraints and opportunities to the actors. In the anarchy of international realm, the institution, once established in a problematic issue area, forms a hierarchy with principles, norms, rules, and procedures and gives a supposedly clear signal to actors for a right-kind behavioral direction. Major question in the study of international institution is whether the institution functions well or not. If the institution cannot live up to the expectation of a certain degree of performance, faults are attributable to the design of the institution. Thus, concerned is what kind of institutional design leads to a better performance of institution.

Meanwhile, what comes into cognizance with respect to the performance of institution is the phenomenon that multiple institutions exist. There has been an exponential increase of institutions in the form of agreement, treaty, conventions, pacts, partnerships with divergent characteristics such as geographical coverage, legality, actor composition, subjects/issues, levels/scales, etc. For more than two decades, we have experienced a plethora of linguistic terms that pinpoint this phenomenon: institutional multiplicity, proliferation, density, congestion, complexity, fragmentation. The single institution has been successful in the set-up of hierarchy in the issue area in the anarchical international society, but the *multiple institutions* that have sprouted in response to the numerous issues necessitate a traffic light to maneuver the relation among multiple institutions. It is because the performance of institution is influenced by the existence of the other institutions.

Two distinctive terms of use are *institutional multiplicity* and *institutional fragmentation*. Institutional multiplicity is a generic phenomenon to indicate a sheer existence of multiple institutions in international society. The existence of multiple institutions does not cast a significant meaning to the beholders as if numerous people walking or gathering in a city does not implicate much meaning. However, despite a similarity of numerical multiplicity, people-gathering in a city

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⁷⁹ Pierson (2000b) grouped this understanding of institution as functional approach to institution.

square with a certain subject matter is clearly demarcated from the unspecified people-walking in a city. The demarcation is driven by the cognitive perception of beholders. Once a gathering is perceived by a beholder as meaningful and significant, the beholder looks at the people-gathering more closely and draws a boundary of it. Then, individuals constituting the people-gathering are not seen homogenous any more. Sometimes, the gathering in the city square entails both public and the mass of policemen that stand face to face with each other conflictingly. Even the public in the gathering is fragmented with heterogeneous minds, backgrounds, and solutions on a concerned matter, despite a gathering at the same time and on the same spot. Thus, people gathered, but the gathering entails fragmentation inside. Likewise, if we draw a certain boundary and bundle up some institutions, it is in this bundle that the multiple institutions reveal a certain relation that ranges from mainly conflictive and confrontational to favorable and synergistic. This is the phenomenon of institutional fragmentation. Thus, the study on the phenomenon of institutional fragmentation is about studying the spectrum that ranges from conflict to synergy on the one hand and the mechanism that leapfrogs from conflict to synergy with multiple institutions.

The phenomenon of institutional fragmentation is broken down to two in terms of boundary-drawing by a subject matter and an issue area. If issue areas indicate sets of issues "dealt with in common negotiations and by the same, or closely coordinated, bureaucracies" (Keohane 1984, p.61), a subject matter is comparatively "often narrower in scope than an issue area" (Orsini et al. 2013, p. 30). Institutional fragmentation on a subject matter indicates that the subject matter is cogoverned or governed in a fragmented manner by several institutions/regimes. Notable characteristics are that i) the multiplicity of institution is exogenously given, ii) multiple institutions are in horizontal relation, iii) institutions/regimes from different issue areas overlap on a subject matter, iv) multiple institutions have a certain inter-relation, and v) this relation affects the effectiveness of each concerned regime. Particularly, in regime complex, many issue areas are overlapping at the center of a single subject matter. Because an institution is designed and generated for expected functions and consequences, the 'overlapping' at the subject matter is mainly incidental. Of course, this is not to deny the potential of intentional 'overlapping' among the

institutions/regimes. The institutional 'overlapping' on a subject matter can be intentionally arising in the course of functional widening. However, at the beginning when a certain regime is formed in the 'issue area', an overlapping on a 'subject matter' is unlikely to be intentionally ordained. Anyhow, it is this incidental overlapping on a subject matter that influences the effectiveness of relevant institutions/regimes. Hence, from this potential effect of the institution/regime onto the other institution/regime and vice versa, a concern on the degree or a typology of fragmentation arises. That is, it relates with the question of whether interaction between or among institutions/regimes is synergistic or conflictive. Ultimately, the type of institutional fragmentation can help or obstruct the problem-solving of the subject matter. That is, institutional fragmentation influences the effectiveness of each regime in regime complex. Though it is diverged whether the influence is positive or negative to the effectiveness, much attention has been arising from the negative aspect of institutional fragmentation. Accordingly, institutional fragmentation is regarded as something to be reacted and managed in a certain way. Thus, institutional fragmentation on a subject matter has engendered the questions of degree, consequence, and response (management). 80 Accordingly, it is a natural corollary that the study has been going forward toward the management of the institutional fragmentation for effective problem-solving.

Meanwhile, if the boundary is drawn at the center of an issue area, relevant institutions within the defined issue area are understood to form global governance architecture. The focus of this thesis is laid on the *institutional fragmentation in a given issue area*. The study in this realm has also taken similar steps of traversing the typology-making, the consequence, and the management of institutional fragmentation in the given specific issue area as the studies in the institutional fragmentation on a subject matter have done.

However, notable is that the phenomenon of institutional fragmentation has different implication by the boundary-drawing. In international society, institution/regime does not occur from problematic vacuum. Only after a certain issue is recognized as problematic, an international

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⁸⁰ Orsini et al. (2013) comprehensively summarized and arranged the notion of regime complex by the multiple institutions on a subject matter. In this research, the regime complex is understood as the institutional fragmentation on a subject matter.

institution emerges to solve the problem. Accordingly, one institution/regime is supposed to correspond to one issue. That is, a certain issue area is supposed to have one dominantly governing institution/regime. This institution/regime provides a regulatory reference to actors to follow and to be constituted by. This is not to deny the existence of multiple institutions in a given issue area; instead, multiple institutions are generated hierarchically sitting on and relating to the dominantly governing institution/regime; so, the issue area is tinted with a certain color of hierarchy. This one-to-one matching is well maintained in the notion of regime complex. Each regime belongs to different issue area, and regimes are overlapping on the governance of a specific subject matter. Thus, the concern is the co-governance of a subject matter and the coordination among the relevant regimes.

Yet, in the institutional fragmentation in the given issue area, the one-to-one matching comes to a failure. The issue area, once dominated by a single institution/regime, becomes cogoverned by multiple institutions that are not hierarchically related. A dominantly governing institution's position is threatened by the generation of multiple institutions outside the dominant core institution. Accordingly, though it is the same that there is a phenomenon of co-governance by multiple institutions, the afore-mentioned starting lines of institutional fragmentation come to face irrelevance. Firstly, it is questionable to have multiple institutions to be exogenously given in an issue area. Because the issue area starts from a single dominant institution at the center of a problematic issue, the multiplicity of institution is not a generic phenomenon within the boundary of issue area. Thus, it is highly crucial to explore the question of why overlapping institutions are created outside or besides the dominantly existing institution: the genesis of institutional fragmentation. The existence of overlapping international institution in a given issue area cannot be incidental but intentional.

Secondly, it is also questionable to see the relation among multiple institutions as horizontal. It is because the given issue area is supposedly dominated by a single institution in the first place in a hierarchical manner. The governance by a singular international institution in a given issue area is replaced with the co-governance by a newly emerged multiple institutions, so the

relation is relatively changed from a hierarchy in the issue area into a lesser hierarchical relation. Thus, the genesis of institutional fragmentation is highly related with the degree of institutional fragmentation. The reference to assess the degree of fragmentation needs to be grounded on the dominantly existent core institution.

Thirdly, it is dubious to presume that the multiple institutions have a certain inter-relation. If an overlapping institution is hierarchically subordinate to a core institution, in referential concordance, and showing addendum to the overall performance of the core institution, the existence of the overlapping institution is an indication of further deepening, thickening, and institutionalization of the core institution. Yet, the existence of overlapping institutions beside the dominantly governing institution also implies a competing relation for governance dominance. Thus, the study on institutional fragmentation in a given issue area is basically about the institution in a conflictive, confrontational, opposite, competing relation with the dominantly pre-existing institution.

Fourthly, it is questionable to see the relation between or among institutions have an influence only in terms of regime effectiveness. Of course, the existence of an additive overlapping institution besides or outside a dominantly pre-existing core institution within a given issue area influences the institution/regime effectiveness. At the same time, the emergence of an overlapping institution also has relevance to institutional/regime change. By the appearance of an overlapping and competing institution, an existent core institution becomes inevitably under a great pressure to go through a certain change. Accordingly, despite a similarity, the institutional fragmentation in a given issue area requires a different step to be taken from the one that is taken forward by the institutional fragmentation on a subject matter.

Most importantly, the multiplicity of institutions in a given single issue area is neither generic nor coincidental. It is more appropriate to see the existence of overlapping institution to the dominantly pre-existing institution as the 'creation' of overlapping or competing institution to or against the pre-existing institution. The institutional emergence in an overlapping manner cannot be detached from a relation with a pre-existing institution. In a given issue area, without exploring this genealogy of an overlapping institution, any *going-forward* efforts to diagnose the institutional

fragmentation by degree assessment, consequence measurement, and management suggestion cannot stand firmly. In this regard, the study on institutional fragmentation needs to *go backward* and explore the *genesis of institutional fragmentation* in the given issue area. The genesis of institutional fragmentation questions why an overlapping and competing institution is created besides a dominantly existing institution in a given issue area.

This phenomenon of institutional fragmentation in the issue area is well seen in the *climate* change issue area. On the basis of the perception of climate change issue as being problematic for its threat to human security and its cause from manmade greenhouse gas emission, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 to mitigate climate change with universal participation of nation states. The UNFCCC, as a framework convention, was weak in the substantive aspect of behavioral content and schedules. Thus, with the 1992 UNFCCC as a bedrock institution, a sequential institutionalization was made by the adoption of the Kyoto Protocol (KP) in 1997. The 1997 KP was an embodiment of successful negotiation on the collective climate change mitigation action by an average of five per cent GHG emission reduction against 1990 levels during the short-term period of 2008 to 2012 by thirty seven industrialized countries and the European Community. However, the dominance by the UNFCCC/KP was challenged by the emergence of an alternative institution, the Asia-Pacific Partnership on Clean Development and Climate (APP) in 2005 when the KP became effective by the ratification of Russia. Notably, the main initiators of the APP are the US and Australia which did not ratify the KP. The creation of the APP signals the genesis of institutional fragmentation. The question of why the APP was erected despite the existence of dominant institutions of the UNFCCC/KP just started enjoying theoretical approaches in the world politics in the following way.

Neo-Realism

Material & Power-oriented approach. An overlapping and competing institution emerges and continues to exist by the efforts of nation states with sufficient power and resource to maximize national interests with discontent on the uniform regulatory measures that do not consider divergent material

endowment and relative gains. The KP is inferred to be unfit to reflect the interest of the initiators of the APP (Kellow 2006; Karlsson-Vinkhuyzen and McGee 2013).

A. Function-oriented institutional approach. The creation of an overlapping institution is originated from the divergent problems associated with climate change issue, the divergent interests of the agents, and the divergent organizational practices. The existing UN-based climate change institutions of UNFCCC/KP are explained to be in lack of fitness to produce all the expected functions from the institutional design perspective. The APP is established for the production of club goods of technology investment and development which cannot be produced by KP (Keohane and Victor 2011).

Neo-Liberal

institutionalism

B. Non-functional institutional approach. The creation of a countervailing institution is driven by institutional capture; if an existing institution is perceived as change-impermeable due to institutional capture by the particular interests of certain interest groups, then, dissatisfied actors create a new competing institution (Van de Graaf 2013). If applied to the case of the APP, this approach can explicate the creation of the APP in a manner that the pre-existing institutions of the UNFCCC/KP are captured and institutionalized by the European countries and environmental organizations to a certain degree.

Constructivism

new alternative interpretation, competing norms, discourse, policies or ideas that are in contestation with the existing norms and existing normative interpretation of the dominantly existing institution. The APP itself is a "counter norm" against the UNFCCC/KP (Hoffmann 2007; van Asselt 2007; McGee and Taplin 2009, p.205; Stevenson 2009).

Normative contestation approach. A competing institution is an embodiment of

The rational choice theories of neo-realism and neoliberal institutionalism explicate the creation of a competing institution, the APP, in the function-oriented aspect, not the cognitive and normative aspect of an institution. Thus, the rational approaches have some limitation in explaining the meaning of conflictingly created institution in cognitive dimension. Meanwhile, constructivist approach can explain "a variety of social structures" including a conflictual institution through exploring norms, rules, practices and diverse characteristics and shaping identities of institutions (Narine 1998, p.39). In this regard, the current constructivist approaches have filled up explanatory lacuna by exploring the normative and ideational constitution of the newly emergent institution in relation with the existing institution and explicating the domestic normative contestation as a source of the creation of a normatively contestant institution against the existing institution.

This is not to tell that the rational choice theories explicate the creation of the APP without recourse to the existing institutions of the UNFCCC/KP. However, neo-realism cannot explain the continued creation of the other overlapping institutions even after the APP was created besides the UNFCCC/KP. If the UNFCCC/KP is inappropriate for some nation states to exercise power, it may be enough to establish one alternative venue, the APP, to compete with the UNFCCC/KP. Yet, the creation of overlapping institution did not stop with the APP. The creation of an institution takes huge costs in negotiation, establishment, and operation. Furthermore, the existing institutions of the UNFCCC/KP, since their establishment, has taken a path-dependency with the mechanism that reinforces the existing institution such as large set-up costs, learning, coordination, and adaptive expectations (Pierson 2000a). This means that only 'power' and 'material' hardly explicate the continuous emergence of overlapping and competing institutions.

The neo-liberal institutionalism explicates the creation of the APP from a lack of goodness-of-fit of the UNFCCC/KP to the diverse problems of the climate change issue. Yet, if the UNFCCC/KP is not a proper design for the problem-solving of climate change issue, expected resultant action should be the institutional change of the UNFCCC/KP for a better goodness-of-fit, not the creation of an overlapping and competing institution.

Even constructivism is not free from the critique on the explanation of the creation of an

overlapping institution. Though the constructivism explicates the relation between the APP and the UNFCCC/KP by normative comparison, normative contestation is one thing, and the building of additional overlapping institution is another. Causal relation between the existing institution and the creation of new competing institutions still remains a black box in the constructivist approach. The black box will reveal itself only through an exploration on the logic of normative contestation.

Accordingly, we have faced with both promises and limitations of each theoretical approach to the genesis of institutional fragmentation. Firstly, the emergence of an additional institution takes huge costs in negotiation, establishment, and implementation which necessitate not only power and materials but also strategic bargaining by concerned actors. The rational choice approaches bring forward this strategic and interest-oriented actor involved in the creation of institution. Secondly, the constructivist approach has sociological actors that are mutually constitutive with the institution. As long as the institution is enlivening and enlivened by the actors, the institution cannot but have normative and ideational dimension. By the changing support of the actors, this dimension cannot stay unchanged, and the changing process cannot be without contestation between the supporters of existing institution and the supporters of new institution. Thus, the institution is doomed to be discursive and liable to variation. The constructivism can bring forward this institution as an embodiment of normative contestation. Thirdly, neither the rational approach nor the constructivist approach can fully explain the creation of an overlapping and competing institution. Accordingly, this research made the strategic agent and the social constructive agent get married and bear a new explanatory mechanism. Particularly, this research takes the strategic social construction that combines the constructivist theoretical ground and the power & material-oriented rational approach to explicate the genesis of the institutional fragmentation: the creation of an overlapping and competing institution, which is normatively contestant to the existing institution, is intended by the strategic actors.

On the basis of this constructivist theoretical ground, this research implemented empirical studies on the basis of three research questions with regard to the genesis of institutional fragmentation as follows;

1st question

Normative contestation in spectrum: logic of Institutional fragmentation. To what extent does a newly created overlapping institution compete with an existing institution? Put differently, to what degree does a competing institution form the normative contestation to (or against) an existing institutions?

2nd question

Normative contestation in action: genesis of institutional fragmentation. Why does a normatively competing institution emerge besides (outside) a dominantly pre-existing institution? The genesis of institutional fragmentation will be analyzed on the ground of strategic social construction by norm entrepreneur's normative contestation.

Normative contestation and its path forward: evolution of institutional fragmentation:. What is the reaction of agents to normative contestation? In the face of normative contestation, agents react by interpretation, position-setting, and position-propelling practices that shape and influence which norms in normative contestation will be empowered. The direction of institutional fragmentation in global governance architecture on climate change will be analyzed by the relevant agents' normative position-setting and position-instantiating or -propelling practices in the face of normative contestation of international norms on climate change.

3rd question

The results of three empirical studies are as follows;

• The first empirical study on Japan's normative position in the range of normative contestation. On the basis of two normatively competing institutions of the Kyoto Protocol (KP) and the Asia-Pacific Partnership on Clean Development and Climate (APP) with regard to two international norms of common-but-differentiated responsibility (CBDR) and precautionary approach, a comprehensive normative contestation mapping with multi-normative dimensions was made. Each normative dimension has spectrum of normative contestation by the existing norms and normative

interpretation and the competing ones. On the basis of this, the normative position of a newly created Japan-led regional climate change institution, the East Asia Low Carbon Growth Partnership (LCGP), in each normative dimension was explored. The research result shows that the normative position of Japan's LCGP is found to be skewed toward the position of the APP.

- The second empirical study on the genesis of institutional fragmentation by the strategic social construction by the Asian nation states as competing norm entrepreneurs and norm leaders. On the ground of strategic social construction by the norm entrepreneur's normative contestation with regard to two norms of the CBDR and the precautionary approach, the creation of overlapping and competing institutions in Asian region is analyzed with the cases of the nation-initiated Asian regional climate change institutions of the US-led APP, Japan-led LCGP, and the East Asia Climate Partnership (EACP) which was initiated by South Korea. From this research, it was found that the normatively competing institutions are established by the norm entrepreneurs as an organizational platform to diffuse the competing norms. These platforms have specific agenda and policy measures that entail the competing interpretations of the norms of the CBDR and precautionary approach. Particularly, if the APP was the first organizational platform as a product of strategic normative contestation by the norm entrepreneur, the US, then the EACP and the LCGP are the emulative behaviors of South Korea and Japan who became the norm leaders that followed the norm entrepreneurs. Accordingly, the genesis of the institutional fragmentation is derived from the normative contestation by the strategic agents in Asian region. Notable is that this analysis allows us to see that the competing normative interpretation has passed the tipping points and entered the norm cascade stage.
- The third empirical study on the Asian regional organizations' normative position-setting and position-propelling practices in the fact of normative contestation. The Asian regional organizations faced the international climate change norms of the CBDR and the precautionary approach that are in normative contestation at the global level. Their reaction were to make formal declarations that

embody their normative position on the international climate change norms and to unfold the regionwide practices on the basis of normative position. Their reaction by interpretation, position-setting, and position-propelling practices have shaped and influenced which norms in normative contestation will be empowered. From the research with the regional climate change institutions of the Asian regional cooperative organizations, the ASEAN, the APEC, and the EAS, it was found that the ASEAN shows a similitude in its normative position with that of the KP and that the APEC has a competing normative position and practices. The EAS stands in-between. The Asian region has been a vessel that encompass divergent normative positions, which make the Asian nation states not only enjoy having plural normative and actionable choices but also exploit coming across the multiple positions. What is worse, normative navigation can lead to normative confusion and inaction. Notably, the divergence of regional normative positions is subject to positional interaction and isomorphism due to overlapping memberships of the Asian regional organizations. Currently, the APEC has had extensive institutionalization and the EAS formed the institutional interaction with the ASEAN organizations, so the ASEAN is more exposed to the normative contagion by the EAS and the APEC through the actual cooperative practices. From the analytical result, it is within bounds to say that the Asian regional organizations are normative digresser to the international norms that undergird the current UN-based climate change institutions. The Asian region works as a harbinger of change by normative contestation and normative shift on the range of legitimate policy options for global climate change actions.

Section 2. IMPLICATION TO INSTITUTIONAL FRAGMENTATION

The essential elements of this research on the genesis of institutional fragmentation in the vein of constructivism are *norms*, *actors*, and *institutions*. In the constructivist approach, *norms* are set as a preponderant explanatory variable to explain the behavior of the actors other than power and interests. However, here, though norms are of central concern, norms carry little causal weight in the

explanation of consequential entities. Instead, norms carry considerable constitutive weight in the explanation of constructive entities.

Norms are the constituents of an institution which works as a structure. The dividing line among the concepts of norms, institution, and structure gets fuzzy, if they are looked aloof. Succinctly, norms are no better than structure. Norms are said to have a role of constraining the behavior of actors, but, specifically speaking, norms define the range of legitimate policy options. It is this range of policy options that constrains the actor behavior. *Institution* is a composite of both norms and the subsequently defined range of policy options. Also, more specifically speaking, norms cannot define the range of legitimate policy options for themselves. Instead, norms are interpreted by *actors*, and this normative interpretation defines the range of legitimate policy options. Accordingly, norms live through the interpretation of actors, and actors live in the normatively defined world of policy options, the world of norms: norms and actors are mutually constitutive. From the perspective of norms, norms are constructing actors and constructed by actors.

Mutually constitutive relation between norms and actors generates two paths. One is the path that reinforces extant norm and normative interpretation. If norms define the range of legitimate policy options in a manner that satisfies the actors involved, then the actors will conform to take the policy options. The repeated practices thicken an existing normative structure. The other is the path that weakens existing norms and existing interpretation. If actors perceive that the range of policy options is too narrowly defined and the conformity to the given behavioral options can inflict a loss on their interests, then, actors with a perception of the existing interpretation of norms as inappropriate re-interpret the norm and re-define the range of legitimate policy options. Mainly, the range is broadened with a breath of flexibility. Notable in this path is that the *re-interpretation of norms* and the *re-defining of the legitimate policy options* come to clash with the existing interpretation of norms and the existing defining of the policy options. This clash is termed as *normative contestation*.

Behind the normative contestation, there are two groups of actors: the actors that support the existing interpretation and defining on the one hand and the actors that pursue the reinterpretation and re-defining of existing norms on the other. Normative contestation is looked from both static and dynamic aspect. In the static aspect, normative contestation necessitates how the interpretation on and the defining of legitimate policy options are stretched by the new interpretation and the new defining. In the dynamic aspect, normative contestation engenders a question of which normative interpretation and defining of policy options will be preponderant in the end, how this normative contestation is to be resolved, and subsequently in what way the institution, a composite of norms and the defined policy options, will be changed. The gist of the politics in the constructivism lies in this normative contestation.

Interestingly, in the global governance architecture on climate change, the re-interpretation of norms and the re-defining of the range of legitimate policy options are embodied into the institution that is created outside the existing institutions of the UNFCCC/KP. *The institutional fragmentation*, which indicates the existence of multiple institutions fragmenting the governance of climate change issue area, once dominated by the UNFCCC/KP, *is no better than the embodied politics of normative contestation*.

7.2.1. Anatomical chart of normative contestation

This research clarifies how international fragmentation in the global governance architecture on climate change has stretched the spectrum of interpretation on two distinctive norms of the *common but differentiated responsibility* (CBDR) and the *precautionary approach*. Each of these climate change norms is more specifically segmented into several normative dimensions. Each dimension is stretched by an existing interpretation and a new interpretation by actors. It is this different interpretation by the actors that engenders a differently defined range of legitimate policy options. The existing interpretation and the extant defined range of policy options are distilled from the Kyoto Protocol (KP). From the fragmented institutions that are created outside the KP, new interpretations and newly defined range of legitimate policy options are extracted, and the institutions are the Asia-Pacific Partnership on Clean Development and Climate (APP), East Asia Climate Partnership (EACP), East Asia Low Carbon Growth Partnership (LCGP), and the formal

declarations of the Asian regional cooperation organizations.

The CBDR has two dimensions of 'common responsibility' and 'differentiated responsibility' (Stone 2004). The normative dimension of common responsibility is stretched by the interpretation on who should bear a responsibility in response to the global problem of climate change. With regard to *common responsibility* in the face of climate change, the actors in support of the KP interpret that global goods of climate stability are at risk, so international cooperation is in need. Rooted in this interpretation, the legitimate range of participants is drawn in three aspects: i) for the provision of global goods, a multilateral cooperation is in need by universal participation of nation states, ii) in the multilateral cooperation, nation states with sovereignty are the main actor in the negotiation on the provision of global goods, and iii) not only nation states but also the non-state actors are supposed to participate in the negotiation.

Meanwhile, in the fragmenting institutions, common responsibility is interpreted on the basis of the perception of climate change problem not just as global goods but as common pooled resources (CPRs) at risk. The CPRs have characteristics of the gradual consumption by use and the non-exclusion in benefit-sharing among consumers, which leads to the free-rider problem (Keohane and Victor 2010). Thus, to tackle the collective action problem arising in the provision of the CPRs, a certain institutional format to replace the CPRs with club goods or private goods is required. In this regard, a legitimate range of participants has three aspects: i) international cooperation is made by small number of like-minded actors in the form of mini-laterlaism or bilateralism, ii) in the provision of club goods and private goods, legitimate actors are not only the nation state actors but also non-state actors, and iii) particularly, among the non-state actors, business stakeholders are empowered in the provision of club goods and private goods.

The other dimension of the CBDR is *differentiated responsibility* dimension. The actors in support of the KP interpret the differentiated responsibility on the ground of historical contribution to climate change problem on the one hand and ability-to-pay on the other. Because industrialized developed countries have long emitted a bunch of GHG since industrial revolution and accumulated capitals enough to render some of the surplus to cope with climate change, burdens are laid on the

rich. Thus, the differentiation of responsibility is made at the policy level in the manner that i) the dividing line of differentiation is drawn between developed countries and developing countries, so only thirty seven industrialized developed countries are to bear the burden and ii) a further differentiation is drawn between developing countries and the least developed countries in need of more support.

Meanwhile, the actors that erected fragmenting institutions interpreted the differentiated responsibility on the ground of future contribution to the problem of climate change and the ability-to-pay. Climate change is problematized by man-made GHG emission. Developing countries in fast economic growth are expected to add mammoth amount of GHG emission, so it is argued that the burden needs to be laid not only on the developed countries but also on the developing countries. Accordingly, the differentiation of responsibility defines the legitimate dividing line of responsibility bearer by the further differentiation of developing countries by more advanced developing countries. Both developed countries and the more advanced developing countries are held responsible in the climate change action. Instead, the further differentiation between the developing countries and the least developed countries is not much considered at the policy level.

The *precautionary approach* has four dimensions under normative interpretation: i) threat, ii) uncertainty, iii) command, and iv) action (Sandin 1999, p. 898). Firstly, in the *threat* dimension, actors in support of the KP see the climate change as a problem that imposes a threat, so the defined policy objective is the stabilization of GHG concentrations. Meanwhile, the actors in support of fragmenting institutions regard the climate change as one of the threats that need to be tackled together such as economic growth and the energy security. Thus, the re-defined range of legitimate objectives is broadened to clean development which combines climate change with energy security, green growth which mixes economic growth and climate change, and low carbon growth that also mingles the issue of climate change with economic growth.

Secondly, in the *uncertainty* dimension, actors in support of the KP respects the assessment reports of the IPCC that scientifically proved the causal impact of human activity on climate change.

On the ground of this scientific proof, the defined range of legitimate action is the mitigation of

quantified GHG emission amount. Meanwhile, in the fragmenting institutions, the very scientific proof on the ground of the IPCC reports is questioned, and the uncertainty of causal relation between the man-made GHG emission and the climate change is heightened. Under this high level of uncertainty, the legitimate policy option to mitigate the climate change is suggested as scientific research on climate change or low emission technology development.

Thirdly, with regard to the dimension of *command*, the supporters of the KP interpret that the preventive action to mitigate the climate change needs to be done in a legal-binding manner, so their preferred type of institution is treaty or protocol-type of legal instruments. Meanwhile, the actors in lesser support of the KP are against the mandatory command and redefine the legitimate manner of eliciting the cooperation through non-legal binding institutions such as partnership.

Lastly, the dimension of action measures is directionally dependent on the afore-mentioned three dimensions of threat, uncertainty, and command. In this dimension, the supporters of the KP interpret that the preventive action needs to be done to mitigate climate change in a cost-'effective' manner. The defined range of legitimate policy options includes command-and-control (CAC) regulatory measures at the center and the market-based incentives for flexibility. Under the CAC, the nation-based quantified GHG emission reduction target is set to meet up a short-term time table. For flexibility, other mitigation measures such as technology transfer and development for developing countries, international compliance market for carbon offset, and obligatory funding mechanism to support the developing countries are set to be provided. Notable is that the flexible mechanisms are mainly intended for the support of the developing countries.

Meanwhile, the supporters of fragmenting institutions interpret that the 'cost'-effective action measures to mitigate the climate change can be accomplished by voluntary approach. In the first place, the target & time-table approach itself is denied and replaced by other mitigation action such as technology development. Or, if the target and time table is included in the re-defined range, then they are modified in a manner that i) the target is GHG intensity reduction, ii) the target is not nation-based but sector-based, iii) the target is not quantified but aspirational, and iv) the target has long-term time table. The flexible mechanisms include technology development, voluntary market

for carbon offset, and voluntary funding mechanism.

Accordingly, two norms of the CBDR and the precautionary approach have experienced normative contestation in dissected dimensions by different normative interpretations and subsequently defined range of legitimate policy options. The normative contestation is charted in the table 7-1 in the next page. As mentioned before, Asian climate change institutions that are studied in this research are utilized in the extraction of their normative interpretations and policy options and shown to have the contesting normative interpretations and policy options against those of the Kyoto Protocol. This research argues that Asian climate change institutions are now fragmenting the UN-based climate change regime with contestation against the existing interpretation of norms and the existing definition of the range of legitimate policy options. Notable is that any newly created climate change institutions cannot stand outside this normative space which is stretched by the normative contestation. Also, any climate change institutions cannot have both normative positions that are stretched to two extremes. By looking at the institution on the basis of the charted normative blue print, we can see what its normative position is and whether it fragments the dominantly existent UN-based climate change regime. Finally, we can figure out the normative position of the actors who initiated the establishment of new institutions.

 Table 7-1
 Chart of normative contestation by the institutional fragmentation

Norm			Normative contestation		
Climate Norms	Dimension	Criteria	Kyoto Protocol	Fragmented climate Institutions in Asia	
CBDR	Common responsibility dimension	Normative interpretation	Global goods at risk by climate change	Global common pooled resources (CPR) at risk by climate change	
		Defined Range of Legitimate Policy Options	Universal participation (multilateralism) Nation-state actor as the main participant Equal participatory position among the non-state actors	 Club participation (mini-lateralism/ bilateralism) Both nation-state actor and non-state actors Skewed participatory position among the non-state actors (business stakeholders vs environmental groups) 	
	Differentiated responsibility dimension	Interpretation	Historical contribution to problem & ability-to-pay	Future contribution to problem & ability-to-pay	
		Policy options	 Differentiation between developed and developing countries Further differentiation between developing countries and the least developed countries 	 Further differentiation between developing countries and the more advanced developing countries No differentiation between developing countries and the least developed countries 	
	Threat	Interpretation	Single threat (Climate Change)	One of threats (Economic growth / Energy security / Climate change)	
		Policy options	 Objective of stabilization of GHG emission 	 Different issue framing by clean development/ green growth / low carbon growth 	
		Interpretation	Respect for IPCC	Questioning the scientific proof	
	Scientific uncertainty	Policy options	 Mitigation By national GHG emission reduction target & time table 	 Mitigation by Scientific research or Technology development 	
	Mandatory command	Interpretation	Legal-binding	Non-legal binding	
Precaution- "ary approach		Policy options	 Type of institution: Treaty or Protocol-type of legal instruments Strict compliance rules 	Partnership Pledge & review process	
	Action (measures)	Interpretation	Cost-'effective' measures	'Cost'-effective measures	
		Policy options	Command-and-control Market-based incentives Target & time table GHG emission cut target Nation-based target Quantified target Short-term time table Technology transfer and development Compliance market for carbon offset Obligatory funding mechanism	 Voluntary Approach No target & time table GHG intensity target Sector-based target Aspirational target Long-term time table Technology development Voluntary market For carbon offset Voluntary funding mechanism 	

Source: The author on the basis of previous studies and analyses in this research.

7.2.2. Genesis of Institutional Fragmentation by strategic social construction

Also, this research advances the logic of normative contestation in the explanation of the genesis of institutional fragmentation. Previously, it was argued that Asian climate change institutions are now fragmenting the UN-based climate change regime with normative contestation against the existing interpretation of norms and the existing definition of the range of legitimate policy options. That is, newly created institution besides or outside an existing institution in an overlapping manner embodies the contestant interpretation of the norms and the subsequently re-defined range of legitimate policy options. Thus, it is crucial to juxtapose competing institutions, their competing interpretations, and different policy options, as shown in the table 7-1.

However, much important is to uncover why normative contestation is manifested by the creation of an overlapping and competing institution. It is a question of linking the normative contestation with the creation of competing institution. We have to look into a common suspect, an *actor*, standing behind both the normative contestation and the institutional creation. It is because the normative contestation cannot be born without a norm-interpreting and -carrying actor. Also, an institution cannot be created without an actor who is mutually constitutive of the institution. The actor who makes a knot between the normative contestation and the creation of competing institution is none other than a norm entrepreneur. By the normative contestation of the norm entrepreneur, the norms come to experience the dynamics of (competing) norm emergence, (competing) norm cascade, and internalization of (competing) norm (Finnemore and Sikkink 1998). Or, the norm dynamics is made in the way the emergence of (competing) normative interpretation on the given norms, the cascade of (competing) normative interpretation, and the internalization of (competing) normative interpretation. The genesis of the institutional fragmentation can be explicated from the look at the stage of norm emergence.

The UNFCCC has been working as an institution that guides the nation states behavior on climate change actions on two normative pillars of the CBDR and the precautionary approach and provides the information and a central negotiation table. For a further specification of regulatory

measures, the CBDR and the precautionary approach were interpreted and led to define the range of legitimate policy options. At this time, the interpretation on the CBDR went through a normative contestation at the UN-based negotiation table. In the climate change issue area, major interpretation of the 'differentiated responsibility' dimension was made on the basis of historical contribution to the problem and the ability-to-pay, and the dividing line for differentiating the responsibility is defined between developed countries and developing countries. However, the US reinterpreted the 'differentiated responsibility' dimension on the basis of the future contribution by developing countries to the climate change and argued "further differentiation" of developing countries to impose the reduction obligation to "the more advanced developing countries" (Stevenson 2009, p.166). However, the normative contestation by the US failed to change the defined range of policy options within the UN-based negotiation venue, and the subsequently adopted Kyoto Protocol (KP) in 1997 drew the range of policy options by the imposition of national emission reduction obligation only onto thirty seven industrialized developed countries on the basis of an existing normative interpretation.

Normative tension by the competing normative interpretations at that time of 1997 seemed resolved by the adoption of the KP but actually did not disappear. Those who were not supportive of the existing interpretation of the norms transformed themselves into norm entrepreneurs and unfolded the strategic behaviors. The US announced that it would not ratify the KP by dubbing the KP as "faulty treaty". Subsequently, Australia also expressed its willingness not to participate in the KP. The US and Australia formed bilateral cooperation on the climate change. Then, the competing interpretation of the norms of the UNFCCC reappeared in 2005. Notable is that the second round of normative contestation was made not in the form of discourses but in the form of institution as an organizational platform to embody and diffuse the competing interpretation of the norms and redefined range of policy options outside the UN-based negotiation venue. The Asia-Pacific Partnership on Clean Development and Climate (APP) was established by the initiative of the US and Australia in 2005 and equipped with its own range of policy options that are in normative contestation with that of the UNFCCC/KP. The policy options of the APP are already well

characterized in the previous section.

Yet, the creation of the overlapping and competing institution did not stop there. South Korea and Japan, both of which are the founding members of the APP, added overlapping and competing institutions in the issue area of climate change. In 2008, South Korea created the East Asia Climate Partnership (EACP), and later in 2012 Japan announced the establishment of the East Asia Low Carbon Growth Partnership (LCGP). The normative positions of the EACP and the LCGP are found to be similar with that of the APP. Notably, the EACP and the LCGP are the collection of bilateral climate change partnership at the center of South Korea in case of the EACP and at the center of Japan in the case of LCGP with Asian developing countries, so the EACP and the LCGP can diffuse their normative interpretations and relevant policy options to the partnered Asian developing countries.

As a step further, these institutions are found to form a linkage with the alternative international negotiation process such as G8/G20. Also, the APP and the LCGP are found to form a network with Asian regional cooperation organizations such as the Asia-Pacific Economic Cooperation (APEC), Association of Southeast Asian Nations (ASEAN), and the East Asia Summit (EAS). The US generated not only the APP but also numerous bilateral partnerships, multilateral climate change technology development partnerships on methane, hydrogen energy, carbon capture, and nuclear power, the multilateral policy negotiation forums such as Major Economies Process (MEP), international financial institution of International Clean Technology Fund (McGee and Taplin, 2009), and these institutions form its own institutional complex. South Korea also formed its own institutional complex with the EACP, the public-private knowledge-sharing institution of the Global Green Growth Institute (GGGI), and the technology development and transfer network of the Green Technology Center Korea (GTCK). Japan formed a linkage with numerous institutions such as the Technology Network of International Energy Agency, International Partnership for Energy Efficiency Cooperation, International Renewable Energy Agency, Global Earth Observation System of Systems, Global Climate Observing System, the APN, the Asia Pacific Adaptation Network, Global Superior Energy Performance Partnership, the World Bank, and the Asian Development Bank

(MOFA 2011a).

The APP is an overlapping and competing institution outside or beside the UNFCCC/KP that dominantly govern the climate change issue area. Accordingly, the creation of the APP is a signal of the genesis of institutional fragmentation in the issue area of climate change, which is a new ontological entity from the perspective of institutional multiplicity in international relations. Yet, from the theoretical lens of constructivist' norm dynamics, the creation of the APP is a strategic behavior of a norm entrepreneur, the US, to promote and diffuse competing interpretation of the CBDR and the precautionary approach. The APP that is operated with re-defined policy options on the basis of normative re-interpretation can be threatening to the existing (international) social arrangement of the UNFCCC/KP.

Distinctive is that the normative contestation through the overlapping and competing institutional creation made inroads to the Asian region. The creation of the EACP and the LCGP and the network formation are explicated by the emulative behaviors of the norm leaders in the socialization mechanism. From this, it can be inferred that the competing interpretations on the CBDR and the precautionary approach entered the *norm cascade stage*. The institutional fragmentation has been experiencing evolution since its genesis, and how it will evolve in the long run remains as a crucial question. The genesis of institutional fragmentation is shown in the table 7-2 in the next page.

 Table 7-2
 Genesis of institutional fragmentation by normative contestation

Norm Stage	Stage 1: Norm emergence	Stage 2: Norm cascade	Stage 3: Internalization
Norm dominance	• Existing interpretation of	Both existing interpretations and	A competing norm
	the CBDR and	competing new interpretations	or a competing
	the Precautionary approach		interpretation
	Start of normative contestation		
		Norm entrepreneurs of the US and	
		Australia forming a network with	Norm followers
Actor	The US and Australia	international organizations	(Law, professions, and bureaucracy)
categorization	as norm entrepreneurs	^o Japan and South Korea	
		as norm leaders	
		 Network of int'l organizations 	
	^o Cognitive framing of the KP	- Emulation by the establishment	^o Conformity
	as "faulty treaty" by the US	of the organizational platforms of	
	 Deliberately organized 	the South Korea-led EACP (2008)	
	inappropriate act of	and the Japan-led LCGP (2012)	
	non-ratification of the KP	Formation of Asian regional	
	Bilateral partnership between	Network	
Strategic behavior	the US and Australia	- the APP and the APEC	
	Reinterpretation of the CBDR	-the LCGP and the EAS	
	and the Precautionary approach	- EACP and the Global Green	
	^e Establishment of utilization of	Growth Institute (GGGI)	
	an organizational platform	- the EAS and the ASEAN	
	to diffuse contestant normative	Formation of institutional complex	
	interpretations		
	- the APP in 2005		
	by the US and Australia		
Mechanism	- Persuasion	Socialization, demonstration	^o Habitualization,
		Institutionalization,	^o Institutionalization

Source: The author by the modification of the table 1 of Finnemore and Sikkink (1998).

7.2.3. Evolution of Institutional Fragmentation

The institutional fragmentation has currently four spheres of studies on the degree, the consequence, the management (or response), and the genesis of institutional fragmentation in a given issue area (Zelli and van Asselt 2013). From the studies on the genesis of institutional fragmentation, it is a natural corollary that the genesis is to be connected to the *evolution of the institutional fragmentation*. Because the genesis of institutional fragmentation is based on the normative contestation on the norms, the evolution of the institutional fragmentation cannot be detachable from the life of norms.

In the climate change issue area, the interpretation on the CBDR and the precautionary approach went through *normative contestation*, and the unresolved normative tension made an appearance by the creation of the APP. Since the co-existence of a core institution of the UNFCCC/KP and the competing institution of the APP from 2005, normative spectrum has been stretched by the contestant interpretations on the norms and the contestant range of policy options. In the face of normative contestation at the international level, actors make their *normative position-setting and -propelling* by establishing the institutions that also embody what they regard as appropriate. Though this research explored the institutions having a competing normative position such as the APP, the LCGP, the EACP, and the Asian regional climate change institutions of the APEC and the EAS, there are institutions that are unexplored yet and supportive of the same normative position with that of the UNFCCC/KP. Accordingly, the institutional fragmentation is extended further by the multiplicity of institutions with divergent normative positions and instantiating practices.

Normative contestation will ultimately have a certain path to taken, because the international norm is subject to "the forces of natural selection" (Florini 1996, p.367). However, the selection is not a simple matter of 'selection' or 'non-selection'. If normative contestation is liquidated, there can be three paths of which norm or normative interpretation is to be chosen. Firstly, despite the attack from new norms or new interpretation on the given norm, the existing norm can still continue to be regarded as the most appropriate and supported by the majority of the actors.

Secondly, as previously shown, each norm has normative dimensions that can be stretched by competing interpretation. In the face of normative contestation, new interpretation on some dimensions of the given norm can be accepted, and, in the other dimensions, existing interpretation can continue to be supported by the actors. This is the case that normative contestation is resolved by the selective conversion of normative interpretation. Thirdly, normative contestation ends up with the new norms or the new interpretation that replace the existing ones. However, if the normative contestation is not liquidated, then, the existing and new norms or normative interpretations will go parallel. The normative selection path in the face of normative contestation draws a path of the *institutional fragmentation*, too. If normative contestation is liquidated, institutional fragmentation will experience a stoppage of its life. However, if the normative contestation is not liquidated, institutional fragmentation will be continued. Table 7-3 shows the relation between the normative contestation and the evolution of institutional fragmentation.

The evolution of institutional fragmentation has four points to ponder over. Firstly, the path of normative contestation is not singular but multiple. It is because there will be not only norm entrepreneurs with competing normative interpretation but also *norm defenders* with existing normative interpretation on the basis of institutionalization of existing normative interpretation. Normative contestation is exerted by norm entrepreneurs, and the norm entrepreneurs utilize mechanisms of persuasion on the basis of fragmenting institution as an organizational platform, socialization, demonstration, and institutionalization. Then, what kind of strategic mechanisms do and should the norm defenders utilize to make the existing norm or existing normative interpretations dominant? Currently, the studies on the norm defenders remain as laggard in comparison with the study on norm entrepreneurs.

Secondly, the evolution of the institutional fragmentation will be determined by whether normative contestation is liquidated or not and how liquidation process is to be made. The *liquidation of normative contestation* process awaits more analysis. Furthermore, the role of the agents who are to be potentially involved in the liquidation of normative contestation remains unexplored yet.

Thirdly, the genesis and evolution of institutional fragmentation influences the doom of the dominantly existent *core institution* of the UNFCCC/KP. The creation of the APP was an attack on the KP, and the continued creation of the competing institutions has sufficed to vibrate the UNFCCC/KP. The evolution of institutional fragmentation will put the UNFCCC/KP under the pressure of institutional change, which has received less scholarly attention but will give much implication to the study on institutional fragmentation. The study of institutional fragmentation cannot be detached from the study of the individual, particularly, core institution and its institutional change.

Fourthly, it is also highly important to look into the life of non-core and fragmenting institutions. Recently, the APP, which brought out the genesis of institutional fragmentation in climate change issue area with contestant normative position against the UNFCCC/KP, came to stop its institutional life. The APP had a short life from its birth in 2005 to its death in 2011. As much as its birth grabbed scholarly attention, its death needs to be highlighted. What is the meaning of its death? Conclusively, institutional fragmentation undergoes evolution on the path of norm dynamics. Also, the evolution of institutional fragmentation cannot be thought of apart from the institutional change of the core institution.

 Table 7-3
 Evolution of institutional fragmentation by normative contestation

	Norm Dynamic Path				
	Normative contestation	Norm positioning & Norm propelling	Norm selection		
Normative contestation	Start of normative contestation by the promotion of competing norms or competing interpretation of the norms	Norm-positioning and norm-propelling in the face of normative contestation	A. Liquidation of normative contestation B. Non-liquidation	Continuation of existing interpretation Selective conversion of normative interpretations Replacement by new interpretation Parallel-going	
Institutional Fragmentation The core institution of the UNFCCC/KP	Genesis by the creation of the APP The attack on the UNFCCC/KP	Extension by the further emergence of numerous institutions Internal vibration of the UNFCCC/KP	Continuation or Stoppage Institutional change of the UNFCCC/KP		

Source: The author by modification of the table 1. Stages of norms of Finnemore and Sikkink (1998).

Section 3. ORIGINALITY OF RESEARCH

This research on the genesis of institutional fragmentation in a given issue area of climate change has some originality in several points. Firstly, in order to clarify what it means by institutional fragmentation in a given issue area in world politics, this research makes a theoretical approach from institutional study in social science. It has been criticized that currently prevalent studies on the multiple institutions in world politics have lacked theoretical ground. Though institutional fragmentation is an international relational phenomenon, the indivisible segment of the phenomenon is the individual institution. Thus, this research tries to understand the institutional fragmentation in a given issue area not as something completely new but as one of conceptual offshoots of the institution. Particularly, this research ventures the 'institutional multiplicity' as a new separate theme alongside the other major themes of institutional design (or genesis), institutional effectiveness, and institutional change. This research makes the notion of institutional fragmentation situated in the institutional multiplicity. The institutional fragmentation as a broad theme of institutional multiplicity in the institutional studies renders us to see how the conventional studies have dealt with institutional multiplicity and how the current notion of institutional fragmentation can be understood. Therefore, this research does not jump into the theoretical ground of world politics right away but trace back to the notion of institution and re-trod the current conception of the institutional fragmentation.

Secondly, this research makes a further specification on the notion of institutional fragmentation. The 'institutional fragmentation in a given issue area' is differentiated from the 'institutional fragmentation on a subject matter' from the perspective of the institutional design and genesis by two different institutional approaches. In the functional approach, the creation an individual international institution is driven by the expected consequences and functions to be delivered, so the existence of multiple institutions on a subject matter and the resultant phenomenon of institutional fragmentation in a competing or overlapping manner coincidentally happens to occur. Thus, institutional multiplicity on a subject matter is understood as a target of coordination and

management in the functional approach.

Yet, the emergence of competing or overlapping institutions *in a given issue area* cannot be genealogically detached from the existing institution. From the non-functional institutional approach, an institution emerges only in the institutional context. The creation of an overlapping institution besides the existing one is the source of conflict and institutional change. Accordingly, though apparently seeming the same due to the fragmentation characteristics, the institutional fragmentation on a subject matter and the institutional fragmentation in a given issue area are explicated to differ. The institutional fragmentation in a given issue area as separate and new ontological entity to be studied in this research.

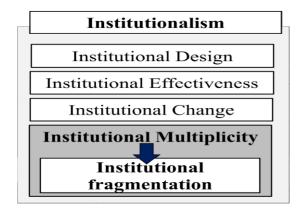
Thirdly, on the basis of this institutional explanation, this research goes over the current themes within institutional fragmentation in a given issue area: degree, consequence, genesis, and management. Particularly, this research focuses on the genesis of institutional fragmentation in a given issue area, which requires a theoretical application. This research traverses the overall international relation theories being applied in the genesis of institutional fragmentation, shows theoretical promises and limitation, and selected the constructivism which has a theoretical adjacency to the non-functional approach, Particularly, in the non-functional institutional approach, the multiplicity of the institution is understood as the source of institutional competition and conflicts. On the basis of this, multiple climate change institutions are understood as an embodiment of normative contestation from the constructivist normative perspectives. Also, in the non-functional approach to the institution, the genesis of institution cannot be said without the pre-existing institution. Along this line, this research explicates the newly created overlapping climate change institutions in normative relation with the existing institutions of the UNFCCC/KP. That is, this research traverses comprehensive theoretical explanations on the genesis of institutional fragmentation in a given issue area of climate change and ventures further theoretical explanation on the ground of constructivism with a logic of normative contestation.

Fourthly, this research extends norm studies. In the first place, this research explicates how the norm and the institution relate with each other in the constructivism: the institution is an

aggregate of norms. This research dissects the institution by normative dimensions and provides a way to analyze the institution and compare the institutions from the normative perspective. In the second place, this research extends the concept of normative contestation in international norm studies by leveling down from the norm versus norm contestation to the contestation at the range of legitimate policy options. The normative contestation happens not only at the norm level between existing norms and competing norms but also at the interpretative and definitional level between the existing interpretation of the given norms and the alternatively defined range of policy options. By the extended level of the normative contestation, the multi-leveled map of normative contestation was drawn. In the third place, besides the snapshot of normative contestation, this research explicates how normative contestation is made through the creation of the institution. In the fourth place, this research extends norm diffusion dynamics by looking at the international norms under normative contestation. In the future, the concern needs to be laid not only on normative contestation itself but also the course of liquidation of normative contestation.

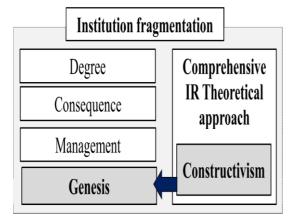
Lastly, this research shows that the institutional phenomena such as institutional design, institutional effectiveness, institutional change, and institutional multiplicity are all relevant, though each of them is separately studied. The specific phenomenon of institutional fragmentation in a given issue area, belonging to the institutional multiplicity, cannot be detached from the studies on the institutional design, effectiveness, and change. Particularly, the genesis of institutional fragmentation renders a thought on the institutional design, effectiveness, and the change of the core institution and the non-core competing institutions and the overall system of those institutions. In this regard, this research focuses on the institutional change and tries to extend the genesis of institutional fragmentation to the evolution of institutional fragmentation. Five aspects of the originality of this research is summarized in the figure 7-1, 7-2, 7-3, 7-4, and 7-5 in the next page.

Figure 7-1 Originality of research (1)



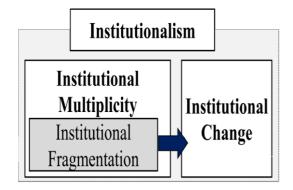
Source: The author,

Figure 7-3 Originality of research (3)



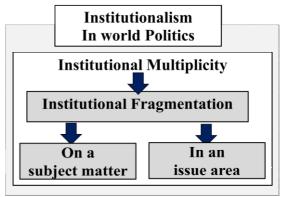
Source: The author.

Figure 7-5 Originality of research (5)



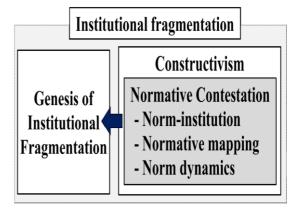
Source: The author.

Figure 7-2 Originality of research (2)



Source: The author,

Figure 7-4 Originality of research (4)



Source: The author,

Section 4. RESEARCH LIMITATION AND FURTHER RESEARCH

The limitation of this research resides in some points. Firstly, the genesis of institutional fragmentation in the issue area of climate change implies questions the creation of overlapping and competing institutions, so this research dealt with the emergent competing institutions of the APP, the LCGP, the EACP, and the regional institutions of Asian regional organizations. However, the genesis of institutional fragmentation cannot be apart from the changed meaning, role, and institutional dispositions of the UNFCCC/KP. The future research needs to explore why the dominantly existing institutions of the UNFCCC/KP could not provide a place to prevent the emergence of competing and overlapping institutions and how the UNFCCC/KP have gone through institutional change, in what way they will defend its position in the stream of institutional fragmentation.

Secondly, the evolution of the UNFCCC and the KP in the context of the institutional fragmentation gives a lot of implication to the management and the consequence of institutional fragmentation. The management of institutional fragmentation hinges upon the coordinating role of the core institution, the UNFCCC (van Asselt and Zelli 2012). Because the dominantly existing institution is under pressure of institutional change, the core institution is in need of capacity increase or positional enhancement. The appropriate ways for management entails the institutional change of the UNFCCC, and the capacity of the UNFCCC influences the way for the management of institutional fragmentation. Will the UNFCCC see the creation of the International Climate Change Agency? Also, the study on the consequence of institutional fragmentation has concerned the overall regime effectiveness, the degree of problem-solving on the one hand and the effect on the political agent on the other. The overall regime effectiveness by the changing role of the UNFCCC needs to be thought of in the future. Accordingly, separate questions on the extent, the consequence, the genesis, and the management of the institutional fragmentation need to be linked in a combined manner at the center of the matter of institutional genesis and evolution.

Thirdly, this research focused on the genesis and subsequently evolution of institutional

fragmentation and explored the individual competing institutions. Particularly, the APP was a major concern in charting the normative contestation against the UNFCCC/KP, and the background and the dispositions of the APP were investigated. However, recently, the APP stopped its institutional life in April 2011. This discontinuity of the APP received a lack of concern in this research, and future research needs to theoretically explicate why the APP stopped living a life. Furthermore, the institutional effectiveness of individual fragmenting institution of the APP has been less concerned than that of the UNFCCC/KP. The study on the institutional effectiveness of the APP during its short life from 2005 to 2011 will give implication for the institutional fragmentation.

Fourthly, this research explored the individual competing institutions that brought out the genesis of institutional fragmentation on the logic of normative contestation and compared those institutions to the UNFCCC/KP. However, domestic politics in the establishment of the APP by the US, the LCGP by Japan, and the EACP by South Korea and the regional politics in the establishment of the regional institutions by the ASEAN, the APEC, and the EAS are not specifically explored yet. Future studies needs to complement this part.

Fifthly, this research did not explore the institutions that have a supportive normative position of the Kyoto Protocol. More data collection of these cases and their defending strategies need to be studied.

Lastly, on the basis of the classification of institutional fragmentation by whether it is on a subject matter or in an issue area, this thesis focused on the institutional fragmentation in a given issue area of climate change. However, recently, there is a perspective to see the issue of climate change not as a singular issue but a set of multiple issues for its broad relevance with so many issue areas. This changed perception will surely give a different implication to the study on very concept of institutional fragmentation and subsequently the genesis of institutional fragmentation. However, the exploration and inclusion of the discourse on climate change issue goes beyond the current capacity of this thesis that solely focused on the discourse of institutional fragmentation. Future studies need to embrace this discourse of issue-perception on climate change alongside the institutional fragmentation.

Section 5. CONCLUDING REMARKS

This research explored the genesis of institutional fragmentation on the basis of normative contestation on two climate change norms of CBDR and precautionary approach with the Asian climate change institutions. Specifically questioned was what leads to the creation of an overlapping and competing institution besides a dominantly existing institution. One normative route led to the establishment of the Kyoto architecture. Meanwhile, different normative interpretation made inroads to climate change issue area and drew a competing normative route. The normative contestation came to be corporeal by the appearance of the APP that represents a competing normative position.

Since the APP ushered in institutional fragmentation in climate change issue area, a series of Asian climate change institutions have emerged as the organizational platforms to embody and diffuse the contestant normative position of nation states and regional cooperative organizations in Asia. That is, Asian climate change institutions are the carving of Asian regional appropriateness. Here, fragmenting institutions work like agents that contest the existing institution that stands on the existing interpretation of the norms. The creation of an overlapping and competing institution on the basis of an alternative interpretation on the core norms and the newly defined range of policy options is a strategic action outcome by the nation state to diffuse its interpretive position on the norms and to legitimize the broadened range of individual actions to choose. Accordingly, the genesis of institutional fragmentation (in a given issue area) is what states make of it.

One digresser can slacken a tight bandage around a dominant and singular international institution, and the opportunistic are likely to appear. The opportunistic can enjoy the stretched spectrum of norm interpretation and the broadened policy options and emulate the first digresser. Then, an existing institutional loop is further loosened. Thus, once institutional fragmentation begins, it comes to have its own life. Undoubtedly, on-going institutional fragmentation can work as a challenge to the UN-based logic of appropriateness. The evolution of institutional fragmentation renders an open-ended question that cannot but relate with the institutional change of the UN-based climate change institutions.

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