

**The Role of Policy Networks in Governing Transnational
Environmental Issues in Southeast Asia**

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The candidate confirms that the work submitted is his/her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

The study of inter-state cooperation on the environment seems an incomplete way of understanding environmental governance in Southeast Asia. Focusing only on state cooperative frameworks and assessing the effectiveness of international regimes in terms of problem-solving not only leads to the conclusion that ASEAN fails to deal with the problems; this approach also fails to find a solution to improve the effectiveness of those regimes. This thesis applies the network approach to understand better the dynamics and potential for cooperation of actual governance activities operating below the level of inter-state cooperation. This thesis proposes that policy networks are a kind of governance mechanism supporting ASEAN environmental cooperation through better processes. To examine the influential role of policy networks on the development of regimes, the transnational haze issue and the illegal transnational trade in wildlife issue are selected as case studies to investigate the relationships between components of the macro-structure of networks and the effectiveness of regimes. A comparison of the two cases reveals the similar role of policy networks in sustaining the environment and supporting environmental policy through functional activities in the policy monitoring and implementation stages. However, varying levels of success in improving the effectiveness of regimes result from different political opportunities, which are determined by the nature of international cooperation problems and the attributes of regimes. Since cooperation in the form of networks can enhance the effectiveness of regimes, the connections between intergovernmental organizations and transnational non-state actors should be considered for developing countries as an option for improving international cooperation in areas that are not priorities for states.

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List of Abbreviations

AATHP	ASEAN Agreement on Transboundary Haze Pollution
AEG-CITES	ASEAN Experts Group on CITES
AIPA	ASEAN Inter-Parliamentary Assembly
AMAF	ASEAN ministers of agriculture and forestry
AMMH	ASEAN Ministerial Meeting on Haze
APA	ASEAN People's Assembly
APFP	ASEAN Peatland Forests Project
APMI	ASEAN Peatland Management Initiative
APMS	ASEAN Peatland Management Strategy
APP	Asia Pulp and Paper
APRIL	Asia Pacific Resources International Ltd
ARREST	Asia's Regional Response to Endangered Species Trafficking
ASEAN	Association of Southeast Asian Nations, which has 10 member countries: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam
ASEAN-WEN	ASEAN Wildlife Enforcement Network
ASMC	ASEAN Specialised Meteorological Centre
ASOEN	ASEAN Senior Officials on Environment
BAL	Basic Agrarian Law
BPN	Badan Pertanahan National (National Land Agency)
CI	Conservation International
CIFOR	Center for International Forestry Research
CITES	Convention of International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties
CSO	Civil society organization
CTI	Coral Triangle Initiative
CTI-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security
DIPs	Detailed implementation plans
DNP	Department of National Parks, Wildlife and Plant Conservation
DoFI	Department of Forest Inspection
DWNP	Department of Wildlife and National Parks Peninsular Malaysia
EIA	Environmental Investigation Agency
ENV	Education for Nature-Vietnam
EoF	Eyes on the Forest
ESABII	Enforcement Coordination Group and the East and Southeast Asia Biodiversity Information Initiative
ETIS	Elephant Trade Information System
EU	European Union

FDRS	Fire Danger Rating System
FWI	Forest Watch Indonesia
GEC	Global Environmental Centre
GEF	Global Environment Facility
GEN	Global Ecolabelling Network
GFW	Global Forest Watch
GIS	Geographic Information Systems
GT SEZ	Golden Triangle Special Economic Zone
GTI	Global Tiger Initiative
HAKA	Hutan, Alam dan Lingkungan Aceh (Forest, Nature and Environment of Aceh)
HMS	Haze Monitoring System
HOB	Heart of Borneo
HTTF	Haze Technical Task Force
ICCWC	International Consortium on Combating Wildlife Crime
ICEL	Indonesian Center for Environmental Law
ICPO	International Criminal Police Organization
IFAW	International Fund for Animal Welfare
IGO	Intergovernmental organization
Inpres	Presidential instruction
IPOP	Indonesia Palm Oil Pledge
IR	International relations
IUCN	International Union for Conservation of Nature/The World Conservation Union
MIFEE	Merauke Integrated Food and Energy Estate
MNC	Multinational corporation
MNS	Malaysian Nature Society
MOF	Ministry of Forestry
MOU	Memorandum of understanding
MPAG	The Marine Protected Areas Governance program
MPR	Majelis Permusyawaratan Rakyat (People's Consultative Assembly)
MSC	Ministerial Steering Committee
MSC Mekong	Ministerial Steering Committee in Mekong subregion
MYCAT	Malaysian Conservation Alliance for Tigers
NEA	Singapore's National Environment Agency
NGO	Non-governmental organization
Norad	The Norwegian Agency for Development Cooperation
PA	Public administration
PCU	Program coordinating unit
PM Haze	People's Movement to Stop Haze
PSI	The pollution standard index

REDD	Reducing greenhouse gas emissions from deforestation and forest degradation
REDD+	Reducing emissions from deforestation and forest degradation and enhancing forest carbon stocks
RHAP	ASEAN Regional Haze Action Plan
RSPO	Roundtable on Sustainable Palm Oil
SCDF	Singapore Civil Defence Force
SDSWR	Singapore Dialogue on Sustainable World Resources
SEApeat	Sustainable Management of Peatland Forests in Southeast Asia
SEC	Singapore Environment Council
SIIA	Singapore Institute of International Affairs
SNF	Seub Nakhasathien Foundation
SRFAs	Subregional firefighting arrangements
TIGERS	Trade Infraction and Global Enforcement Recording System
TNC	The Nature Conservancy
TRAFFIC	Trade Records Analysis of Flora and Fauna in Commerce
TRAFFIC-SEA	TRAFFIC-Southeast Asia
TWG	Technical Working Group
UGM	Gadjah Mada University
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development's
USFWS	US Fish and Wildlife Service
VACNE	Vietnam Association for Conservation of Nature and Environment
WCO	World Customs Organization
WCS	Wildlife Conservation Society
WEN	Wildlife Enforcement Network
WFFT	Wildlife Friends Foundation Thailand
WRI	World Resources Institute
WSPA	World Society for the Protection of Animals
WWF	World Wide Fund for Nature

Chapter 1 Introduction

Governing transnational environmental issues effectively is a critical challenge for states and intergovernmental organizations (IGOs). In Southeast Asia, the Association of Southeast Asian Nations (ASEAN) has addressed the issues and established regional mechanisms to manage them. However, these attempts are considered to have failed because of the recurrence of the problems in the region. Detractors also point out several factors, including crony capitalism (Nguitragool, 2011; Pas-Ong and Lebel, 2000) and the ASEAN cooperation principles called ASEAN Way (Elliott, 2003; Elliott, 2011; Aggarwal and Chow, 2010). On assessing the cooperation in terms of physical environmental outcomes, it seems there are no possible solutions for the region to make the environmental situation better, despite a considerable number of activities and efforts having been continuously taken by states, IGOs and civil society organizations (CSOs). These attempts have been developed and have helped sustain environmental governance in the region. But these are outweighed by the continued presence of the problem. Considering the complexity of the environmental problems and the difficulties in finding effective solutions, my thesis explores contemporary governance activities contributing to the development of the international policy process in governing transnational environmental issues to examine whether or not policy networks are a potential factor that influences the improvement of regional mechanisms in Southeast Asia.

1.1 Background

It is challenging for states to find effective, appropriate measures and solutions to transnational environmental issues. Difficulties in managing them are rooted in the characteristics of environmental problems, which are complicated and interconnected; the causes and effects of the problems – as well as policy options, which potentially and unexpectedly impact other policy areas at different levels of governance – are also uncertain (Connelly et al., 2012: 2, 142; Connelly and Smith, 2003: 124). In addition, the multiscale features of environmental problems – spatially, sociopolitically and temporally – also increase the complexity for stakeholders and policymakers involved in the policy process at the grassroots,

subnational, national and international levels (Lemos and Agrawal, 2006). The nature of the environmental problems, which variously affect stakeholders at different policy levels, are a fundamental explanation for the difficulties that states have in initiating adequate environmental policy to respond to them nationally and internationally.

At the national level, there are several reasons why governments cannot succeed in dealing with environmental problems. Where governments have an incentive to tackle them, governments may face several operational obstacles, including insufficient knowledge, technology and resources to cope with the uncertainty of the causes and effects of the issues. In weak states and in developing countries, environmental policy is less attractive than economic development policy, and is often ignored. The governments in those countries often fail in addressing the problems, implementing environmental laws and/or preventing corruption (Mitchell, 2010).

At the international and global levels, the achievement of international cooperation in solving environmental problems requires several necessary policy stages to be fulfilled. International negotiation among states is possible only if shared benefits can be identified. However, individual states have different incentives to deal with a particular problem: the tragedy of the commons (where both perpetrator and victim suffer) or the upstream/downstream problem (a perpetrating state may not be concerned about reducing another's interest, while a victim state has to pay for the cost) (Mitchell, 2010). However, success in multilateral negotiation does not guarantee the reduction of the problem. Boehmer-Christiansen and Kellow (2002) propose that environmental issues require more than state ratification and compliance. The adoption and implementation of measures at the domestic level are necessary to make an impact on the agreed policies. The key for inter-state success in managing the environmental problem physically does not depend on one policy stage but all of them. Failure at one policy stage can lead to unsuccessful results overall. The achievement of inter-state cooperation on the environment needs full responsibilities on all parties to monitor, comply with, implement and enforce what they have agreed.

International cooperation to manage environmental issues, which are mostly by nature transnational, would not be a problem if the state which is the source of the problem has a strong aspiration and makes effort to take its obligations seriously. While there is no global government as the highest legitimate authority in international relations, international institutions and organizations have been established to support the objectives of international cooperation through activities ranging from ensuring that all parties follow the agreements to monitoring to prevent free-riders and seeking collective sanction mechanisms to punish offenders. Young (1997b) suggests that, to deal effectively with environmental problems that cross jurisdictional boundaries, states should establish joint institutions to manage shared natural resources and transnational externalities that affect other states' welfare. In addition, intervention on the ground is required (Young, 1997b). But, in the current international context, apart from the most advanced example of regional integration, the European Union (EU), states rarely bestow part of their sovereignty to any international institution to enforce treaties. Therefore, IGOs cannot take overall responsibility for implementing at the domestic level. The fulfilment of environmental agreements depends on individual states.

The combination of the nature of the environmental problems, the difficulties at different levels of the policy process in finding solutions, states' incentives to join international agreements, and the limited capacity of international institutions explains why environmental problems are hard to solve effectively, especially in terms of problem-solving, which only measures by identifying the absence or presence of the problem. Owing to lengthy processes gradually contributing to overcoming challenges in the environmental problem, the failure and success of international cooperation on the environment should be determined not only by physical, preferably environmental, outcomes such as the absence of pollution or the abundance of biodiversity. Lemos and Agrawal (2006) make an interesting observation that signed agreements and established institutions relating to environmental problems around the world vary in their effectiveness. International agreements and declarations can instead be a guideline which cannot significantly secure the success of states' cooperation. The considerable difficulties in managing transnational environmental issues are the main reason why this thesis decides to

examine the progress of international cooperation, in terms of process rather than product, through different stages of international policy process.

Among the literature on international relations, the failure of international cooperation paves the way to broaden the field by increasingly including non-state actors as parts of analytical explanation and understanding international politics and phenomena. While states and IGOs are still the main and critical actors in international politics, civil society actors (especially non-governmental organizations (NGOs)) are gaining popularity in standing up for international concerns in the less prioritized areas such as poverty eradication, human rights, social equality and the environment. In the environmental area, Boehmer-Christiansen and Kellow (2002) highlight that NGOs become a critical actor because they realize the states' constraints in carrying out international agreements and the limitations of IGOs in intervening in domestic affairs. In addition, some NGOs can finance environmental projects for states and operate transnationally in activities which IGOs cannot do, such as lobbying and criticizing state policy or behaviour (Boehmer-Christiansen and Kellow, 2002). By recognizing their roles in international environmental governance, they can position themselves against state policy while, at the same time, complementarily fulfil states' and IGOs' intentions.

Non-state actors are included in the concept of international regimes, governance and networks to provide support in the states' unsuccessful cooperative areas. They have the potential to manage the problem globally and to make those regimes function more effectively (Young, 1997b). Lemos and Agrawal (2006) believe that the greater levels of citizen participation and involvement in the international cooperation process can bring about the effectiveness of environmental governance. They also suggest that alternative efforts can come in the form of formal and informal networks between state and non-state actors to create or maintain international regimes in the public policy process without changing the key rules and procedures underlying that cooperation (2006: 302–303).

The concept of network is also applied in the study of international relations (IR). The concept is not only useful in examining states' relations on security and economic interdependence. It also allows analysts to include non-state actors in examining

their roles responding to the areas where the progress of inter-state cooperation cannot go further. Distinctive types of networks in the field exemplify how relations between actors can influence changes in international politics. Firstly, in traditional network theory, the network of the United Nations Global Compact, which consists of UN-related stakeholders (businesses, governments and civil society groups), formed communicative structures to influentially address specific norms and/or other social problems for the policy community (Gilbert and Behnam, 2013). Secondly, activists constructed transnational advocacy networks to influentially bring new ideas, norms and identities into the global system (Keck and Sikkink, 1999). The network targeted particular states or IGOs which failed to carry out international norms in the areas of human rights, the environment and violence against women. Activists operated transnationally to gain information, as well as lobbying to address domestic and international concerns. Nationally, they also investigate, and pressure governments to change policies (Keck and Sikkink, 1999). Finally, the connection between decision makers and technical experts – called the epistemic community – was developed because of the complexities and uncertainties of global problems. Nationally, the network can influence states' interest by providing salient informative elements for policymakers, whereas it can internationally contribute to the establishment of social institutions to guide international behaviour (Haas, 1992). These types of network bring optimism about an improvement of environmental governance since networks can be a potential options for dealing with environmental issues.

1.2 Environmental problems and ASEAN cooperation on the environment

Although Southeast Asia is in the rainforest zone and rich in biodiversity, these invaluable natural resources are severely threatened and have been degraded by large-scale exploitation. Dense forests have been cleared for agricultural land, dam construction, mining and urbanization. In general, the rapid growth of economic development, which has come alongside poor governance of natural resources, is an explanation for the environmental problems in the region. The richness of natural resources has been consumed unsustainably with less concern from governments.

From a state orientation perspective, environmental problems should be effectively governed nationally by governments and/or internationally by IGOs. Therefore, noticeably, there are two distinct sets of literature on transnational environmental problems in the region. The first emphasizes the environmental issues which cannot be solved by national governments. A prominent example is deforestation for industrial farming and logging in Indonesia, which is the root cause of the transnational haze issue. Scholars point to an interest-based explanation and the connection between politicians and agricultural businesses called crony capitalism (Nguitragool, 2011; Pas-Ong and Lebel, 2000; Varkkey, 2015). Furthermore, because of the complex nature of environmental problems and the limitation of current knowledge and technology, governments in the region have encountered policy problems in finding proper options or implementing them. Moreover, since the environmental problems overlap with other policy areas, the capacity of governments – especially in the decentralized political system – is restricted by coordination difficulties among national departments and ministries at different levels of governance in enforcing law and implementing policy to deal with environmental problems.

Another set of literature focuses on the failure of ASEAN as a regional institution to create effective regimes to achieve international cooperation on the environment. Even though environmental issues have been addressed by the organization since 1977 under the concept of sustainability to balance development needs and environmental protection, environmentally sustainable objectives in ASEAN documents are still ambiguous. Several studies identify the inability and ineffectiveness of the ASEAN institutional structure, norms and regimes in ensuring members' compliance and policy implementation as sources of the weakness of regional environmental governance (Litta, 2012; Tan, 2005; Contreras, 2008; Aggarwal and Chow, 2010; Elliott, 2011; Nguitragool, 2011; Lian and Robinson, 2002). While this set of literature assesses the deficiency of ASEAN cooperation on the environment, this does not equate to an absence of cooperation. Therefore, breaking up particular factors underlying and representing the cooperation would help better to analytically justify the position of ASEAN cooperation, which hangs somewhere between failure and success.

1.2.1 General context of ASEAN cooperation

ASEAN cooperation, in general, can be observed from three components: the ASEAN Way (as the principles and norms underlying state practices for regional cooperation), the ASEAN Secretariat (as an intergovernmental body for facilitating cooperation) and regimes (which are regional mechanisms for governing specific concerns). These components are interrelated. Separating and then examining them together could also help understand the international context and the possibility of improving the progress of ASEAN cooperation.

The ASEAN Way is the key norms underlying members' practices for regional cooperation. It was developed as a diplomatic instrument for conflict management and the peaceful settlement of disputes when ASEAN was established during the Cold War; it caused the organization to be praised for its success in security cooperation in the developing world (Loke, 2005). The foundation norms – including principles of non-interference, consensus and non-intervention – worked well in promoting regional peace and security through dialogue among members characterized by recent statehood, experiences of colonization and bitter historical tensions among each other. However, it has been criticized as a major obstacle for deeper cooperation in non-traditional security issues, especially on the environment (Elliott, 2003; Elliott, 2011; Aggarwal and Chow, 2010). While the principle of consensus minimizes the shared interests which all members can accept, the non-intervention and non-interference principles constrain regional attempts to intervene in individual countries whether or not they wish to transform what has been agreed at the national level. These ASEAN foundational norms reveal the state-centric nature of the members that prioritizes their sovereign rights over their territories. Thus, the norms are especially impractical when the regional problems are transnational and need intervening measures to address.

The ASEAN Way is the key reason why ASEAN's mechanisms are presented in a soft form of cooperation without firm commitment, obligations and/or sanction mechanisms. However, ASEAN has already acknowledged the environmental problems and prepared the ground for cooperation, which at least can present some common benefits shared by them.

A more concrete set of ASEAN cooperation is the ASEAN Secretariat and its affiliated bodies. ASEAN as an intergovernmental organization can be separated into two main components: the organs responsible for regional policy (including the ASEAN Summit, the ASEAN Coordination Councils, the ASEAN Community Council and the ASEAN Sectorial Ministerial bodies) and the ASEAN Secretariat (the secretary-general and the deputy secretaries-general of ASEAN) representing the ASEAN view. While the first comprise mainly national representatives, senior officials, ministers and heads of state working through meetings and forums, the second takes responsibility for coordinating, facilitating, monitoring and reporting progress of implementing ASEAN agreements and decisions (ASEAN Secretariat, 2007a: 10–19). When conflicts between members occur, the secretary-general can act as an ex officio consultant or mediator. However, the role of the Secretariat and the secretary-general is rather limited since the decision on results and whether states have complied to those results shall be settled by the ASEAN Summit (ASEAN Secretariat, 2007a: 24–25). Therefore, from this aspect, the independent role of the Secretariat in directing or accelerating the progress of cooperation is blocked by the ASEAN Way, and this does not give much hope for regional achievement on transnational environmental issues.

More specifically on cooperation on the environment, the international regimes were created and developed by the specialized ASEAN bodies responsible for managing a particular issue. Regimes are sets of intervening tools – which include agreements, regional action plans, procedures, mechanisms, policies and projects – to deal with a particular issue. While these tools are not strong owing to the ASEAN Way and the ASEAN organization structure – which are hard to shape in the short term – improving the quality of the existing regimes could be a possible option for gradually achieving objectives and goals of ASEAN cooperation addressed by the members. Examining the regional tools through the process helps to identify what the regimes' weaknesses are. These weaknesses can be the vagueness of obligations and appropriate policies in practice, the organization's inability to monitor members' compliance, and/or the incapacity of members to implement and enforce policy and law at the national level. Considering them in this way allows us to look at non-state actors as an alternative factor which can possibly facilitate and improve these flaws of the ASEAN regimes.

ASEAN cooperation on the environment, therefore, is often separated into two main levels: regional (which includes policy consultation, negotiation and initiation) and national (which is the implementation responsible by members). Although environmental problems require every stage of the policy process to be solved successfully, these two sections of policy process are not well connected. The mismatching of the existing regional mechanisms to the issues is part of the reason why the problems recur. Transnational operations – such as policy monitoring or the implementing projects designed at the regional level by the ASEAN Technical Working Groups, the ASEAN Senior Officials on the Environment, and the coordinating centres – are restricted by ASEAN norms and the organizational structure stated above.

This feature of the ASEAN policy process in dealing with regional issues, therefore, presents multiple levels of governance; however, it is very different from the aspect of multilevel governance in the EU cooperative model. Some distinctions can be pointed out. Firstly, while multilevel governance is a policy-creating process where members' authority and decision-making are shared across multiple levels of government including supranational, national and subnational levels (Hooghe and Marks, 2001: 2); this kind of policy aspect does not happen in environmental policy process in ASEAN. Secondly, the EU members have legally binding commitments, a more precise timeline, and better authoritative coordinating bodies to follow up policy implementation at the local level; on the other hand, the timeframe for policy implementation and enforcement by ASEAN members is unclear and unpredictable. The systems of government – the centralized or decentralized power – can additionally be an explanation for different lengths of time taken to translate what they agree into national laws in the process of national implementation and enforcement. Thirdly, diverse types of political system in ASEAN – most of which are not fully democratic – bring about careful consideration of the horizontal aspect of governance. Because the EU countries are governed by the democratic system as a key criterion for membership, civil society actors and stakeholders can participate in the national political process through political channels. In contrast, owing to different types of government in ASEAN, these political channels are not obvious. Non-state actors' political opportunities at the national level vary and depend on each government deciding to control different kinds of political issue. Therefore,

even though the international policy process in managing environmental issues in ASEAN contains multiple levels of governance, the process is still highly reflective of a strong state-centric character of inter-state cooperation in the region.

1.2.2 Non-state actors, networks and their promising role on regional environmental governance

Since ASEAN cooperation is state-centric, non-state actors are overlooked and they are not considered a relevant factor for ASEAN or the international policy process. Despite non-state actors, especially NGOs, actively working to solve environmental problems, they are always observed as being antagonistic to states and ASEAN. Some literatures, which focus only on the regional negotiation process, exclude non-state actors from the political sphere because of their absence of formal seats at the ASEAN forum and/or a strong voice in the forums they can attend (Litta, 2012; Contreras, 2008). However, the absence of a voice in regional meetings does not mean that they are insignificant in their ability to join in at different stages of the policy development process on the environment. Many studies on environmental governance in Southeast Asian countries present the crucial role of non-state actors in applying alternative strategies to protect the environment at national and/or community levels (Simpson, 2013; Abdul-Aziz and Ofori, 2012; Storey, 2012; Steenbergen, 2016; Steenbergen, 2013). These pieces of governance are pervasive and contribute to environmental conservation in the region. Those operations occur in different areas across the region but they are not yet considered parts of international environmental governance. Existing literature on ASEAN cooperation on the environment focuses only on the international level. This understanding neither goes beyond why the cooperation fails nor proposes alternative options on how cooperation can be improved once institutions have no capacity to enhance cooperation. On the other hand, actual environmental governance activities which happen at other levels are not yet investigated in terms of how their attempts affect regional environmental outcomes. The absence of an explanation for how non-state actors interact to respond to the ineffectiveness of ASEAN cooperation creates a gap in the literature. By observing the relationships among ASEAN, its member states and non-state actors outside the negotiation process, this thesis attempts to fill this gap

by exploring those interactions through stages of the international policy process governing particular environmental issues that are obviously addressed but still not successfully achieved by ASEAN.

Networking among actors becomes a promising option which potentially leads to better achievement in dealing with environmental issues in Southeast Asia. The achievement of networks of transnational activists on human rights, anti-slavery and the environment in Latin America and some developing countries in establishing global norms of national politics and domestic debates (Keck and Sikkink, 1998) exemplifies the influential role of networked governance in shaping political outcomes. In addition, in the conventional inter-state orientation, transgovernmental networks – networks of government officials including courts, regulatory agencies, executives and legislatures – are offered as a different perspective for analysing international cooperation on issues by focusing on the existing role of national substate or governmental officials who work transnationally on various kinds of international activity in the absence of supranational authorities (Slaughter, 1997; Slaughter, 2004; Hooghe and Marks, 2001; Eilstrup-Sangiovanni, 2009). The network approach and studies in the field of environmental cooperation and politics are worth further exploration for these reasons. Firstly, collective collaboration in the network form can be a strategy adding power to relatively less powerful actors. The connections and loose alliances of actors can increase their ability to achieve policy which none can accomplish on its own (Reinicke, 2000: 44; Rohrschneider and Dalton, 2002: 510).

Secondly, because of the complex nature of environmental problems, it is impractical and not sensible to disregard non-state actors, especially academics, scientists and NGOs who have actively worked in and understand the issue. In addition, since they possess expertise and practical knowledge, the professional links between them and policymakers can bring alternative solutions and options in the policymaking areas (Feldman, 2012; Haas, 1992). In addition, to solve complex environmental problems, transferring new knowledge and technological options should not be limited to states; the public and other stakeholders should receive them as well. By the nature of the problem, it is necessary to include all relevant actors as much as possible to

join operations after policy is made. Since the causes and impacts of the environmental issues sometimes contain scientific language that is hard to understand, these experts can also have an important role in translating it into an understandable language for raising awareness and support from the public.

Finally, despite literature on networks in international politics always highlighting the networks' influence in shaping international norms and policy outcomes, those works also present the network's activities beyond the policy negotiation process (Bae et al., 2011; Keck and Sikkink, 1999; Downie, 2014). While the formal inclusion of non-state actors in the policy discussion process provides a legitimate component to the global policy forum (Reinicke, 2000), their influence on international outcome is also derived from their actual governance activities at different stages of policy process, especially policy monitoring and implementing. For example, to ensure that negotiated compliance is carried out, transnational advocacy networks keep an eye on target actors to adopt new policies. This might possibly result in an amendment to procedures, policies and, ultimately, behaviours (Keck and Sikkink, 1998). The existence of environmental policy does not make any changes unless it is carried out, complied with and implemented by states and/or other kinds of actor.

1.3 Hypothesis and research questions

From the conventional perspective, which focuses only on states and intergovernmental organization in the region, the progress of international cooperation on the environment has been blocked by ASEAN norms and incapacity. On the other hand, non-state actors, whose operations contribute to environmental conservation in the region, are active in the environmental area. Owing to their weak voice in the formal ASEAN forum, they are excluded from the frame in analysing ASEAN cooperation. However, non-state actors, especially environmental NGOs, collectively share a common goal in terms of problem-solving, and their work may complement each other in supporting regional governance on a particular issue. Therefore, this can lead to the formation of policy networks in governing a particular environmental issue.

The varying application of the concept of networks in sociology, administrative studies and international studies leads to a lack of consensual meaning of the word. To avoid any confusion, this thesis finds a useful term applied by Perkin and Court (2005), who propose that in general networks are 'simply collections of linked nodes'. However, the difficulty in defining the word results from different perspectives that perceive networks as 'organizational structures or processes that bring actors together'. Therefore, with the intention of providing a broad definition which includes both informal groups and rigid organization, Perkin and Court adjust Tennyson's (2003) meaning of network and define it as 'formal or informal structures that link actors (individuals or organizations) who share a common interest on a specific issue or a general set of values' (Perkin and Court, 2005: 2). Any network related to the policy process will be called a 'policy network' (Perkin and Court, 2005: 8–9). Guided by and adjusting from Perkin's and Court's notion, the definition of policy networks refers in this thesis to formal and/or informal structures that link actors (states, IGOs and/or CSOs) who share a common goal on a particular issue and operate to achieve that goal in the international policy process.

The difficulties in dealing with transnational environmental issues require more than states and IGOs to manage them. Cooperative efforts from non-state actors who share a common goal to end the problem can be another factor supporting the effectiveness of existing environmental regimes. This thesis argues that *policy networks are a critical factor supporting ASEAN cooperation on the environment*. Since the function of ASEAN as a regional body is limited by the ASEAN Way and resources, this thesis hypothesizes that *links between IGOs and transnational NGOs are a crucial factor facilitating the effectiveness of international regimes in governing transnational environmental issues in Southeast Asia*. The argument and hypothesis are examined under the main research question and subquestions as follows.

Main research question: under what circumstances can policy networks facilitate inter-state cooperation in governing transnational environmental issues?

The main question will be answered by asking these following subquestions.

1. What are the components (kinds of actors, number of ties, subgroups and central nodes) of policy networks?
2. How do policy networks operate to improve the effectiveness of international regimes?
3. To what extent can non-state actors in policy networks engage in the ASEAN policy development process?
4. What are the significant roles of policy networks in governing transnational environmental issues in the region?

To answer these questions, two transnational environmental issues are chosen to examine the role of policy networks in governing the issues. The cases are purposely selected from Southeast Asia. Although the region is criticized for a failure of inter-state cooperation on the environment, international regimes for tackling the issues have been addressed and supported by ASEAN member countries. In addition, with an awareness that most of these are developing countries, which are less likely to prioritize the environment, and non-democratic without strong civil societies as in Western developed countries, this thesis may reveal different features of relationships between state and civil society actors that go beyond fighting each other outside the areas of political suppression. Environmental governance in a group of developing countries may be better understood by considering efforts and connections among different kinds of actors governing on a particular environmental issue guided by an international agreement. More importantly, to analyse how policy networks can better operate to improve international regimes, ASEAN, as a regional institution, serves as a similar inter-state cooperative structure for comparing the networks in two cases. Comparing two cases with similar contexts and in the same category would help to identify factors which cause different results in the effectiveness of the regime in each case study.

For these reasons, two selected transnational environmental cases are the transnational haze issue (hereafter called the haze case) and the transnational illegal wildlife trade issue (hereafter called the wildlife case). The Coordination and Support Unit within the ASEAN Secretariat acts as a regional coordinating body on the

transboundary haze issue for member countries, while ASEAN-WEN Program Coordination Unit was established as a centre for ASEAN Wildlife Enforcement Network (ASEAN-WEN) to solve the illegal wildlife trade and trafficking issue. Both cases are governed and guided by international agreements: the former is based on the ASEAN Agreement on Transboundary Haze Pollution, and the latter is based on the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES).

1.4 Original contribution and significance of research

Although there are key studies providing a comprehensive account of international environmental cooperation and environmental governance in Southeast Asia, a gap in literature can be identified. With the conventional perspective, which focuses mainly on inter-state cooperation and organization, extensive research has explained well why environmental cooperation in the region has failed and cannot be achieved (Litta, 2012; Tan, 2005; Contreras, 2008; Aggarwal and Chow, 2010; Elliott, 2011). However, these studies have not yet answered how environmental cooperation in the region can be improved. Although non-state actors should be another option for developing regional environmental governance, they are often perceived as antagonistic to governments' economic development initiatives and gain less attention owing to their less powerful voice and/or having no seat in the formal decision-making process (Nguitrugool, 2011; Litta, 2012). The separation of state and civil society world in the existing literature does not only limit understanding of regional environmental governance on transnational environmental issues since the non-state actors' attempts and activities are not considered parts of regional governance. It also rarely brings about promising options for the region to improve environmental cooperation. This thesis attempts to close this literature gap by applying a network perspective to investigate the progress of international cooperation through actual collaborative attempts among state and non-state actors for a better understanding of environmental governance in the region.

From a state-oriented view, international cooperation cannot be taken seriously without looking at states' mutual interests and incentives. Environmental issues become a problem of international cooperation since the different consequences of

the problems create various incentives to individual states. That is why environmental cooperation has always been unsuccessful despite the problems having been addressed by states. The state-oriented perspective therefore is not adequate for answering how environmental cooperation can be developed. Moreover, environmental problems are complicated and cooperation requires more than agreements negotiated at the international level. This is why environmental cooperation should be addressed in different ways. Looking at other stages of the international policy process and examining cooperative efforts by both state and non-state actors can lead to better understanding of the dynamic and potential development of environmental cooperation in the region.

The concept of networks has been applied in the Southeast Asian literature on international cooperation; however, very few attempts have been made to explain it in the environmental area. Many pieces of existing literature on networks are on economic development, including inter-state political economy relations (Katzenstein, 1996; Dent, 2003) and regional cooperation on sustainable energy and resource exploitation (Karki et al., 2005; Poocharoen and Sovacool, 2012). On the other hand, some of them present the promise of networks among civil society actors in the field of human rights (Crouch, 2013), and the establishment of the ASEAN People's Assembly, which would ideally contribute to the foundation of community building (Morada, 2007). While there is a network study on the regional environment, the author points out the absence of networked regionalism in the environmental sphere owing to the vertical mode of governance covering up the horizontal ones (Elliott, 2011). Even though Elliott's work presents the network perspective, cooperative efforts between states and non-state actors are detached by different modes of governance.

In the absence of a network approach for investigating the relationships between state and non-state actors through collaborative efforts in governing transnational environmental issues in Southeast Asia, this thesis aims to fill in the literature gap. By applying the method of network analysis to the case study, it will reveal how policy networks facilitate environmental cooperation in the region and how an environmental issue is actually governed. The findings of the research questions

contribute to understandings and debates on environmental governance, international cooperation on the environment among ASEAN countries, and the concept of network as a hybrid mode of governance in Southeast Asia.

While judging regional cooperation on the environment in terms of problem-solving cannot give any new answers to states and international organizations in dealing with environmental problems, examining the development of that cooperation through the process can probably bring about more practical options for dealing with the complexity of environmental issues. Exploring different stages of the environmental policy process helps to identify existing activities resulting from regimes and other governance mechanisms at different levels and across levels of governance. Policy networks can also be a potential intervention for improving those processes, resulting in better situations even if goals are not reached in terms of problem-solving. If a policy network can facilitate regional environmental cooperation, strengthening or investing in these connections will be a practical and promising option for developing countries.

1.5 Structure of thesis

The thesis contains seven chapters: (1) Introduction; (2) Theoretical and conceptual foundation; (3) Research methodology, analytical framework and data collection methods; (4) Policy networks in governing the transboundary haze issue; (5) Policy network in governing the illegal wildlife trade and smuggling issue; (6) Comparative analysis; and (7) Conclusion.

Chapter 2 focuses on the theoretical foundation, concepts in international cooperation and the key terms applied in this thesis. Debates on international cooperation theories and justifications for which one is suitable for this thesis are discussed in this chapter. Since key words – especially international cooperation, regimes, governance, civil society and networks – are applied variously in the IR literature, this chapter also aims to clarify those key terms and definitions to avoid any confusion before applying them in the following chapters.

Chapter 3 presents research methodology and methods applied for analysis. The purpose of this chapter is to make sense of methodological choices and use them as

devices bridging concepts and methods for empirical study. An analytical framework is developed as a structural observation for the case studies in Chapters 4 and 5.

Chapter 4 (the haze case) and Chapter 5 (the wildlife case) are case studies of transnational environmental issues in Southeast Asia. Each chapter reveals the background (causes, impacts and importance) of the issue, the necessity of international cooperation, the establishment of international regimes developed to deal with the issue, governance gaps existing in the regimes, and the role of non-state actors and policy networks in making those regimes function better.

Chapter 6 is a comparative analysis. Two steps of comparison are applied in this chapter: the comparison through an analytical framework (developed in Chapter 3), and the comparison of the components of the macro-structure of networks. The first step of comparison is done to identify similar categories of governance gaps as a basic step before analysing the different components of the macro-structure of networks in relation to the effectiveness of regimes. The purpose of this chapter is to identify the key differences and the similarity of the cases before answering the main research question and subquestions in the conclusion.

Chapter 7 is the conclusion, which includes the summary of the thesis, research findings and their implications, and the original contribution of this thesis to IR literature. The limitations of the research as well as prospects for future studies are also noted here.

Chapter 2 Theoretical and conceptual foundation

Conflict and cooperation among states are the main focus of international relations (IR) and there are several perspectives and approaches in insightfully explaining and understanding them. While transnational environmental issues require more than international agreements to effectively govern them, an examination of inter-state cooperative efforts and interactions on their own produces neither sufficient further understanding nor potential alternatives to better manage them. This chapter comprises two main sections. The first section explores the concept of international conflict and cooperation in different key IR theories. The second section aims to search for a suitable theoretical foundation in constructing the thesis's framework. Under the umbrella of the liberal perspective and the concept of governance, the network approach is founded and justified as the most appropriate prospective in delivering an answer to my research questions. This is because the approach potentially develops a better understanding of environmental governance and cooperation through interactions among different kinds of actors in the region. This section also serves to clarify the concept of governance, regimes, policy networks, governance gaps and relationships among them. At the final part of the section, the concept of civil society is discussed, with focus on applying it in the Southeast Asian context. Definitions to differentiate and specify particular types of actors including non-state actors, CSOs, and NGOs are also clarified in this part before applying them in the following chapters. This chapter serves as a foundation step in constructing an analytical framework, which will be discussed in the next chapter.

2.1 International cooperation: definitions, theories and concepts

International cooperation is defined, applied and interpreted variously in the international politics and IR literature. Despite scholars having given different definitions of it as a guideline to interpret and infer cooperation through states' interactions in international politics, the problem of determining which events are considered cooperative action still exist (Milner, 1992: 470). Prominently, there are three ways to perceive cooperative action in international politics. Firstly, cooperation can be perceived as an opposite type of 'uncooperative' efforts. Milner (1992) raises a concern about which behaviours are defined as 'uncooperative' to

identify competition and conflict which reduce other states' gains. Unintended unilateral action and/or inactivity is considered non-cooperative when that action leads to negative consequences for others' policy (Milner, 1992). Even though this definition is useful in identifying unilateral uncooperative behaviour affecting to other states, it is not clear whether cooperation is a normal or pervasive situation before discord between actors has occurred.

The problem in clearly identifying what cooperation is can be answered by the second category of the definition of cooperation. Cooperation happens when two or more states find mutual interests and voluntarily contribute their resources to achieve their goal. According to Holsti (1988), states' cooperation – 'the commitment of resources, plans, and ideas toward some common purposes, according to agreed-upon rules and cost formulas' – are normal relations (1988: 432-433). Another definition of cooperation which follows Holsti's notion and makes cooperation more observable is recognizing international organization as concrete evidence for cooperation. James and Pfaltzgraff (2001) look at international organizations such as the United Nations (UN), the EU and the North Atlantic Treaty Organization; they then define international cooperation as a set of relationships that is legitimized by the mutual consent of members and is not based on coercion. Although this definitional category helps to straightforwardly perceive what cooperation is through the establishment of mutual goals and international organizations, cooperation is recognized as a product of inter-state interactions. This definition, therefore, neither emphasizes the process nor explains cooperation in relation to international conflict.

The third category of the definition of cooperation regards conflict as essential in considering cooperation. Keohane (2005) emphasizes the importance of conflict and potential conflict as a necessary condition that stimulates demands for cooperation (Keohane, 2005: 63). Cooperation can be seen in the process of mutual policy adjustment and coordination (Martin, 2001; Keohane, 2005: 63). Additionally, Axelrod and Keohane (1985) note that cooperation must be differentiated from harmony, which requires that complete identity of interest or unilateral action automatically provides benefits for others. However, cooperation can occur in situations that 'contain a mixture of conflicting and complementary interest' (Axelrod

and Keohane, 1985: 226). For Keohane (1984), conflict and cooperation are not necessarily reversed types of relationships. He also shows that, even where there is a shared goal, disagreement on the means of achieving it might occur (Keohane, 1984). His perspective goes well with Slaughter's idea that conflict can be positive in long-term cooperation because it provides an opportunity for collective discussion (Slaughter, 2004). This category of the definition of cooperation focuses on process of interactions among states. Cooperation does not mean there is no conflict or that it is necessarily good. Conflicts may exist, but states are able to overcome them through policy adjustment to achieve their mutual interests.

Compared with the first and second categories of the definition of cooperation, the third presents the most realistic nature of international politics, revealing both cooperation and conflict. Within the mixture of cooperation and discord, it allows this thesis to explore IR theories explaining and understanding international politics through conflicts and cooperation. Asking questions – on why states cooperate, how they can manage and overcome their conflicts, and how cooperation is maintained and/or further developed in an anarchic world – reveals different opportunities and constraints of each theoretical perspective in examining international politics on transnational environmental issues. Exploring theories and concepts relevant to international cooperation and conflicts with regard to the nature of environmental issues is a critical path in justifying which theory or concept provides a sufficient analytical perspective for this thesis to test hypotheses and deliver answers to the research questions. Next, cooperation in different IR perspectives is examined before justifying which is the most appropriate for positioning my thesis.

2.2 International cooperation in IR theories

This section explores the explanation and understanding of conflicts and cooperation in international politics. There are four parts emphasizing the power-oriented perspective, the social constructivist perspective, the liberal perspective and the

concept of governance.¹ Each part illustrates an IR perspective on the nature of international anarchy, the possibility of cooperation, the issues at hand, and the perspective's view towards non-state actors in changes of international actions and outcomes.

2.2.1 Cooperation in power-oriented perspectives

For realism and neorealism, international cooperation is possible; however, there is little room for it. Anarchy, in the meaning of the absence of a supreme authority, constrains states to rely on themselves to guarantee their security. Grieco (1993) notes that international anarchy brings about states' competition and conflicts. That bars state cooperation even if they share common advantages. For realists, states keep in mind that 'today's friend may be tomorrow's enemy in war'. Therefore, states are seriously concerned about the relative gains of partners (Grieco, 1993). In addition, states are rational actors who formulate their own policies to maximize their own interests. Within these circumstances, states have to compete with each other to gain power and security. Although the structure of power (Waltz, 1979) crucially differentiates realism and neorealism, states are the most important actors in the study of international politics. Thus, non-state actors are always ignored by realists; they are not important enough to study. International cooperation is an incentive for states if it is a tool designed to increase their power or national security goals.

While realist and neorealist perspectives on cooperation offer a very useful analytical tool to examine state cooperation in form of bilateral or multilateral alliances to obtain and/or balance power, it is not sufficient for this thesis, in which the main focus is on environmental cooperation. In addition, neither intergovernmental organizations nor non-state actors are included or analysed in international power

¹ It should be noted that the concept of governance is developed from the liberal perspective; however, this thesis intentionally takes this part equally from the liberal perspective to emphasize the concept of governance, which offers broader analytical approaches to investigate the importance of non-state actors, especially as an additional intervention to inter-state cooperation, in shaping international outcomes in temporary international politics.

politics despite increasingly having potential influence to shape the outcomes of international affairs. The role of non-state actors, especially NGOs and corporations, are obvious in security-related issues but their role has not been investigated by realists. For instance, international NGOs working in peace building operations, in protesting against wars or in supporting humanitarian intervention are not clearly mentioned by realists. Nor is the role examined of business groups whose interest in arms trading could be a key explanation of current state conflict. Limited areas of concern to focus only on security and power, insufficient attention paid to non-state actors, and little room for international cooperation are key reasons that the power-oriented approach is neither suitable nor flexible enough to be a theoretical foundation for my research.

2.2.2 Cooperation in social constructivist perspective

Constructivism is also an important approach which gives explanation to international cooperation. The social constructivist perspective identifies the importance of states' interactions as a source of changes in the perceptions, interests, norms, identities and structure of international politics. Actors' antagonistic or friendly relationships are constituted by social structures, which are defined as shared understandings, expectations or knowledge. What states do to each other will affect the structure through the logic of reciprocity (Wendt, 1995). States are the main actors in the international arena; however, the constructivist approach also emphasizes the impact of institutions on international outcomes in socializing individuals, policymakers and states (Karns and Mingst, 2010). Social constructivism provides a dynamic explanation of international cooperation across a wide range of areas where environmental issues are also included (Haas, 2002).

The constructivist approach contributes to a better understanding of how states' perceptions, identities, interests and norms can be altered over time through interactions. It is useful since it gives an account of the significance of history in explaining and understanding phenomena and changes in international politics. However, there are some difficulties in applying this approach to my thesis. Firstly, while mutual interests, values, norms and goals can be shaped through interactions, those factors which can change require time for observation. It is hard to precisely

identify them since they depend on actors' historical perceptions of each other. Secondly, analysing international conflicts and cooperation for multiple parties is complicated. The increasing number of actors requires more observation of historical interactions. This sometimes needs to take into account other conflictual and cooperative areas which may be, directly or indirectly, relevant to understand their historical relationships. Importantly, the approach does not provide a clear distinction between interactions which lead to inter-state cooperation and the role of existing institutions in contributing to that cooperation. Based on Stein's brilliant observation in combining a broad view of institution with a view of reality which is inter-subjectively constructed through interaction, it leads to the argument that 'the sovereign state system is itself an institution of international political life' (Stein, 2008: 207). Processes of interactions are a fundamental explanation for reality, perceptions, identity, conflicts, cooperation, institutions and even the international system; the perspective does not offer clarity on which factors, through this infinite interaction process, prominently cause changes to international politics, outcomes and/or actions. It is very difficult to make a clear distinction between dependent and interdependent variables in the dynamic and infinite changes in international politics. Based on dynamic and various historical backgrounds of actors' perceptions and interactions, this approach seems to add more difficulty in testing my thesis's hypothesis and/or delivering answers to my research questions.

2.2.3 Cooperation in liberal perspectives

Liberal perspectives have provided considerably broad accounts of international cooperation. The liberal perspectives share two key basic assumptions with the power-oriented approach: states are rational actors, and the nature of international system is anarchic – it lacks a supreme authority. But what makes liberal perspectives more fascinating for this research is their extensive explanation for and understanding of why cooperation is possible and pervasive in international politics under anarchy. Although there are different liberal perspectives discussed in this thesis, their central focus is on international institutions as a condition allowing cooperation under anarchy to be achievable.

Studies of international institutions² can be classified into two groups: an old institutionalism and a new institutionalism. The old institutionalism refers to the functionalist and neo-functionalist approach, which emphasizes the role of formal institutions in international politics; the new institutionalism – international regime theory and/or neo-liberal institutionalism – has replaced and broadened the scope of the former conceptualization (Stein, 2008: 204).

Functionalism theory in the 1940s and neo-functionalism in the 1950s addressed the role of international institutions in fostering states' cooperation. Functionalism, neo-functionalism and interdependence theory have emphasized the importance of transnational interactions among state and non-state actors in the process of integration. International economy and social relations is necessary for political cooperation. From a functionalist view, Mitrany (1966) proposes that higher interdependence between countries will lead to peace. In transnational relations, technical experts, not politicians, will arrange cooperation. International activities should be linked like a web (Mitrany, 1966). However, neo-functionalists take a different view by arguing that the intensifying of cooperation – which was developed in Europe – requires political decisions and intentions to enhance cooperation from one area to another. Political integration, according to Haas, 'is the process whereby political actors in several distinct national settings are persuaded to shift their loyalties, expectations, and political activities toward a new centre, whose institutions possess or demand jurisdictions over the pre-existing national states'. This will form a new political community over the pre-existing ones (Haas, 1968). Both functionalism and neo-functionalism explain the higher level of cooperation, which would finally move to political integration. As a concept, integration refers to both the process and an end-state (Evans and Newnham, 1998: 253). The process of integration occurs voluntarily and consensually, and it is closer to the concept of supranationalism. Even though this old institutionalist approach cannot be practically and completely applied to regional cooperation in ASEAN, it has obviously highlighted

² In order to develop his systemic and insightful reviews on the concepts in institutional perspectives in IR theories, Stein accepts North's definition of institutions and defines them as 'the rules of the game in a society, or more formally, [the] humanly devised constraints that shape human interaction' (North, 1990: 3, cited in Stein, 2008: 204).

IGO as an international actor representing states' mutual interest in international politics. This is helpful in investigating the role of IGOs in shaping international outcomes. International cooperation can be easily identified through the physical presence of institutional organizations and machinery, and those international organizations, in turn, accommodate cooperation among members.

To differentiate institutions referred to in the old institutionalist perspective, neo-liberal institutionalists replace institutions with regimes with the aim of broadening the concept of institutions (Young, 1989; Krasner, 1983; Keohane, 2005; Stein, 2008). A widely accepted definition of international regimes is given by Krasner (1983). Regimes are 'sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations' (Krasner, 1983: 2).³ As rational actors, states – which basically have an incentive to cooperate to maximize their gains – purposively create regimes to achieve their mutual goals through the process of bargaining, agenda setting and forming international political coalitions and initiatives (Keohane and Nye, 1989). Regimes function as states' tools to facilitate international cooperation in anarchy. International organizations, as parts of regimes, are founded to provide a framework for interaction, bargaining, reducing cheating, facilitating transparency and settling disputes. According to Young (1989), international regimes include a wide range of functional scope, geographical domain and membership. From his perspective, the nature of IR is not an extreme level of conflict, but there are well-stocked institutions and organizations to accommodate cooperation (Young, 1989).

In addition, neo-liberal institutionalists explain the advantages of institutions through game theory. Cooperation under anarchy is possible owing to the existence of institutions and the awareness of the repetition of the game. Although achieving cooperation is not easy in an anarchic world since there is no supreme authority to

³ Krasner's definition of regimes is used in this chapter for illustrating a standard meaning of regimes which can be generally accepted in IR debates on whether regimes can determine international outcomes or/and state's behaviour in international politics. However, it should be noted that the definition of regimes referred to in this thesis is not exactly the same as Krasner's. The definition of regime applied in this research is clarified in this chapter under the heading of 'regimes as parts of global governance'.

enforce the law, Axelrod and Keohane (1986) show that mutual interest, the shadow of the future and the number of players can help us to understand the success and failure of attempts at both military and political economic cooperation. The prisoner's dilemma game illustrates that institutions can provide mutual interests and future expectations for states. Reciprocity can be a strategy to persuade states to cooperate (Axelrod and Keohane, 1986). Holsti (1988) also highlights that states have learned to achieve some purposes by establishing systems of reciprocity to coordinate policies with others. In an interconnected world, states have acknowledged that reputation will be a crucial component of diplomatic effectiveness so that efficient, successful cooperation can happen. Karns and Mingst (2010) notice that states choose to continuously interact with each other in the anarchic society because they become aware that in the future they will interact with them.

Through attempts in explaining how institutions affect international outcomes and actors' behaviour, neo-liberal institutionalists have clearly added the characteristics of decentralized institutions and complex interdependence into the nature of IR. Decentralized institutions, which are potentially enacted and coordinated by the individual members of regimes, create international compliance and sanction mechanisms despite the absence of a supreme authority responsible for enforcing them (Young, 1979: 35; Keohane, 2005: 98). Even though states have an incentive to violate the rules, they instead choose to comply with them. Interactions through regimes offer open-ended prisoner's dilemma and make them realize that violation of a commitment in a particular issue may lead to negative reputations and consequences in other issues and regimes in the future (Keohane, 2005: 103). Since normally states do not cooperate only in one area, this consideration creates complicated relationships and unforeseen opportunity costs which constrain states' behaviour. When regimes are established this will facilitate cooperation as well as form a basis for the necessary conditions – including information availability, dense patterns of issue linkages, and members' future plans – for fostering further cooperation (Martin, 2001). Examining cooperation through this perspective reveals the complex interdependent structure implicitly existing in IR which states have to calculate before choosing any course of action.

The neo-liberal institutional perspective importantly forms a basis for the understanding of the nature of IR under anarchy in world politics for this thesis. It clearly and extensively highlights the crucial functions of international institutions in addition to the physical presence of international organizations and mechanisms emphasized by the old institutionalist perspective. This broadens understanding of how and why inter-state cooperation can be created, maintained and developed pervasively under international anarchy. It explains the important functions of regimes in shaping international outcomes in world politics on various cooperative areas and issues, the linkages between which construct complex interdependence in IR. Through international interactions, states can identify mutual interests and cooperation occurs when states create and/or adjust existing regimes as a tool to achieve members' goals. Moreover, under international anarchy, where decentralized institutions and regimes are plentiful, regime theorists demonstrate how international compliance and sanction mechanisms – through multilateral efforts – can potentially operate to secure what states have agreed, even though there is no supreme authority or hegemony in the world system. Cooperation can occur when states can identify their mutual interests. Once institutions are established, it forms a cooperative mechanism for achieving members' goals and enhancing necessary conditions, which pave the way for future cooperation. This seems to be an endless process of enhancing mutual interests and expectations, which importantly explains why international cooperation is pervasive in IR according to this perspective.

Although neo-liberal institutionalists substantially contribute a comprehensive understanding of the nature of IR for analysing the effects of regimes on international outcomes, some limitations can be pointed out as a reason why this perspective cannot be fully applied in analysing international cooperation on environmental issues. Firstly, the neo-liberal institutionalist view limits the study of international cooperation in world politics on interaction among states. International cooperation can be explained only by focusing on the role of states in establishing regimes for achieving members' goals where mutual interests can be identified. Cooperation can occur only when at least one state raises its concern and calls for others to address it through the international negotiation process. Without states' incentive and the

ability to identify mutual interests, cooperation cannot be achieved and regimes cannot be established (Mitchell, 2010: 116).

Secondly, since the concept of cooperation in neo-liberal institutionalism does not by itself clearly explain how regimes emerge without pre-existing cooperation, it is questionable how environmental cooperation can be created and developed. In examining the development of economic cooperation, a hegemon who possessed superiority of economic and military resources has historically been responsible for providing collective goods to secure international order, which in turn serves its interests. Under the hegemonic period – the British Empire in the nineteenth century and the leading role of the United States after World War II – economic regimes were established and maintained. Thus, in the period after the decline of hegemony, these economic regimes were well established for fostering further economic cooperation by leading capitalist states (Keohane, 2005). However, a hegemon dedicated to bearing the high cost of collective goods to protect the environment cannot be obviously identified. At the core of the concept that emphasizes cooperation in states' incentive and interest, cooperation can happen when states realize that they can gain some benefit or some cost reduction, or when the benefits outweigh the cost. Environmental cooperation can occur as a result of states realizing that collective action is needed; however, with different incentives and interests, established environmental regimes have different effects on international outcomes. The neo-liberal perspective does not offer other factors which can change states' incentive to cooperate in areas where mutual interests are hard to find and develop by rational state actors.

While this thesis accepts the neo-liberal institutionalists' assumption on the nature of IR, the approach does not offer a sufficient explanation of how regimes can be improved for better functioning after they have been established. In international politics, regimes are pervasive for fostering cooperation in different concerned areas; however, their effects on international outcomes and states' behaviour are various. Focusing only on states' initiatives on cooperation on the environment through a neo-liberal institutionalist perspective can merely understand why cooperation is antagonistic to commerce, while looking at other environmental collaborations can

broaden understanding of how non-state actors react to the slow progress of inter-state cooperation. The roles of non-state actors are well constructed under the umbrella of liberalism in the context of globalization. The following part delves into the concept of governance, which is still under the liberal perspective. However, more attention is given to analysing the increasing role of non-state actors as a kind of international mechanism in shaping international politics.

2.2.4 Cooperation in the concept of governance

Although neo-liberals see that there is pervasive cooperation under international anarchy, it does not mean that states have equal intentions and willingness to cooperate on every relevant area. While there are ranges of issues on which states have decided to cooperate, states as rational actors often prioritize their cooperation in areas which can better maximize their gain. This is why economic cooperation can develop over time, whereas other cooperative areas – on which it is difficult to attain mutual consensus or mutual benefits – are left behind. This explains the situation that under complex interdependence states tend to better cooperate on the issues which clearly serve their national interests. This raises critiques on the role of states in dealing with non-economic or non-security issues. Despite there also being considerable international cooperation on the environment, human rights and/or inequality, these issues are not always managed promptly and successfully. With different degrees of achievements in international non-economic and/or non-security cooperation, scholars have developed analytical approaches for better explanation and understanding of international cooperation on those issues under the concept of governance. The concept not only broadens international cooperation by taking non-state actors into international politics; it also allows alternative options to be examined aside from regimes as alternative interventions to shape international outcomes and actors' behaviour.

The scope for international cooperation in world politics has been broadened under the concept of governance. Although states are the key actors which establish regimes for dealing with global issues, the capacity of civil society actors is highlighted in complementing, but not replacing, states' tasks in governing international affairs (Wapner, 1997: 67). As interdependence has been developed basically through

economic cooperation, actors and societies can be connected through multiple channels to collaborate in their relevant areas. At the same time, interdependencies also partly disable individual actors to isolate themselves from impacts of collective problems. This leads to the demand for governance (Young, 1997a: 273). The private sector and NGOs have played a crucial role in contributing to governing collective action problems, and not only by supporting intergovernmental efforts (Mitchell, 2010: 4). They also attempt to establish mechanisms of governance whose authority arises outside government to commit themselves in cooperative strategies in various kinds of governance activities (Wapner, 1997: 65). It can be noticed that what regime perspective and global governance have in common is an attempt to explain how compliance and sanction mechanisms, as an intervention, can be developed by international actors in the absence of a world government. Since the governance approach provides an explanation of the role of non-state actors in shaping international outcomes, it offers an option to examine how these actors can contribute to inter-state cooperative areas where regimes are established but function ineffectively.

2.2.4.1 Regimes as parts of global governance

Although governance and regimes are similar in focusing on process and social institutions over the collective activities of groups in governing members' relevant areas, it is necessary to clearly differentiate regimes from other modes of governance. Regimes are parts of governance (Commission on Global Governance, 1995: 2; Karns and Mingst, 2010: 4–5; Viotti and Kauppi, 2010: 131, 135) under the widely accepted definition of governance, which is 'the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institution have agreed to or perceive to be in their interest' (Commission on Global Governance, 1995: 2). This definition is useful to give a broad idea of what can be identified as governance; however, it is not clear how these governance processes, mechanisms and actors are related to each other in

international politics. Nor is there an idea of how to clearly separate regimes from other kinds of governance tools. Therefore, exploring the concept of governance applied in the IR and the public administration (PA) literature can help clarify the meaning and norms attached to the concept of governance. The concept of governance in the fields of IR and PA is beneficial because a part of each field is concerned with how to manage the collective problems in different contexts. The nature of transnational environmental issues is that they are an international problem which requires international collective action from states in governing them. At this point, the PA approach proposes an idea for how the modes of governance can contribute to the public policy development process.

In the IR literature, governance means different things, ranging from inter-state-oriented perspectives to non-state actors' activities where states and IGOs fail to do their function. It can be used interchangeably in emphasizing the activities of inter-state relations horizontally and their vertical processes at multiple levels of government activities, ranging from local to global (Vogler, 2000, cited in Paterson et al., 2003: 5). The wider scope of governance appears in the study of international politics to include non-state actors in relations to states. For example, Elliott and Breslin (2011) relate regional environmental governance to structures of authority in managing environmental collective problems and conflicts among stakeholders in the variety of processes both in vertical modes of governance (conventional and intergovernmental arrangements) and horizontal modes of governance (multiple public-private arrangements and networks) (Elliott and Breslin, 2011: 3). From the institutionalist perspectives, Lemos and Agrawal (2009) define governance as the application of institutionalized power or interventions aiming to shape processes and outcomes, and it differs from government by including the actions and mechanisms of non-state actors (Lemos and Agrawal, 2009: 71-72). Additionally, governance can be more than governmental or intergovernmental institution, since it also involves relations between the state and people and the collaborative mechanisms across sectors, and the norms of inclusion and equality (UNDP, 2014: 2). Governance can also refer to the functional relations of non-state actors – civil society actors and/or the private sector – to initiate mechanisms in the issues that states fail to do (Steets, 2009; Delmas and Young, 2009). The IR literature often emphasizes governance in

terms of functional relations among actors in their focus in explaining and understanding the outcomes emerging from interactions among actors in the absence of world authority. It can be seen that the concept of governance is connected to the state and/or the government in at least three ways: conventionally directed to state relations, the hybrid relations among state and non-state actors, and the relations among non-state actors relating to the absence of state capacity and initiatives. More recently, governance in the meaning of traditional relations between states is less likely applied than others, especially in global and transnational issues. These are where non-state actors can also play their part in dealing with those problems in international politics (Chhotray and Stoker, 2010: 13).

In the PA literature, the concept of governance focuses mainly on changes in public policy processes. Within the field, 'governance' is defined in various ways. Firstly, Whitman (2005) points out governance is the business of government in steering and control to maintain order and stability in which it operates. The term's use in this way also concerns the relations between government and non-authoritative actors, interested parties and transnational actors in the internal public policy processes (Whitman, 2005: 16). Secondly, governance is not equal to government but rather 'the art of coordinating administration actions' in the policy processes between different administrative levels (Saunier and Meganck, 2009: xiv, 159). Thirdly, governance refers to the ways in which states, non-state actors operating as partners through networks rather than a hierarchical structure, or markets for better coordination in managing policy files to avoid redundancies (Phillips, 2004: 1, 15). This use of governance is called variously, for example, as horizontal governance, alliances, joint ventures and partnership (Ferguson, 2009: 1). In addition, the application of the word 'governance' in the PA field refers to the complexity of the issues, which requires that higher collaboration, coordination and responsibility sharing for decision-making across public, private and voluntary sectors are necessary for governance collaboration (Phillips, 2004: 14; Ferguson, 2009: 1). This is, moreover, the change in condition of the public policy processes, where Stoker (1998) points out the unclear boundaries and responsibilities between and within the public and private sectors. Therefore, the essential focus of governance should be 'governance mechanisms which do not rest on resource to the authority and

sanctions of government' (Stoker, 1998: 17). Rhodes (1996) clearly notes that 'governance signifies a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed' (Rhodes, 1996: 652–653).

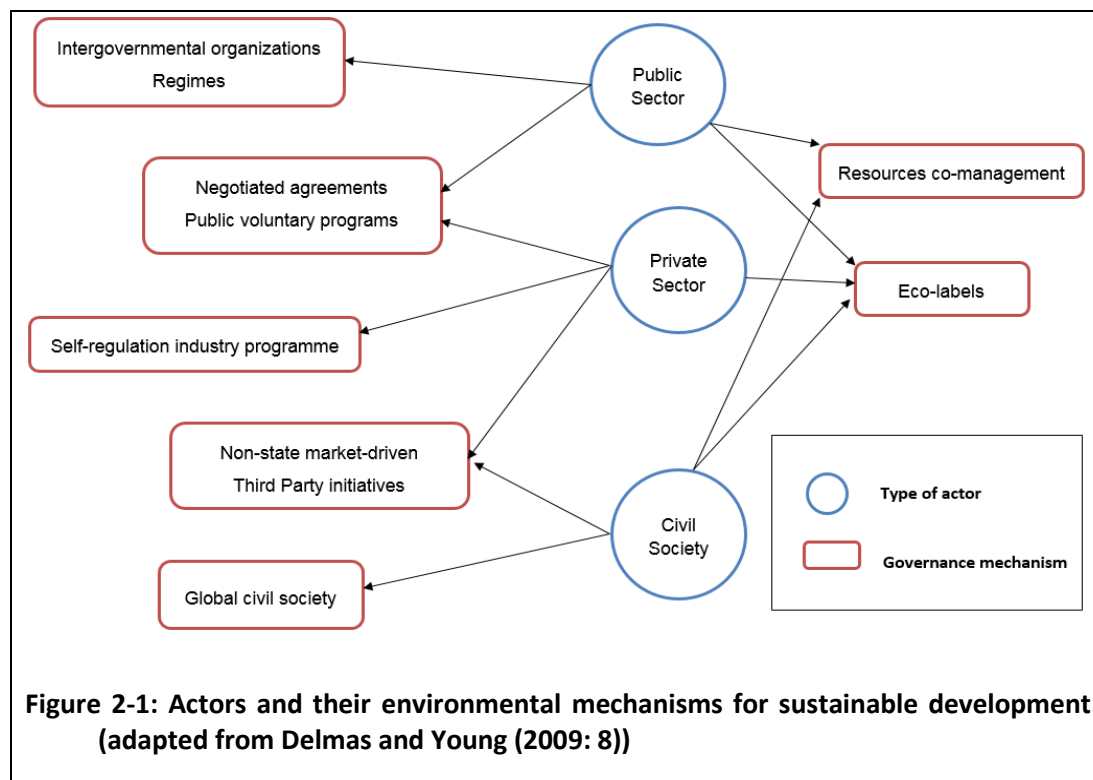
Although the PA approach is mainly oriented in the changing modes of governance within the context of national public policy, the meaning of governance – similarly to the IR approach – reflects the increase of political space for non-state actors to engage in the public policy area. Moreover, the PA perspective provides a framework for how governance can be interpreted by separating governance into two different structures: vertical and horizontal. It assists with distinguishing the conventional, formal chains of commands – which can be normally found in governmental departments and agencies – from the flat organizational relations emphasizing the need for coordination, participation and information sharing among various kinds of actors to manage complex issues over particular policy areas.

The concept of multilevel governance can be a useful framework to exemplify the overlapping areas of interest between IR and PA on how international environmental policy can be formed, developed and implemented. Multilevel governance is defined as 'political structures and processes that transgress the borders of administrative jurisdictions, aiming to cope with interdependencies in societal development and political decision-making which exist among territorial units' (Benz, 2006: 95, translated and cited in Newig and Fritsch, 2008: 5). Multilevel governance comprises vertical modes of governance among governmental departments, non-hierarchical structures among independent actors at each different level of governance and across levels. This results in a highly complex system of decision points in the EU political structure and the increasing number of non-state actors participating in those decision-making points is one of the main focuses in multilevel governance studies (Newig and Fritsch, 2008: 3, 5). The concept of multilevel governance depicts how policies are initiated and decided from various directions: the top-down, the bottom-up, the two-level-game and the network structure. Although the concept of multilevel governance which is best applied in the EU political structure is not fully fit with other regional organizations, the concept helpfully identifies the political

activities at multiple levels that political actors have to go through. Under the different political context of each region, the development of international policy can be at the least investigated from the multiple levels of government and/or governance in the more participatory political system.

Exploring the concept of governance on IR and PA reveals how the concept can be applied to a wide spectrum of collaborative efforts in managing their common affairs. Governance can refer to all encompassed activities – initiated, collaborated and implemented by actors – with the aim of achieving their goals in dealing with any particular areas. Recognizing that governance can be interpreted variously, this thesis demarcates the study on environmental governance. With an aim of analysing the roles of actors who support environmental management at different levels and across levels to shape international outcomes and/or actors' behaviour, this thesis finds Lemos and Agrawal's definition of environmental governance most practical since the definition stresses social interventions and it is specific enough to cover both regimes and networks, which are the focus of this thesis. Environmental governance can be defined as ***'the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes'*** (Lemos and Agrawal, 2006: 298). Environmental regimes are considered parts of environmental governance. However, what makes regimes different from other modes of governance interventions is the centrality of states in governing international affairs and policy orientation (Stokke, 1997: 27). This is evidenced by some definitions of regimes that refer to regimes as instruments for international cooperation (Zartman, 1997: 58), rules agreed by states for conduct in specific issue areas (Viotti and Kauppi, 2010: 131) and/or mostly formal schemes of international cooperation (List, 2003: 17). The distinctions between regimes and other governance activities are more obvious when considering whose mechanisms are included in a governance system in a particular issue. For example, in emphasizing actors and their governance mechanisms in responding to the demand for sustainable development, Delmas and Young (2009) identify different kinds of governance initiated by different groups of actors (including the public sector, civil society and the private sector) and their hybrid forms of collaboration among them (Delmas and Young, 2009: 8). Figure

2-1 illustrates international actors and their governance mechanisms for supporting sustainable development.



Regimes are created, maintained and developed mainly by states and/or IGOs formally at the international level through multilateral arrangements designed to solve and/or mitigate a particular problem. ***The definition of regimes in this thesis is drawn on inter-state cooperation for functionally solving specific collective problems.*** In order to clearly observe what regimes are, this thesis focuses on explicit properties of regimes and ***defines regimes as the set of states' intervening tools – which include international agreements, regional action plans, procedures, mechanisms, policies and projects – to deal with a particular issue.*** Therefore, environmental regimes are composed of a set of those policy tools and processes created by state members with the mutual aim of dealing with an environmental issue. Regimes are authoritatively developed and mostly monopolized by states and IGOs through the international policy process. Regimes have two integral parts: the common intentions and goals addressed internationally and the states' obligations in complying with those intentions and implementing what has been agreed at the

national level. The consequences of regimes are therefore considered and measured through the international and national policy process.

The definition of regimes applied in this research differentiates between regimes from other kinds of governance activities. Distinct points are set out below. Firstly, regimes are states' tools to manage a specific problem, while governance reflects the state and non-state relations interacting on specific issues. Both regimes and governance are ongoing processes resulting from the activities and interactions of organizational actors; therefore, an IGO can be considered an inter-state cooperative mechanism and/or an international actor which facilitates members' goals. Secondly, the study of regimes focuses mainly on interactions at the international level, where international policy is made as agreements, declarations and action plans, for example; and the consequences of regimes depend on each government carrying out those policies as national laws, rules and enforcement activities at the national level. However, governance consists of interactions among various kinds of actors at the international, national, subnational and especially transnational level. Therefore, in a specific issue, regimes and governance are parallel processes. Regimes contain an emphasis on state relations and authority mechanisms to manage a problem, but governance involves all mechanisms and activities in a particular area. By the definition applied in this thesis, the focus of regimes is an analysis of interventions existing in the state-world, while governance emphasizes various kinds of social interventions. The governance perspective allows the investigation of international changes resulting from non-state actors' mechanisms. Although there is less opportunity for non-state actors to take part directly in the formal policymaking process, non-state actors can find other opportunities to influence international outcomes through their governance mechanisms and activities.

Thirdly, since regimes are state mechanisms, they often have an authoritative or official nature backed up by international agreements or mutual declarations. This aspect of regimes distinguishes them from other kinds of governance mechanisms initiated by non-state actors. Regimes are also different from other hybrid governance mechanisms between state and non-state actors because actors in the hybrid forms of governance are collaborate equally as partners in a form of horizontal

governance. Regimes also contain the horizontal mode of governance but this manner is reserved only for states and governmental relations. The features of regimes are therefore equal relations between state members and the vertical form of governance at the national level in implementation and enforcing policies by state authorities at the national, subnational and local levels.

Finally, the modes of governance help to differentiate regimes from other kinds of governance. As the word 'governance' in PA signifies changes in process of government terms in incorporating more coordinated information and participation (Rhodes, 1996: 652–653), regimes represent conventional management among inter-state and governmental relations interdependently at the international level but a hierarchically top-down approach when it comes to implementation at the national level. Non-state actors are rarely involved in the formal policy decision-making process at any level if they are not allowed to do so by their constitution. From the definition of regimes applied in this thesis, networks referring to connections between different types of actor are categorized as a kind of governance.

Networking as a kind of governance appears in international relations. The concept of networks in this field has mostly been developed from the concept of social networks. They are used to explain a factor that causes changes in international politics. International actors form networks to cooperate transnationally on specific issues. The concept of social networks emphasizing the nodes and links as a basic form of network gives a guideline to identify and examine the features of networks. Divided by types of actor participating in networks, three categories of networks can be broadly categorized: government networks (Slaughter, 1997; Slaughter, 2004; Hooghe and Marks, 2001), state–civil society networks (Miyazaki, 2011; Gilbert and Behnam, 2013) and civil society networks (Reinicke, 2000; Keck and Sikkink, 1999; Haas, 1992). In addition, links among actors can be examined through various kinds of cooperative activities, for example resource sharing, trust building, implementing policy, monitoring and norm creating. Thus, from this IR literature, networks are a form of governance and the concept of networks has a strong potential to be applied to the study of international politics.

As a form of global governance which emphasizes the role of institutions in maintaining international order, achieving collective goals and facilitating IR (Rosenau, 2000; Sikkink, 2009: 241; Hafner-Burton et al., 2009: 560), the concept of networks is fascinating for this thesis in providing an explanation for how collaboration in the form of networks can influence international outcomes and/or shape international actors' behaviour. The network perspective allows the investigation of the achievement of collective action which derives from attempts among diverse types of actor. The network form of organization has become an alternative for actors who want to preserve their autonomy, not only because it is more flexible, adaptable and cheap than other forms of organization (Sikkink, 2009: 231, 233; Kahler, 2009: 17) but also because collaboration in the form of networks also gives network actors social power, in addition to material power, within a structure formed by patterns of relationships among political actors (Hafner-Burton et al., 2009: 560; Ward et al., 2011: 246).

Social power through a structure is an additional source of influence for networks in achieving their mutual goals and international outcomes. The network approach does not deny the actors' attributes. However, it emphasizes the social power created by ties among nodes, which provides an opportunity for or constrains actors' behaviour (Hafner-Burton and Montgomery, 2009: 29). An actor can obtain more social power, for example in the case of inter-state relations, by access to international institutions and/or associations since this creates denser ties with others (Hafner-Burton et al., 2009: 573). Hafner-Burton and Montgomery (2009) develop Dahl's concept of the three faces of power (Dahl, 1957) to clarify an application of social power through coercion, agenda setting and interest alteration to shape actors' behaviour and international outcomes in world politics. Social power can be used as a weapon to impose costs on a target actor through bullying, shaming and isolating. Actors possessing denser ties to other states can have more influence to manipulate reputations and/or exercise their power by cutting ties to the target actor (Hafner-Burton and Montgomery, 2009: 30–31). Social power can be better understood through a network analysis approach, which offers systemic tools to examine the structural properties of networks, flows of influence and network power within the

structure, and the effects of the network on international outcomes (Hafner-Burton et al., 2009: 559; Sikkink, 2009: 230).

Analysing the structure of networks reveals the power of particular nodes obtained from their network positions in relations to other network actors (Hafner-Burton et al., 2009; Hafner-Burton and Montgomery, 2009; Sikkink, 2009). Network power can be observed through structure in three different ways including access, brokerage and exit options (Hafner-Burton et al., 2009). Firstly, power of access refers to ability of the node, which can easily receive valued information and resources from other nodes. This kind of social network power belongs to the central position of the network, called centrality. The social power of a central node can be clearly exemplified in the case of a wheel network since if the node chooses to exit the network the whole network collapse (Sikkink, 2009: 239). Secondly, brokerage power is possessed by the node, which can bridge or connect to exclusive or marginalized nodes or clusters of nodes. The node in the bridge position may gain more influence or bargaining power once it provides the only link to the larger clusters of networks, exclusive and/or marginalized nodes. Finally, exit power is an option for marginalized nodes. The margins of the network often exercise this power when they are constrained, when they do not realize the benefits and/or when they can find better alternatives from other kinds of arrangements (Sikkink, 2009: 230). Although actors can voluntarily join the network and obtain exit options, the option is a source of power for marginalized nodes to bargain with the broker node, which has to secure its influence position by strategically trying to decrease the risk of exit either by making the network more attractive or by increasing the opportunity costs of exiting to the exclusive and/or marginalized nodes and clusters (Hafner-Burton et al., 2009: 570–572). Furthermore, exiting can ruin the nature of legitimacy in advocacy networks, whose power as a whole comes from their claims of being the voice of the powerless (Sikkink, 2009: 240). While the position in the structure of network can give different social power to each node, the power of the structure of the network should be considered together with the purpose of networks to see the effects, influence and effectiveness of the networks to shape international politics.

Comparing diverse kinds of networks, Sikkink (2009) helpfully suggests two end points on a continuum, with fully intentional networks on one side and purely unintentional networks on the other. An actual network may fall at a point on the continuum and that results in the influence of the network on its outcomes. Unintentional networks may not plan to act collectively; as a result, network effects can instead be expected than effectiveness in terms of achieving specific goals. On the other hand, intentional networks designed to act collectively to meet their planned goals could be measured in terms of effectiveness whether they are fail or success in setting agenda, changing policy or shaping target actors' behaviour (Sikkink, 2009: 229, 235). By examining through structure of networks together with their network purpose, the network approach gives a reason why some networks can achieve better outcomes than others. Moreover, the approach offers an explanation for why networks with a majority of non-state actors can strategically raise their social power to shape international outcomes despite their absence of material power to bargain with state actors.

The network approach, which provides analytical toolkits to investigate the role of various kinds of network in shaping international outcomes, is very useful for constructing an analytical framework for examining the effects of policy networks on environmental governance in the region. Policy networks are the main focus of this thesis; therefore, the next part of this chapter discusses the concept of networks as well as the definition of policy networks. Since the word 'policy networks' is also applied in the field of PA, the concept of policy networks and the method of policy network analysis are also explored and justified whether or not they are suitable and applicable for my research.

2.2.4.2 Networks: concepts, definitions and analytical tools

This part delves into the concept of networks, which normally comes together with the definition of networks and the methods of network analysis. The foundation of what is called 'networks' is firstly and necessarily discussed to avoid any confusion from the various meanings, concepts and terms of networks which are widely applied in sociology, PA and IR. This part aims to settle any confusion which can arise from

various interpretation of the words 'networks' and 'policy networks', whose definitions are interrelated to their method of analysis.

The word 'networks' can be seen in the social sciences literature in many forms such as social networks, policy networks, transgovernmental networks, transnational networks and transnational advocacy networks. This part firstly focuses on the notion of networks and the methods of social network in sociology as an initial step to understand the concept of network in other fields. This reveals the basic component of networks as well as the methods to identify and analyse a network. Secondly, this part illustrates the various concepts of policy networks, where the agreed definition is still absent. This leads to difficulties in applying the concepts and methods to my research. The investigation of the development of policy in the public policy process lead to the usage of policy networks in the meaning provided by Perkin and Court (2005), whose terms are defined by applying the basic concept of network. This makes the definition of policy network as applied in this research different from the general term used in the PA.

2.2.4.2.1 The concept of social networks and the social network analysis

In the social sciences literature, networks are generally depicted before introducing the network analysis method by emphasizing the components of networks or the features that will form a network. A good observation on what can be called 'a network' is from Knoke, who points out that 'the two basic components of all network analyses are a set of objects (variously called *nodes*, *positions*, or *actors*) and a set of relations among these objects (variously called *edges*, *ties*, or *links*)' (Knoke, 1990: 8). In addition, 'the units of analysis are the varying interactions that link each pair (a *dyad* consisting of an ego and alter) of social actors in the system' (Knoke, 1990: 235). In explaining social life, which is importantly based on actors' relations and the patterns formed by their relations, a social network is defined as 'a set of socially relevant nodes connected by one or more relations. Nodes, or network members, are the units of that are connected by the relations whose patterns we study. These units are most commonly persons or organizations, but in principle any units that can be connected to other units can be studies as nodes' (Marin and Wellman, 2011: 11). Moreover, a social network can also be referred to as 'a group of actors – people,

organizations, governments – who are linked together by some common actions, common membership, shared communication or some other form of exchange’ (Manheim et al., 2008: 226). Although the structure and function of each network are not the same, Manheim et al. (2008) propose that the common core of them is that they are based on patterns of exchange which can be mapped. And the social network analysis will provide a method to produce and analyse those patterns (Manheim et al., 2008: 227).

Hanneman and Riddle (2011) introduce some simple properties that can be seen in most networks. From the top-down view, the whole structure of a network has properties including size (number of actors), density (unique ordered pairs of actors identifying possible relationships – both directed or undirected ties), connections (reachability, connectivity, distance, reciprocity, transitivity and clustering), connections among groups (block density, group-external and group-internal ties) and substructures (the dyads, triads and ego-centres that can be examined separately) (Hanneman and Riddle, 2011). Hanneman and Riddle (2011: 356) also provide another way to examine social networks from the bottom-up by focusing on the embedded individuals (or ego networks) to find ‘the variation across individuals in the way they are embedded in “local” social structure’. Ego refers to an individual focal node connected directly to other one-step nodes, called neighbourhoods. The focus of ego networks is on the quality of ties between egos and their neighbours, connections, structural holes, brokerage among groups, and centrality (Hanneman and Riddle, 2011: 354–367). It can be noticed that these network properties make a network different from others. Degenne and Forsé (1999: 3-4) explain that although two simple networks have the same number of members and densities, they can still be different because of the connection between links and the average path between actors. The analysis of the network, thus, focuses on the relations or interactions between two actors (or dyadic relations) and patterns of relations, while individuals and dyads cannot be separated from the structures (Degenne and Forsé, 1999: 3; Marin and Wellman, 2011: 14). Mapping the positions of nodes and links reveals a network’s structure, which is unique and can be helpful for exploring patterns of relationships actors for better understanding of social phenomena.

2.2.4.2.2 The concept of policy networks and the policy networks analysis

The application of the word 'policy network' requires special attention since it connects to the development of the policy network analysis in the field of PA. Since the concept of policy networks is variously applied in the field to explain different circumstances at different stages of the public policy process within governmental organizations or domestic politics, it leads to ambiguity in identifying precisely what policy networks are. The analysis of policy network in this field, according to Rhodes (2008), can be separated into three main categories: policy network as description, policy network as theory and policy network as reform (Rhodes, 2008: 426–433). Rhodes (2008) defines policy networks as 'sets of formal institutional and informal linkages between governmental and other actors structured around shared if endlessly negotiated beliefs and interests in public policymaking and implementation. These actors are interdependent and policy emerges from the interactions between them' (Rhodes, 2008: 425). From Rhodes's definition, the focus on actors is specific to political actors whose interests are in the public policy process. Policy network analysis can be used as methods to explain relationships among the central government and subsystem in the pluralist society, the structural relationship between political institutions, the relationship between the state and civil society, sets of resource-reliance organizations, the structural change of government, and management in the public sector (Rhodes, 2008).

In addition, a policy network, defined as 'a set of relatively stable relationships which are of non-hierarchical and interdependent nature linking a variety of actors, who share common interests with regard to a policy and who exchange resources to pursue these shared interests acknowledging that co-operation is the best way to achieve common goals' (Börzel, 1998: 254), can be seen as a kind of governance which provides a tool to mobilize political resources dispersed between the public and private sectors (Börzel, 1998). Policy network analysis, therefore, analyses 'structural relationships, interdependencies and dynamic between actors in politics and policy-making' (Schneider, 1988: 2, cited in Börzel, 1998: 258). The method focuses on trust and communicative interactions of separate, but interdependent and coordinated, horizontal organizations to investigate how a policy network can exercise its influence on the policy processes (Börzel, 1998).

Moreover, policy networks have been developed as a theory by some scholars to contextualize a network as a social system (Klijn, 1996; Marsh and Smith, 2000). Klijn (1996) defines a policy network as '(more or less) stable patterns of social relationships between interdependent actors, which take shape around policy problems or policy programs, and that are being formed, reproduced, and changed by an ecology of games between these actors' (Klijn, 1996: 97). A network consists of actors, arrangements and interdependency (Klijn, 1996: 109). Thus, the method analyses the interdependency of actors, the actors' different strategies and the consequences of interactions, leading to changes of actors' perceptions, preferences and interests (Klijn, 1996: 98–100, 112).

Various concepts of policy networks which are directly related with the policy network analysis method, however, bring difficulties in finding an exact model to apply to my research which focuses on the establishment and development of regional environmental policy among developing countries. Since most of the literature applies the policy networks concept to analyse internal politics in developed countries or the EU, where formal political channels are open to non-state actors (Dowding, 1995; Rhodes, 2008; Börzel, 1998; Klijn, 1996; Miyazaki, 2011), none of these concepts can fully apply as a framework for my research. Not only do the various aspects of the conceptual analysis pose challenges in searching for a suitable model to apply in my cases, the drawback of the network concept is criticized in Dowding's work. Dowding (1995) is right to argue that, while the policy process can be learned by different types of policy network, the approach itself can be developed as a theory only when it follows the lines of sociological network analysis. 'They fail because the driving force of explanation, the independent variables, are not network characteristics per se but rather characteristics of components within the networks' (Dowding, 1995: 137).

Since the concept of policy networks in PA is not suitable to be applied to Southeast Asia's political context and it is difficult to utilize the concept to international politics, this thesis finds the concept of social networks and the methods of social network analysis more practical than the policy networks concept and the policy network analysis method. This thesis therefore adopts the fundamental basis of the social

networks concept and the social network analysis method. However, the term 'policy network' as used in this thesis is different from those definitions of policy networks in PA. This thesis uses 'policy network' to emphasize the networks' activities that affect the policy process and international policy outcomes. Similar to Perkin and Court's work, which aims to investigate how non-state actors work in the form of networks to influence policy processes, networks are defined as 'formal or informal structures that link actors (individuals or organizations) who share a common interest on a specific issue or who share a general set of values' (Perkin and Court, 2005: 2) and 'policy network' is used for any network that is relevant to the policy process (Perkin and Court, 2005: 8).

2.2.4.3 Governance gaps as opportunities for policy networks

Regimes are created at the international level when individual states are incapable of managing transnational issues alone; however, acting in concert in accordance with documents cannot guarantee success. The classical role of states is challenged by transnational issues and this leads to the usage of the term 'governance gaps' in the literature. Governance gaps in this thesis refer to the inner flaws of regimes functions. These gaps are examined if non-state actors in the form of policy networks can play any role in improving the quality of regimes at different levels: international, national and transnational.

The application of the term 'governance gaps' in my thesis is connected to but slightly different from the term used in the literature. The concept of global governance and the concept of global civil society question the role of the state in dealing with global problems. State and civil society seem to be on different sides. Therefore, in general, governance gaps are opportunities for civil society actors and the private sector to increase their role by providing alternative mechanisms to tackle the global problems, which states fail to do. If we see governance as the combination of pieces of all cooperative problem-solving arrangements and activities exercised by states and non-state actors in various forms of collaboration (Karns and Mingst, 2010: 4–5), governance gaps can appear anywhere. Steets's aspect helpfully defined the concept of governance gaps (Steets, 2009). Governance gaps are referred to as the lack of the state's operational capacity to effectively address the global problems in the rapid

change of politics, economic liberalization and technology (Steets, 2009: 123). Governance gaps in Steets's perspective are where activities initiated by non-state actors respond to the failure of the state's functions in the form of networks and partnerships among civil society and the private sector to fill those gaps by setting operational governance mechanisms outside the state's sphere of influence to increase the effectiveness of global governance (Steets, 2009: 123–124). This is where the use of the term 'governance' in this thesis, which is developed from Steets's proposition, is needed to be clarified. Steets's concept of governance gaps reveals various environmental problematic areas where non-state actors can play a role in shaping environmental outcomes through their governance mechanisms. It is also helpful and practical to identify governance gaps as the absence of the effectiveness of regimes' functional mechanisms to solve problems. Governance gaps here do not exist outside the state's realm but within regimes, which can be changed through interactions and intervention mechanisms among network actors. This thesis defines it in this way because, firstly, the clear-cut separation between non-state and state actors in dealing with environmental problems does not seem obvious. Secondly, this definition serves to explore the formation of policy networks among state and non-state actors, which is possible when considering the nature of transnational environmental issues, where shared goals can be identified.

Governance gaps identified by scholars derive from several factors: the collective action problems in international cooperation, the lack of states' and IGOs' capacity to meet policy goals, and the complexity of the issues, where better modes of governance are necessary. Governance gaps occurring in international environmental cooperation emphasized in this thesis can be broadly perceived and examined in two aspects: the quality of the product in the form of documents and the process of implementing that product. Although these aspects of governance gaps can be investigated separately, they are interrelated and directly affect the quality of international regimes. This part explores what scholars have pointed out as governance gaps and explains why international environmental policy is hard to achieve at particular stages of implementation.

The first category of governance gaps is considered from the quality of international agreements and related documents in addressing the intentions, objectives, goals, obligations and compliance mechanisms for cooperation. In addressing the vagueness of international agreements, Sjöberg (1997) notices that, even though formal international organizations have been established and legal multilateral agreements have been signed, the improvement of environmental problems covered by those agreements is sluggish. She identifies the collective action problem in world affairs, where there is an absence of central authority, no guarantor of the agreement and a reluctance of state to cede control to multilateral mechanisms in sensitive areas. These are why multilateral agreements are often weak and vague (Sjöberg, 1997: 13). In addition, Zartman (1997) proposes that, to obtain consensus on multilateral agreements, exceptions to the agreement are provided to form an issue coalition at the cost of temporary effectiveness (Zartman, 1997: 63). A basic obligation written in the international agreement at the earlier stage of the regime's establishment may encourage states to join the club, which requires more actors for better consequences in achieving collective action, especially in the case of the environment; however, the vagueness of the agreement, objectives and policies consequently lessens the effectiveness of regimes when it comes into practice, particularly when policies and mechanisms related to achieving those goals are not further developed through the process. In addition, a number of international forums and international accords negotiated at the international level may cause more problems in implementation, which can be highlighted in the other aspect of governance gaps.

The other aspect of governance gaps emphasized in this thesis can be identified through the international policy process, especially the process of policy implementation. Operational and implementation problems can be perceived by different groups of scholars who examine different stages of the policy development process: the groups whose concerns are on states' and/or IGOs' institutional mechanisms and the groups whose focuses are on the absence of non-state actors' involvement on the policy development process. While the former reveals international and national mechanisms which make states and IGOs' deliver poor functional policy and mechanisms, the latter implicitly and importantly proposes the

engagement of non-state actors as an option to make policy and process better function.

Examining why environmental agreements are difficult to achieve, some scholars observe the process of policy implementation. Implementation problems are obviously rooted in the inability of states and IGOs to establish effective intervention policy and mechanisms owing to insufficient resources allocated to deal with the problem. At the national level, the implementation gaps derive from states' incapacity to implement an agreement (Faulkner, 1997: 150; Elliott and Breslin, 2011: 11; Esty and Ivanova, 2002: 7). Implementation gaps do not just simply arise because of a lack of states' willingness to comply with the agreements. It is also caused by the insufficiency of institutional and financial resources (Faulkner, 1997: 150) and the lack of technology transfer mechanisms to developing countries (Esty and Ivanova, 2002: 7). As Faulkner (1997) points out, the increased number of agreements especially in developing countries shows governments' willingness to deal with the problems but the major obstacles are resources to process their obligations (Faulkner, 1997: 150). Esty and Ivanova (2002) depict that the increasing number of treaties – even in developed countries – does not only cause the overload of works to national staffs in participating environmental activities. Activities across IGOs related to these agreements also make both financial and opportunity costs to already-understaffed environmental ministries (Esty and Ivanova, 2002: 4).

Governance gaps in the process of implementation also result from the institutional problems at the international level. This kind of governance gap also occurs in the most advanced IGOs like the EU. Implementation deficits – meaning the failure to identify policy goals and/or the failure to solve the initial problem – happen and have little consequence on the quality of the environment (Jordan, 1999, cited in Leventon and Antypas, 2012: 253). This occurs in the EU structure, which still lacks a supreme authority and causes conflicts between aims and priorities (Bache and Flinders, 2004, cited in Leventon and Antypas, 2012: 255). Furthermore, international bodies relating to environmental issues have limited jurisdictional authority in ensuring states' obligations at the national level, while national legislative authorities rarely see their important role in addressing environmental harms (Esty and Ivanova, 2002: 3). This

comes together with few agreements containing serious enforcement provision (Esty and Ivanova, 2002: 7); therefore, the compliance and implementation process of international agreements directly rely on states' willingness and capacity.

Although the governance gaps in the process of implementation are revealed by emphasizing states' and IGOs' institutional inability, some scholars propose the absence of non-state actors in the policy process to be a part of the governance gaps in implementing international environmental policy. Operational gaps, which include participatory and information gaps, are presented as an explanation for why the absence of non-state actors' participation at different stages of the environmental policy process can lead to failures in policy implementation. While the different stages of policy are interrelated and these operational gaps can occur at any stage, the improvement of the process through better information and participation can lead to better environmental outcomes by filling the governance gaps in policy documents and/or strengthening institutional states' and IGOs' tools for better policy implementation.

Information and participation are a crucial foundation in the policy formation and negotiation stages at different levels, especially in complex issues like the environment. According to Reinicke et al. (2000), operational gaps are the problems of states' incapacity to effectively address the policy to respond to the growing number of complex issues at the national and international levels. This gap also results from the exclusion – both intentionally and unintentionally – of stakeholders in related policy areas to provide the sufficient knowledge and considerations to form and select policy options (Reinicke et al., 2000: viii). The participatory gaps lessen states' and IGOs' credibility and legitimacy, especially when private-sector and civil society actors successfully form transnational instruments to operate in a governance vacuum (Reinicke et al., 2000: 7–8).

In addition, the participatory gaps can be seen in the environmental policy process in the absence of links between key informant sectors and policymakers. Russell-Smith et al. (2015) have recently urged groups of scientists – known to be honest brokers – to engage and take responsibility for informing, advocating, guiding and expanding environmental policy options to policymakers (Russell-Smith et al., 2015: 441–447).

In the negotiating and regulatory setting process to address the transnational problem, the involvement of all stakeholders has been recognized as important as it pools knowledge from different perspectives to manage conflicting and complex issues (Reinicke et al., 2000: 29). The consultation of stakeholders and public participation in the policy decision-making process is an instrument to achieve policy objectives since this process leads to the acceptance of the decision then brings about better compliance and implementation on the ground (EU, 2002: 6; Newig and Fritsch, 2008: 3). The more participatory and collaborative approach in including stakeholders in the policy process is a means to sustainably achieve more policies, political results and project outcomes (Newig and Fritsch, 2008: 2; Reinicke et al., 2000: 39; UNDP, 2014: 8). In the policy implementation process, for instance, capacity building is more effective if the demand is articulated by communities and not imposed by states (Reinicke et al., 2000: 77). In the EU's highly complex decision points at multiple levels, the involvement of actors might hamper the effectiveness of policy delivery in the short term; however, it would increase the effectiveness of environmental policy in the long run (Newig and Fritsch, 2008: 3). More crucially, even though participation and public engagement might not fully work in the policy decision-making areas, which are reserved for the state and governmental actors, the participatory process is still very relevant, helpful and necessary in making regimes more effective at other stages. For example, participation in decision-making may make it harder to meet mutual aims, but in the enforcement process of monitoring who breaks the law more participation at that level may be better. The more information contributed through participation, the better data can be added to the effectiveness of regimes. Consequently, in regimes where there is little political space for non-state actors, participatory gaps occur and these gaps are directly related to information gaps.

Information gaps, as part of operational gaps which also result from the absence of participation by non-state actors and/or key stakeholders, are crucial both in the process of policy development and in coordination and management among organizations. In the international public policy process, the information or the data gaps is well demonstrated in Esty and Ivanova's work (2002). Information gaps, according to them, are the absence of reliable information on, firstly, the explanation

and causal relations among environmental problems and trends. Secondly, the gaps refer to the lack of policy choices, consequences and compliance with commitments in data collection. Information gaps can derive from problems of coordination in data collection across boundaries, unsystematic guidelines in monitoring compliance and reporting data, the limitation of institutional authorities in terms of resources and capacity to verify data written in the national self-report, and incomplete and inconsistent reports because of the increasing burden on national staff to declare obligations which their government has met (Esty and Ivanova, 2002: 6). To close these information gaps, they therefore propose the establishment of the data coordinating system in the form of network-based mechanisms among institutions and scientific and technical expertise as a key step to obtain higher-quality data in the monitoring process (Esty and Ivanova, 2002: 13).

The governance gaps stated above offer points for investigating non-state actors' activities responding to ineffective of international regimes. Governance gaps existing in regimes are considered a political opportunity for non-state actors to create links to connect with states and/or IGOs to work together to close those existing gaps. Governance gaps referred to in this thesis are *areas where the operations and functions of regimes – which can be changed through interactions among state and non-state actors at the different levels of policy development process – can possibly be improved if states and/or IGOs include non-state actors as parts of their networks*. The governance gaps are seen as an opportunity for non-state actors to engage with states and IGOs at different levels and across levels of governance with the aim of supporting the goals of regimes at different stages of the international policy process.

To find practical options to solve environmental problems, scholars on environmental governance propose several approaches to deal with the complexity of environmental problems. Although an effective way for a government to manage an environmental problem within a state is for the Ministry of the Environment to coordinate environmental policy with other relevant policy and governmental departments such as the economy, agriculture, land management and enforcement, it is still very challenging for a state to successfully coordinate between national and

local bodies (Eckerberg, 1997: 119). While formal coordination among governmental divisions within a state does not provide any promises for governmental agencies to officially coordinate on the issue across boundaries, informal forms of cooperation for better coordination among organizational actors whose mutual goals can be identified can be a more realistic choice. To respond to the failure of international regimes, and to achieve environmental governance, Lemos and Agrawal (2006) propose that the multilevel character of environmental problems requires cross-scale governance mechanisms and strategies with heightened cooperation of many different actors across local, regional, national and international levels, and the economic, political, social and cultural domains (2006: 318). In addition, Peter M. Haas (2004) offers multilevel, non-hierarchical, information-rich, loose networks of institutions and actors as an alternative governance mechanism to match the nature of environmental problems derived from ineffective state-centric regimes and governance (Haas, 2004, cited in Lemos and Agrawal, 2006: 301). Network-based governance is appropriate for examining international cooperation on transnational environmental issues in the region for these reasons.

Firstly, the network approach is flexible in analysing relationships among different kinds of actors in contributing to the progress of international regimes at different levels and across levels. The approach by itself emphasizes neither state nor non-state actors; however, its main focus is on relationships among actual actors who are connected by particular defined activity. This helps to observe how international policy is developed, adjusted and implemented at the national and local levels. Although policy to tackle transnational environmental issues is initiated at the international level, the goal cannot be achieved if there is nothing done on the ground. On the other hand, it is difficult to create bottom-up policy to respond to transnational environmental issues. For example, policy done fragmentarily at the community level could manage the problem in a particular area but it is very hard to stop the occurrence of the issues in nearby areas. The environment can be protected if commitment is taken by every party from different local areas. The bottom-up approach may not be able to harmonize the various needs and interests of local communities, while the top-down approach may not guarantee the effectiveness and sustainability of policy on the ground owing to the absence of participation and a

sense of policy belonging for the community. The network perspective bridges these gaps by focusing on the interactions among environmental supporters at different levels and across levels. In addition, the network approach, which focuses on the connections among actors, also allows the investigation of collaboration among network actors as a response to states' failure to manage environmental problems effectively.

Secondly, since the approach allows an analysis of the role of non-state actors, collaborative connections among them to support particular international environmental policies can be examined across boundaries. Despite the feature of environmental problems being transnational by nature and fitting well with the characteristics of transnational actors, transnational relationships among non-state actors in collectively shaping and contributing to international environmental outcomes are not much emphasized by other IR approaches. Since coordination among ministries is not well established and still problematic in domestic politics, it seems to be more challenging to make better coordination through formal policy coordination across boundaries, especially among developing countries. Transnational characteristics of the problems may need transnational relations which include the non-state actor to resolve them. The network perspective offers a means to investigate the role of non-state actors in reducing states' and IGOs' obstacles resulting from a lack of coordination in the conventional approach. Through the network perspective, informal interactions among these transnational actors in the form of networks may lead to better outcomes on environmental cooperation on transnational issues in the region.

Thirdly, cooperation in the form of networks is attractive and suitable for groups of developing countries since it does not require the establishment of new institutions. More importantly, the network approach proposes a possible option to improve international environmental outcomes through process orientation and development. The networked form of governance – emphasizing process facilitation and development – does not require the establishment of new institutions or new functional bodies. The networks should build on existing institutions, keep their structured informality and avoid falling into the trap of becoming another institution

(Reinicke et al., 2000: 64). Since the main problems of states' incapacity to deal with environmental issues include a lack of personnel, material and financial resources, Esty and Ivanova (2002: 13) propose a network-based mechanism that builds on the functional elements in the existing institutions as a means to re-engineer regimes. 'While capitalizing on existing institutions and harnessing the power of governments and civil society alike, networks offer a faster, agile, problem-tailored process, inclusiveness on a merit basis, access to state of the art knowledge, and simultaneous proximity to both the local and the global scale' (Esty and Ivanova, 2002: 18).

2.2.4.4 The concept of civil society and awareness in applying it in the Southeast Asian context

The previous parts addressing the concept of governance have developed relationships and understanding of international regimes, governance and governance gaps as a necessary step before the following chapter constructs an analytical framework. However, terms such as non-state actors, civil society and NGOs are referred to but are not yet clarified. Since those words are not used interchangeably but have specific meaning in intentionally referring to a particular kind of group of actors, this part therefore serves to clarify the definitions and categories of actors before applying them to identify network actors. This part firstly explores the various terms which are categorized and analysed by scholars. To justify which term is the most suitable for applying in this thesis, the concept of civil society and some observations in applying the concept to Southeast Asia are examined. This part not only aims to clarify the terms used for this thesis but also to identify the role of civil society actors in the region in other areas aside from their prominent roles in struggling for development of democracy at the national level.

The concept of civil society is still a matter of debate among scholars, particularly for the question of who should be considered part of civil society. Weiss (2008: 144) notes that the concept of civil society is a core and fascinating concept in political science; however, the meaning of the word is poorly defined. A first definition proposes that civil society is the voluntary social relationships and institutions which are different from market and states. Secondly, civil society encompasses all legal personality actors who are at least recognized by a state but are not a part of a

governmental body. Thus, NGOs, labour unions and charitable foundations are included (Steffek and Nanz, 2008, cited in Bernauer, et al. 2013: 88). The third perspective, which is rooted in the liberal tradition, defines civil society as a 'domain of associational life situated above the individual and below the state. It is made up of complex networks based on interest, ideology, family and cultural affinity through which people pursue their various aims. Churches, unions, movements, political parties, and clubs of all sorts are examples of such networks, and the host of these together constitutes civil society' (Commission on Global Governance, 1995; Falk, 1992; Lipschutz, 1992, cited in Wapner 1997: 65).

NGOs as parts of civil society play a significant role in global governance. Although non-governmental movements have long existed, the influence of them has dramatically enhanced since the end of World War II (Commission on Global Governance, 1995: 32). NGOs can be defined in two ways. In a broad term, an NGO refers to a voluntary, non-profit, non-violent and organized group pursuing shared public purposes and seeking political outcomes. Thus, while multinational corporations (MNCs) are excluded from the group by this definition, professional associations, charity foundations, trade unions and issue-based organizations are NGOs (Wapner, 1997; Evans and Newnham, 1998). Another definition of NGOs includes for-profit businesses because the economy is part of civil society. Therefore, for example, a corporation attempting to establish mechanisms to minimize environmental degradation can be considered an NGO (Wapner, 1997: 81–82).

The concept of civil society is applied in both domestic and international politics. It can be noted that, in general, civil society is widely defined in two broad terms, which are differentiated by the inclusion or exclusion of the market as a group in civil society. On the one hand, while civil society in the analysis of domestic society can be defined as the 'domain of associational life situated above the individual and below the state' (Wapner, 1997: 66), Wapner sees the concept as still making sense in the analysis of international politics by defining the global civil society as 'the domain that exists above the individual and below the state but also across state boundaries, where people voluntarily organize themselves to pursue various aims' (1997: 66). On the other hand, Bernauer et al. (2013) notes that, while domestic and international

affairs discuss the increase of civil society participation in the policymaking process, there still exists the question of who should be considered civil society actors. They conclude that civil society commonly refers to voluntary social relationships and civic or social institutions that are distinguishable from state structure and market. Their legal personality is recognized by at least one state, however they are not a part of official governmental entities (Bernauer et al., 2013: 88).

Although the concept and definition of civil society can provide a crucial approach in the observation of the role of non-state actors in effecting change in the studying of global affairs, a wide range of associations and groups make some difficulties in identifying who should be collectively called civil society, especially at the regional level. In addition, since the concept of civil society is rooted from the political and social development in Western countries, the application of the concept and definition in the non-Western state may not be suitable and might cause difficulty in the context that the public-private sphere cannot be clearly separated from each other. The term 'civil society' is always found in Southeast Asian literature that explores the relationships between state and civil society actors in the development of democracy (Guan, 2004; Weiss, 2008; Rodan, 1997; Aspinall and Weiss, 2012). Aspinall and Weiss (2012) propose that civil society is commonly defined by scholars as 'the realm of associational life between family and state, as a site where ordinary Southeast Asian citizens were autonomously, carving out democratic space and challenging the legitimacy of authoritarian regimes' (2012: 213). By using this definition, they identify many associations – based on issues including human rights, environmental and women's groups, labour and farmers' organizations – to note the growth of these organizations in diverse political regimes, most of which are non-democratic.

However, care should be taken in applying the concept of civil society in a context where most states are authoritarian. Guan (2004) emphasizes the importance of history and its effects in considering the way to see the democratic development of Southeast Asian civil society. While the relations between democracy and civil society in Eastern Europe and the United States foster the idea that the development of civil society will provide a positive effect in the democratic polity, this seems to be

different in Southeast Asia, where civil society actors were suppressed during the colonial period and limited in their political participation by European colonizers to prevent anti-colonial and nationalist movements (Guan, 2004: 11). Although this democratic struggle has existed since the colonial period, rapid economic development in the 1970s brought about the increase of educational opportunities that inspired citizens and the growth of social movements in a wide range to engage in political discourse and participation in a certain political arena (Guan, 2004: 12–19). Thus, the study of the development of civil society and its relations with the state in Southeast Asia needs to recognize the context of diversity in terms of history, ethnicity, religion, culture, economic development and the political regimes (Guan, 2004: 19). Similarly, Weiss (2008) also points out the problematic definition of civil society in applying the concept to the development of democracy in Southeast Asia. She agrees with Kaviraj and Khilnani that, while the actual political process in developing countries are mostly different from the West's experience, the language used to articulate the politics are, strangely, the same (Kaviraj and Khilnani, 2001: 4–5, cited in Weiss, 2008: 145). Some key aspects that must be taken into account in considering the development of Southeast Asian civil society are the diverse types of political regime, the role of transnational and international institutions, the public and private spheres that are difficult to distinguish, and the clearly weaker power of civil society compared to the state (Weiss, 2008: 146–151). Therefore, it is suggested that, in the discussion about works on civil society in Southeast Asia, civil society not be talked about as a collective noun but as individual organizations (Alagappa, 2004: 10, cited in Weiss, 2008: 167–168).

This notion corresponds with Aspinall and Weiss's work (2012) . Apart from the focus of the civil society model, which they have seen as a strategy to oppose authoritarianism by inviting external actors and international agencies to support the groups participating in development projects through the concept of good governance external actors and international agencies, they note the existence of political space conditioned by the variety of political regimes. Therefore, civil society actors may be classified as a legitimate, controlled or repressed organizations. In addition, since some civil society organizations support political parties and movements, it is difficult to draw conclusions on whether the development of civil

society in the region could lead to political change in a more democratic way (Aspinall and Weiss, 2012: 214). Moreover, an analysis of their case studies in Malaysia and Indonesia shows some limits of civil society such as their weak links to political parties and the public and their profession in lobbying (Aspinall and Weiss, 2012: 225–226). Thus, Aspinall and Weiss (2012) recommend that the role of the civil society in political engagement and policy influence should be understood differently in the context of different channels (Aspinall and Weiss, 2012: 215).

While the Western definition of civil society is problematic in the study of non-Western society since it provides the dichotomous opposition of the state and obscures social diversity, Rodan (1997) proposes that the definition of civil society should provide a consideration of the various forms of political space and the complexity of society. A zero-sum perception, which is usually prevalent in state–civil society relations, could downplay and overlook complementary and collaborative relations (Rodan, 1997:160–162). Chong (2011) gives useful points in mapping the relationships between state and civil society in each ASEAN country. Although states are the most crucial players in determining the conditions and agenda of civil society, the reality does not necessary reflect this. Aside from the apparatus in controlling their power, civil society actors are key facilitators especially in areas where the market and the state cannot provide public services (Chong, 2011: 9). Furthermore, under different degrees of freedom control, civil society organizations have applied different techniques in cooperating and engaging with the state (Chong, 2011: 10). Therefore, the conformity of civil society organizations to the government can be noticed from regulations (such as the registered CSOs' requirement to declare the sources of funds to the government) and states' recognition of CSOs (such as tax exemption and reductions for donors) (Chong, 2011: 11).

Considering the political context in Southeast Asia and the power relationships between states and non-state actors,⁴ this thesis adheres to Alagappa's suggestion

⁴ While non-state actors in international politics can always refer to diverse kinds of actors – including NGOs, CSOs, multinational corporations, transnational groups, think-tanks, media, diaspora, movement super-empowered, and/or individuals (such as celebrity activists,

that civil society be considered as organizations (Alagappa, 2004: 10, cited in Weiss, 2008: 167–168). In addition, following Lim's note (Lim, 2011) on the operationalization of civil society actors, CSOs are organizations beyond states, family networks and profit-driven entities. These organizations have to have formal structures such as meetings and coherent agenda. Although some organizations are funded from governmental or public entities, they must be primarily and naturally non-profit-seeking organizations and they should be able to independently self-govern (Lim, 2011: 22). Different types of organizations can be considered parts of CSOs. CSOs include NGOs (non-profit organizations established for particular purposes and employing staff, and associations of private sectors with clear intentions to collectively set mechanisms to minimize environmental degradation), community-based organizations (established by members of a particular group in the community who share an interest, which are operated by voluntary staff), faith-based organizations (groups organizing around religious or supernatural concerns), foundations (charitable organizations) and professional associations (groups of specific professional interests) (Lim, 2011: 23; Wapner, 1997: 81–82).

In short, concerning the unclear meanings of the civil society and limitations on the application of the Western term in Southeast Asian context, this thesis adopts the notion that it is difficult to find the whole trend of the development of civil society at the regional level because of the diversity in the social, political and economic contexts. However, the literature focusing on the development of civil society in the region suggests looking at the political space provided by the state, the working relations between the state and civil society actor, and the channels that civil society organizations can engage with in the policymaking process. While the study of the overall development of civil society is almost impossible, it is possible to investigate

financiers, religious leaders and terrorists) who potentially have an influence in shaping international outcomes (Weiss et al., 2013; NIC, 2007; Josselin and Wallace, 2001), the term 'non-state actors' applied in this thesis encompasses only CSOs and businesses. Therefore, despite the business being a member of a private-sector association, the business is not in itself considered a CSO.

the role of CSOs in governing international concerns through a specific issue-based area at the regional level.

2.3 Conclusion

International cooperation and conflict are basic features of international politics. Under the state of anarchy, where supreme authority is absent, this thesis accepts that international cooperation can be perceived through the process of mutual policy adjustment and coordination to overcome conflicts and/or achieve mutual interests. Conflicts and cooperation in international politics have been explained and understood by different IR perspectives; however, the most useful and relevant ones are neo-liberal institutionalism and the concept of governance, both of which come from the liberal perspective. Neo-liberal institutionalism and the concept of governance are fascinating for my research because they share a common interest on the role of international institutions in shaping international outcomes and actors' behaviour in an anarchic world.

Although the neo-liberal institutionalist perspective is very helpful in explaining how regimes can foster international cooperation and shape international outcomes, the approach is not sufficient for investigating the issues which are not in states' concerns. Cooperation will not happen if mutual interests cannot be identified; otherwise, inter-state mechanisms cannot be developed to effectively manage conflicts or solve problems in the less prioritized policy areas. While cooperation is pervasive in the view of neo-liberal institutionalists, the effects of regimes are diverse. Without states' intention to take the regime seriously, there seems to be no option to enhance the effectiveness of regimes for better international outcomes.

While neo-liberal institutionalists' main focus is only on international regimes, which are states' tools to achieve mutual goals, the concept of governance broadens the scope of international cooperation by including the role of non-state actors in constructing governance mechanisms to fulfil their collective intentions in the various issue areas, especially where states and IGOs fail to do so. The concept of governance includes regimes as parts of social institutions in governing international affairs. While there is no supreme authority and world government, intervening mechanisms

such as sanctions can be established by international actors to deal with particular relevant issues. Since global governance is composed of pieces of collaborative and cooperative arrangements established by international actors, networks can be considered parts of those pieces which can potentially influence international outcomes. The network perspective offers social power through network structure in analysing the role of networks as a group and the role of network actors in particular positions to explain the influence of networks in achieving their collective goals and/or to examine the role of networks in shaping political outcomes.

The network perspective offers analytical innovation and tools for investigating progress in international cooperation on modern issues such as the environment. While there are various kinds of governance mechanisms, the network approach becomes the most fascinating, especially when the concept is applied in the context of developing countries. The approach is also suitable to be applied in areas where states have already initiated cooperation but still lack effectiveness. The networks approach allows an investigation of cooperation among different types of actors whose mutual goals can be identified. Collaboration in the form of networks can potentially close governance gaps – the ineffectiveness of international regimes which derive from collective action problems and the capacity of states and IGOs in the process of implementation – by improving the international policy process through connections among actors which possibly and potentially facilitate coordination, communication and participation. The network approach allows us to investigate relationships among different types of actors, connections among organizations at different levels and across levels, and the links across national boundaries. In addition, since collaboration in the form of networks does not require the establishment of new institutions, this form of governance can be an option for improving the effectiveness of international cooperation among developing countries.

Chapter 3 Research methodology, analytical framework and data collection methods

The aim of this chapter is to make sense of the methodological choices which will move the thesis from the theoretical and analytical framework to the empirical case study. The interrelationships among the research questions, methodology, theories, concepts and the selection of cases for comparison are the main focus of this chapter. This will help position where this research is located in the field of international relations. The first section intends to answer why a qualitative approach is appropriate for this research. It also discusses why a comparative study is a proper way to provide a causal explanation for this research inquiry. The second section recalls the key terms developed in Chapter 2 and applies them for constructing an analytical framework to observe variables in the selected case studies. An analytical framework for a case study is set to demonstrate how each case answers research questions. Since the role of policy networks in relation to the effectiveness of regimes is also comparatively examined to answer the main research question, the international policy process for ASEAN environmental cooperation – which serves as a similar context for analysing those relationships in the different case studies – is presented in this section. The final section presents data collection methods including document analysis, qualitative questionnaires and semi-structured interviews. This section also details how validity, reliability and ethics are maintained throughout the whole process in conducting the research.

3.1 Research methodology

The effective management of transnational environmental problems is a current challenge for states. The difficulty and complexity of the problem requires international cooperation to deal with transboundary problems. States are often blamed for the failure to establish effective environmental regimes, while civil society actors (CSOs) are playing a more critical role in environmental management areas. However, although cooperative activities in forming environmental management among states and civil society actors can be obviously found in developed countries, especially in the EU, cooperative efforts are seldom seen in Southeast Asia, where resource are poorly protected and unsustainably exploited. Many studies that

examine environmental governance in Southeast Asia propose why environmental governance in the region cannot be effective in terms of problem-solving. This research also explores those reasons, but with the aim of finding out possible answers to how ineffective governance can be eased by cooperative attempts between states and non-state actors. To answer the question of the extent to which policy networks facilitate Southeast Asian states to improve the effectiveness of the environmental regime, this research applies a case study approach to explain the progress of the regime in Southeast Asia.

The methodological choice and research design are determined by the nature of the research question (Van Evera, 1997: 55; Vromen, 2010: 249). Epistemological realism in the debates between positivism and interpretivism – which is different from the realism approach in the field of international relations – is an appropriate framework to find the answer for this research. This is because the purpose of this research is to find a causal explanation for the development of an international regime seen as an interventionist instrument of international cooperation in achieving international outcomes on specific issues (Krasner, 1983: 5). Marsh and Furlong (2002) note that realists, who see that ‘there is a real world “out there”, but [emphasize] that outcomes are shaped by the way in which that world is socially constructed’ (2002: 31), seek causal relationships between social phenomena; they also recognize the existence of a power in the social structure that is unobservable but important for any explanation of social behaviour. Thus, realists provide a quantitative method for directly observable data and a qualitative one for unobservable data. In addition, influenced by interpretivist critiques, contemporary realists contend that causal statements and explanations of reality can be made even though not all social phenomena are directly observable, since the ability to observe may not always offer the right picture of the phenomena influenced by the unobservable structure (Marsh and Furlong, 2002: 20–31). The contemporary realist approach, which tends to place more emphasis on the qualitative method, is more in line with this research because the focus of the research is to find specific explanations for the relationships between the role of policy networks and the effectiveness of the international environmental regime in a specific context. The qualitative method offers a more practical means by providing a case study approach to form a ‘causes-of-effects’ explanation in a

particular context (Mahoney and Goertz, 2006: 230, cited in Vromen, 2010: 255). Regarding to the complexity and infrequency of the international phenomena which has constrained the testing of political generalization (Hopkin, 2010: 290), studies in political science and international relations are likely to generate particular explanations and understandings of how and why the outcomes and events occurred at particular places and times (Van Evera, 1997: 255–256). These kinds of questions require in-depth analysis and a holistic account to understand the complicated interdependencies in the issue at hand (Creswell, 2014: 186; Vromen, 2010: 257). Moreover, since this research attempts to find the causal relationships between the cooperative efforts of policy networks and their effects on the improvement of regimes, the realist epistemology fits with the research purpose in the sense that causal relations can be identified by empirical evidence by which the validity and reliability of obtained data can be assessed through the application of multiple methods including document analysis, qualitative questionnaires and interviews. The purpose is not to create any law-like, scientific statements for explaining social phenomena, but rather to find a causal relationship of those variables in a particular social context. Therefore, statistical evidence and quantitative analysis appearing in this thesis are parts of the information supporting an interpretation in observing and assessing those selected case studies.

A qualitative strategy of inquiry is important in international relations research since this allows a case study approach, which allows researchers to examine complex phenomena (Bennett and Elman, 2007: 171). This notion works well with Creswell's argument that the real value of the qualitative method lies in the particular description in a specific context (Creswell (2014: 204). Therefore, to answer the particular research question of how policy networks improve the effectiveness of regimes, the qualitative method offers a case study, which is worth examining in detail to demonstrate the hypothesized mechanisms (Vromen, 2010: 256; Bennett and Elman, 2007: 186). The case study method is useful for this research because it tests the explanation of how the independent variables cause the dependent variables (Van Evera, 1997: 54). In this thesis, cases are selected to find out whether collaborative efforts in the form of policy networks can make any difference for international cooperation on environmental issues through the improvement of the

effectiveness of the relevant international regimes. To identify the causal relationship, the comparative method is also applied in this research.

The comparative method is about 'observing and comparing carefully selected cases on the basis of some stimulus being absent or present' (Burnham et al., 2004: 60). Hopkin points out that the comparative method has more of a role to play than creating social scientific generalizations because the approach functions to develop, test and refine causal relationships and other social causal claims in social research (2010: 286). In addition, the term 'comparative method' in cross-societal comparison, according to Warwick and Osherson (1973), is referred to 'social scientific analyses involving observations in more than one social system, or in the same social system at more than one point in time' (Warwick and Osherson, 1973: 8). In addition, according to them, since social scientists' interest in discovering the conditions (independent and intervening variables) that determine certain directions of something (dependent variable), a hypothesis is proposed to identify the relationships between variables. The comparative method helps an investigator to test the hypothesis by suggesting holding particular conditions constant while letting others vary. 'The essential analytic task is to identify similarities in the relationship between two variables ... under different conditions ... with other condition held constant' (Warwick and Osherson, 1973: 7). This enables the investigator to find empirical relationships between two or more variables (Burnham et al., 2004: 69). A comparative case study is often applied to find out the relationships between an international institution and its consequences. For example, in finding the causal impacts explaining how international institutions and causal mechanisms affect behavioural change, Stokke (2007: 14) compares a small number of cases to trace a sequence of events and particular processes that mediate between an institution and its consequences. Therefore, comparing two case studies which possess differences in their network features and the effectiveness of regimes not only helps to identify the causal relationships between policy networks and the effectiveness of regimes; it also allows an examination of the conditions under which policy networks can better contribute to the effectiveness of regimes.

3.2 An analytical framework for a case study

The concepts of the international regime, governance and regime effectiveness, discussed in Chapter 2, serve as a starting point to find the answer for the research question. The words 'governance', 'regime', 'governance gaps', 'effectiveness' and 'policy networks' are variously applied in the studies of international environmental governance. Clarity in these key terms and definitions is necessary for setting out how each concept is related to the others. Young (2013) suggests that the use of key terms precisely and consistently can avoid researchers from undesired and problematic results, which derive simply from definitional imprecision (Young, 2013: 88). Mitchell (2013) comments that the clear definitions of words provided in Young's work (2013) are from Young's consideration of the importance of scales and that makes his empirical research rigorous (Mitchell, 2013: 10). Moreover, a precise definition is a crucial source of equivalence in the comparative analysis since it provides equivalent terms for identifying meaning and indicators for measurement in cross-societal research (Warwick and Osherson, 1973: 11–28). Therefore, for this comparative research, the application of consistent terms in the different cases is a means of protecting this research from slipping into fallacious reasoning.

While governance can mean several cooperative efforts by different kinds of actor in managing their affairs in a particular collective issue, this thesis aims to examine environmental governance by defining it as *'the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes'* (Lemos and Agrawal, 2006: 298). This definition includes environmental regimes – which refers to *the set of states' intervening tools including international agreements, regional action plans, procedures, mechanisms, policies and projects to deal with a particular environmental issue* – as parts of environmental governance.

Defining regimes as an inter-state framework which includes the products of the formal state and government policy process in governing transnational environmental issues is fit and useful for setting a framework to identify the roles of policy networks in several ways. Firstly, the definition gives dynamic characteristics to the nature of regimes. Regimes can be developed through ongoing formal

interactions of international actors, which come in several forms of policy. They can be changed over time through state interactions and multilateral arrangements. Changes are results from key actors through the formal policy process, where common goals are set and documented in official forms, for example agreements, conventions, protocols and declarations.

The second advantage in defining regimes in this way helps to construct criteria for the case study: the way to measure regime effectiveness and the distinction of actors which causes regimes' effects. The consequences of regimes can be more potentially measured than other kinds of governance. While governance is defined as the sum of activities that aim to achieve different groups' goals in dealing with environmental problems, attempts to assess the dynamics of environmental governance – which need to analyse different dimensions such as histories, goals, structures and processes – seem hardly achieved (Rosenau, 1997: 27). Comparing regimes to other kinds of governance mechanism, there is more possibility of measuring the effectiveness of regimes since at least the common goals agreed by actors are expressed. Even though the goals have been criticized as too ambitious and incomplete (Stokke, 1997: 34), at least some standards are initially addressed. As regimes are products of states' interaction through the policy process at the international level, regimes can be shaped, revised, clarified and interpreted later in the form of documents produced under agreements and declarations. Common goals are set and these can be used as points of reference for the effectiveness of the regime in a convention or agreement where objectives, principles, rules and decision-making procedure for state cooperation are expressed.

In addition, state actors and intergovernmental organizations are categorized as different kinds of actors. This fits well with the aim of this research, which is to find out whether there is any causal relationship between actors and the improvement of regimes. The role of coordinating bodies under the secretariat's direction for governing an issue is also pointed out in the convention or agreement; therefore, the secretariat – as a body of intergovernmental organization – is distinguished as another kind of actor, different from states. The effectiveness of the regime results not only from states' operational and functional capacities, but also from

intergovernmental organizations and/or secretariats. Peterson (1997) suggests that intergovernmental organizations can improve compliance effectiveness by supporting members to monitor environmental conditions, evaluate outcomes and modify the regimes to achieve better results. They can act as regime process managers since they possess 'a political legitimacy of representing the "international community," which individual governments and nongovernmental organizations cannot do' (Peterson, 1997: 116). Secretariats can also function, for instance, as a central point for information flows from both state and non-state actors, a focal point for analysing mutually acceptable aggregation, and an organizer for convening forums for discussion and exercises of peer pressure (Peterson, 1997: 116). Since intergovernmental organizations play a necessary role in the international regime formation phase (Breitmeier, 1997: 88) and the implementation and evaluation phases (Peterson, 1997: 115), the effectiveness of the regime is partly dependent on the ability of the secretariat to exercise its function sufficiently to facilitate state cooperation.

Thirdly, focusing on process, regimes include all stages of policy: making collective choices, framing formal channels of communication for actors participating in the regime to develop policy, monitoring obligations, and implementing and complying with commitments. These provide stages of policy for examining the role of state actors directly engaging in the policy development process at the international level, as well as the role of non-state actors attempting to participate in those processes at different levels and across levels. Furthermore, this definition helps to distinguish regimes from other kinds of governance mechanisms, and it clearly identifies a regime as a state instrument and a kind of governance mechanism. Because regimes are states' initiatives aiming to govern a specific collective issue, they possess legislative and enforcement tools which other kinds of governance cannot offer.

Regimes are created and developed by states and intergovernmental organizations to deal with the problem of members' collective action. However, since transnational environmental issues are hard to manage effectively, this creates governance gaps within regimes. Governance gaps refer to areas where members lack operational and functional capacity to reach their mutual environmental goal. Governance gaps are

perceived as opportunities for non-state actors to take complementary roles in improving the effectiveness of the regimes. *Therefore, governance gaps are areas where the operations and functions of regimes – which can be changed through interactions among state and non-state actors at the different levels of policy development process – can possibly be improved if states and/or intergovernmental organizations include non-state actors as parts of their networks.*

The causal relationship between policy networks and the effectiveness of regimes on transnational environmental issues is done through the international policy development process at multiple levels of governance. In measuring the consequences of international policy on the environment, the policy must be carried out at the national and local levels. Therefore, points to investigate the possible role of policy networks in closing the governance gaps include the international policymaking process at the international level, implementation at the national level, and evaluating and monitoring the policy transnationally.

The roles of policy networks in the international environmental policy development process are examined through the causal relationships between the policy networks and the effectiveness of regimes. It is necessary to clarify that the main focus of this research is to find how policy networks can contribute to the effectiveness of regimes rather than to assess whether regimes are effective. Therefore, the comparative approach is utilized to trace back whether regimes are made more effective by policy networks, and to answer the question on the conditions for policy networks to better functionally improve regimes. Figure 3-1 demonstrates how to identify the role of policy networks and their potential contribution to the effectiveness of regimes. Policy networks are an intervening factor to improve the quality of regimes, especially in terms of process – which probably leads to better physical environmental consequences.

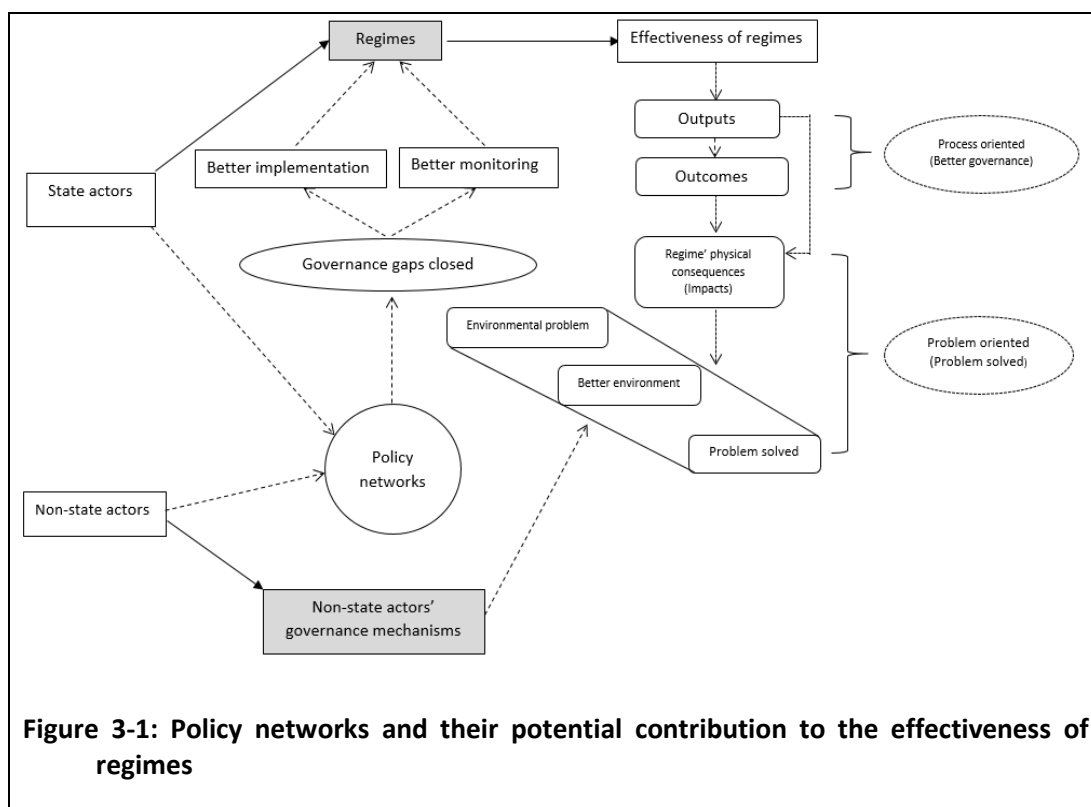


Figure 3-1: Policy networks and their potential contribution to the effectiveness of regimes

The effectiveness of regimes is an initial point to investigate the role of policy networks. This research identifies the role of policy networks through the development of regimes for these reasons. Firstly, focusing on regimes reflects the acceptance that states and the state system are superior to non-state actors in terms of powerful authority, integrity and coherence (Whitman, 2005: 26). In order to solve collective problems over and across territories, the most effective means can only be through international cooperation. Additionally, regimes address collective goals which can be assessed and improved from time to time. Although non-state actors and their relationships are recognized, though less emphasized than state actors by regime theorists (Stokke, 1997: 30), they still potentially have opportunities to take their part in the policy process at different stages and levels of environmental governance.

In assessing the effectiveness of regimes, Young's analytical terms to measure the simple effectiveness of the regime are adopted. The effectiveness of the regime is 'a function of the extent to which these arrangements contribute to solving or mitigating the problems that lead to their creation' (Young, 2011, cited in Young 2013: 90). Three aspects that evidence the effectiveness of regimes are outputs,

outcomes and impacts. 'Outputs involve the promulgation of regulations and the establishment of infrastructure needed to move a regime from paper to practice. Outcomes refer to changes in the behaviour of those subject to the rights, rules, and decision-making procedures of a regime. Impacts are a matter of problem-solving as such' (Young, 2013: 90). Measuring the effectiveness of regimes through this method is useful since it offers a way to examine the process of the regimes in terms of process (outputs and outcomes) and in terms of product (impacts).

Regimes initiated at the international level are useful if they are implemented and/or complied with by state members. It is noticed that outputs are associated with implementation to establish legal measures, projects and/or institutional bodies as a tool to achieve policy goals, while outcomes are closely related to states' compliance. Jacobson and Weiss (1997) differentiate between implementation and compliance by pointing out that implementation refers to measures or national legislation and regulations made by states to make international agreements effective in domestic law, whereas compliance refers to 'whether states adhere to the provisions of the accord and to the implementing measures that they have instituted' (Jacobson and Weiss, 1997: 83). Implementation not only includes the creation of measures and institutions and the enforcement of rules at the domestic level; it also involves the establishment of specialized bodies at the international level; in this aspect, implementation is therefore a crucial step towards compliance (Nguiragool, 2011: 17). Assessing compliance is harder than measuring implementation; however, it can look at specific obligations, procedures and other requirements stated in agreements (Jacobson and Weiss, 1997: 83). Peterson (1997) sees that desired environmental outcomes need to satisfy both compliance effectiveness (actors following prescriptions promoted by regimes) and result effectiveness (environmental improvement caused by states' obedience to regimes) (Peterson, 1997: 116). As impacts are seen as the ultimate goal of regimes aiming to stop a specific problem, outputs and outcomes are important instruments related to the improvement of the relevant problems.

Young's method (2013) in assessing the effectiveness of regimes offers means to judge the success of regimes in two ways: process orientation and problem-solving

orientation. This research focuses more on the process because transnational environmental issues are currently challenging and cannot be easily solved in a short period. Regimes have to be developed to respond to those challenges through the policy process. Therefore, the success and/or failure of regimes are judged on their functional improvement in reacting to the issues.

In assessing the effectiveness of the process, we turn to the concept of governance in terms of management. Young (2009) suggests evaluating the effectiveness of a governance system under the domain of 'good governance', which is a normative but not standardized list. He also notes that the notions of good governance are best considered as matters of process, although the success of the system in terms of process may not determine success in problem-solving (Young, 2009: 32). However, it is hoped that the basic elements of good governance, including stakeholder involvement and legitimacy in getting the process right, are crucial and likely to prove successful for problem-solvers and public policy (Young, 2009: 32-33; Reinicke et al., 2000: 55).

The performance of regimes in this research is judged through the criteria representing the concept of better governance. Ensuring the process of implementation and compliance is the contribution that policy networks – which possess transnational capability in linking policy from different levels and processes – can potentially make. Here, the social network analysis method can present similar aspects of good governance since it also focuses on the participation of actors (nodes), their information coordination (links) and collaborative activities (links) through stages of policy development to close the governance gaps in regimes. Better governance in the policy development process at this point means better communication, better coordination and better participation.

Networks in this research are developed from the concept of the social network (Degenne and Forsé, 1999; Hanneman and Riddle, 2011). The components of a network consist of actors and links among them. Since this thesis focuses on issue-based networks, nodes of networks – actors – are defined by applying the relation-based approach (Marin and Wellman, 2011: 12). Beginning with a small number of actors of interest and then expanding to include others can identify actors as

representative of organizations with broader memberships and constituencies, and with the desire or interest in dealing with specific issues. To define links, which are the unit of analysis, the concept of the political network (Knoke, 1990) and the idea of network-based cooperation (Miyazaki, 2011) allow the observation of the basic nature of the links which lead to the influential role or the functional role of policy networks in closing governance gaps to improve the effectiveness of regimes.

According to Knoke, '[i]nfluence occurs when one actor intentionally transmits information to another that alters the latter's actions from what would have occurred without that information. Influence operates by providing information that changes an actor's perception of the connection between an action and its consequences' (Knoke, 1990: 3). On another aspect, functional links can be drawn from actors' activities in sharing resources, exchanging knowledge, increasing capacity, collaborating in projects and monitoring situations (Miyazaki, 2011). Although these two kinds of links are formed with different purposes – to change target actors' perceptions and behaviours and to contribute to problem-solving – the foundations of these links are flows of information within the network. Defining the links which are basically founded on information sharing serves this research in two main ways. Firstly, it allows the identification of different kinds of actors who work collectively to support goals of regimes at different levels of governance. The macro-structure of the network can be constructed to analyse communication, coordination and participation among network actors in each case. Secondly, it supports comparison between cases in analysing the components of policy networks and their ability to influence environmental policy and/or improve the effectiveness of regimes.

Guided by and adjusted from Perkin and Court's notion (as mentioned in the introduction), policy networks are defined as formal and/or informal structures that link actors (states, IGOs and/or CSOs) who share common goals on particular issues and operate to achieve those goals in the international policy process. The links between actors are constructed basically from information sharing, which can be empirically identified through activities (resource and information sharing, organizing conferences and workshops and/or project collaborations) aiming to support environmental policy to govern a particular issue. However, considering the

complexity of environmental problems, the transnational aspects of non-state actors and the works of NGOs, which are not always in opposition to states (Whitman, 2005: 27), non-state actors should be considered crucial parts of the policy development process. Non-state actors, such as academic institutions, and transnational environmental actors play active roles in dealing with environmental problems at different levels and across levels (Wuori, 1997, cited in Sjöberg, 1997: 15). Figure 3-2 shows how policy networks potentially contribute to the improvement of the effectiveness of regimes.

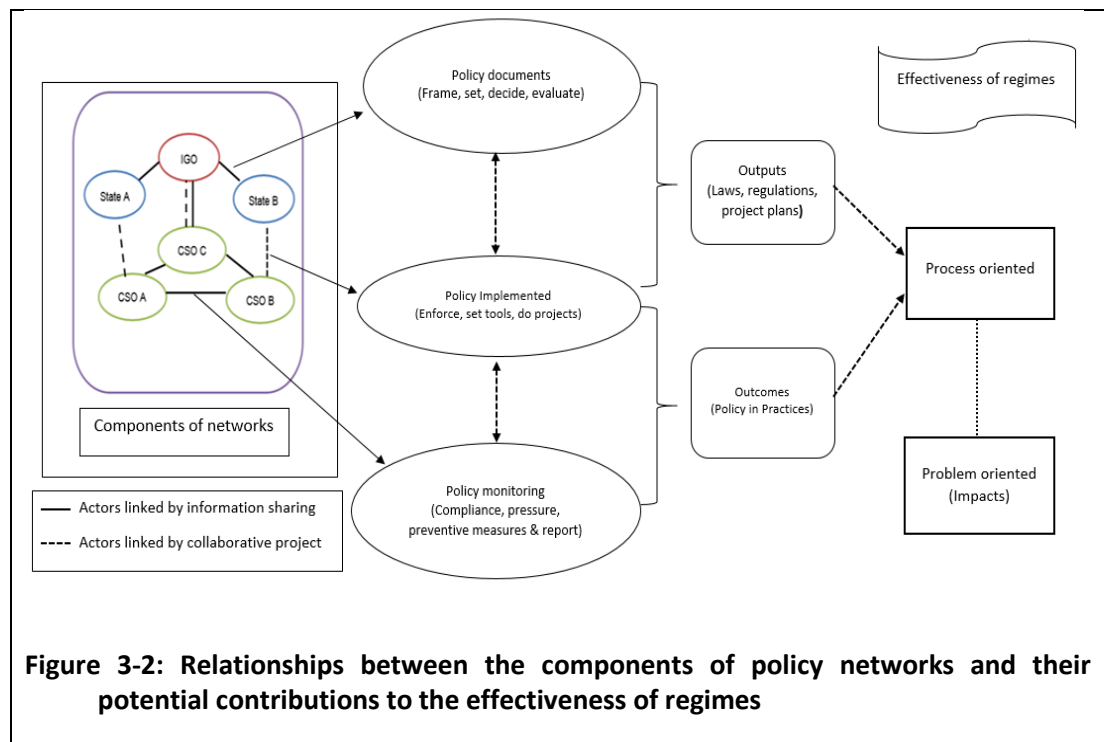


Figure 3-2: Relationships between the components of policy networks and their potential contributions to the effectiveness of regimes

Policy networks which involve non-state actors as parts of the network component could increase the effectiveness of regimes by improving the outputs and outcomes of regimes through the international policy process. The social network analysis method depicts similar aspects related to the notions of good governance since it identifies different kinds of organizational actors that participate in the process and the links among those actors. Policy networks can make better governance if they possess mixed types of node, including states, IGOs and transnational NGOs. The different kinds of actor present various information and expertise from various backgrounds, while the links support operational activities among members in

different stages of the policy process, which assist states and intergovernmental organizations to improve the process of policy compliance and implementation.

The method of social network analysis allows an examination of components of networks: the number of nodes and links, the priorities and goals of networks, and the function of the centre in managing those relations. Since the failure or success of networks can be analysed through those components, the relative effectiveness of regimes can be partly examined by comparing the components of the policy network in different cases.

Better governance in the policy process can be investigated, firstly, by identifying the kinds of actor participating in the policy process. The involvement of non-state and/or transnational actors at different stages is crucial as they are sources of perspectives, information and expertise. The larger the number of various kinds of participants, the more opportunities for networks to get the complete picture for environmental policy. The participation of non-state actors is the fundamental factor leading to further capacity of policy networks in closing other governance gaps existing in regimes. The number and kinds of actors are directly related to the links and the networks' ability in governing the problems.

The links of networks are the second point of examination. To improve the policy process, it should be possible to identify the links between NGOs and IGOs/states. Information sharing and communication activities can support the development of policy in the form of documents, policy coordination and policy monitoring, while functional activities emphasize the increasing of networks' capacity in the process of policy implementation.

The links of information communication are basically founded on information flows and the application of that information in development policy in the form of policy documents addressing objectives, goals, means and indicators. It includes the use of updated information from different sources to adjust and evaluate policy. In addition, Esty and Ivanova (2002) stress the importance of data collection across areas in the environmental policy area for better information in identifying issues, spotting trends, evaluating risks, setting priorities, establishing policy choices, testing

hypotheses and developing technologies. They suggest that the central sources for information coordination among organizational institutions be established to manage environmental policy (Esty and Ivanova, 2002: 15). Ferguson (2009) offers three degrees of horizontal efforts to identify signs of stronger information links among actors, spanning information sharing, dividing tasks and responsibilities to avoid redundancies, and integrating resources and decision-making across organizations (Ferguson, 2009: 2). As a result, information sharing links are the foundation for policy networks, which leads to developing their coordination and collaboration.

Through the informative communication links, non-state actors in policy networks can take their roles by framing problems, tightening international negotiations, proposing policy choices, suggesting policy areas to be developed, setting indicators, sending feedback for policy evaluation, identifying legislative loopholes, putting forward more details for policy guidelines and/or writing regional action plans. Evidence could be found by comparing the group's statement or proposals with the policy formulated by governments or intergovernmental organizations. Other sources of documents would be non-state actors' proposals, reports and policy suggestions.

The links of functional activities help to identify how non-state actors in policy networks could fill the implementation gaps. They can offer material and financial resources to states to do projects and/or support capacity building, and technology transfer through workshops and forums. Furthermore, they can help to disseminate information and knowledge to raise awareness among people. Evidence to support the links can be found in the news, announcements of events, and updated activities appearing officially on the organizations' websites.

Both kinds of links support policy monitoring in the process of implementation and compliance. Finding out whether states comply with the agreement requires information from different actors across borders and levels. Transnational actors can take their role in providing to intergovernmental organizations the information they can collect. Since the performance of states' data might be scarce, insufficient or even unreliable (Esty and Ivanova, 2002: 7), information provided by non-state actors can

be another source of reference for states and intergovernmental organizations. This information can be used to support the peer pressure system in official meetings or be utilized together with enforcement provisions.

The centres of the networks are another important aspect for examining how well the nodes and links of networks are managed. Improvement in the quality of the process partly results from the ability of the centre, which plays a role of a broker unit to facilitate information, coordinate goals and priorities, and mediate and manage any disagreement among actors. Without a centre, the networks' operations would fail.

This research applies a comparative approach to measure the effectiveness of regimes. The comparative method benefits this research for the following reasons. Firstly, while there is no method that can be applied in all cases to measure effectiveness, comparing two cases helps to find out which is more or less effective in terms of outputs, outcomes and impacts. The measurement here is not done by setting standardized cardinal scores because it is hard to find a common unit of effectiveness which can be applied across issue areas (Underdal, 2004: 37). Instead, the assessment is interpreted from existing empirical data. The effectiveness of regimes is assessed separately to assess the extent to which each regime makes states comply with agreements and implements policy which results in solving the specific environmental problems for which it was established. Secondly, the comparative method reveals key variables and helps to identify causal relationships between independent and dependent variables. In explaining regime effectiveness, Underdal (2004) categorizes three main clusters of the critical determinants of effectiveness: the nature of the problem (focusing on what makes a problem hard to solve), the characteristics of groups of parties (focusing on which group characteristics increase the capacity of collective action) and the properties of the regime itself (concentrating on attributes of regimes such as incentives, procedure support and legitimacy) (Underdal, 2004: 40-41). The primary focus is on the characteristics of actors as independent variables which cause the effectiveness of regimes as a dependent variable. Since states and IGOs are members of regimes, the effectiveness of regimes can be improved if non-state actors are connected to those

regimes' actors which consequently bring about better governance in communication, coordination and participation to the policy development process. Comparing the two cases aims to confirm whether policy networks do in fact contribute to the outputs, outcomes and impacts of regimes.

3.2.1 ASEAN policy process and international policy context

The international policy process provides the similar stages in analysing the development of international environmental policy. This research also adopts Mintrom's suggestion to keep the linear model of the policymaking process to establish clear boundaries of the stages (Mintrom, 2012: 112-113). The linear model serves well for an examination of the development of policy initiated internationally and implemented locally.

The international policy process for investigating the development of transnational environmental cooperation in Southeast Asia can be separated into two linear processes: policy initiated at the international level and the policy adopted at the national level for implementation. List proposes that, while the international context is composed of domestic and international settings, it is more practical to examine each setting separately (List, 2003: 7). This idea suits research related to Southeast Asian institutions because it separates the regional policy process, which is similar to the national policy process, which differs by member country according to their political system. At the international level, agreed rules and standards stated in each regime are set to specify states' agreed rights and obligations to establish and sustain international cooperation, whereas implementation of the policy is left in states' hands under international bodies' control (Hass et al., 1993, and Krasner, 1983, cited in List, 2003: 17).

ASEAN international cooperation on environmental issues is addressed in the sociocultural community. International policy is developed through the ASEAN Summit, the ASEAN Ministerial Meeting, the ASEAN Senior Official Meetings, and the Technical Working Group. At this level, international environmental policy is formed and set. An international environmental policy may include initiatives from

conferences, reports, declarations, action plans, binding treaties or combinations of these with the aim of solving the problem (Arts, 1998: 19).

Since the international policy process in this research is seen as a linear combination between the regional policy framework and the national policy process, this is the state's means to manage environmental issues. Both issues are under the ASEAN cooperative framework, therefore it can be expected that the development of policy could run in the same way. ASEAN's structure of cooperation helps to explain the formal steps for states to develop their cooperation in terms of policy.

At the national level, international environmental policy is implemented by parties under the principle of sovereignty. While this principle is consistently pointed out as a source of ineffective global environmental policy, List reminds that the legal principle cannot be blamed since it depends on the actors who make use of it (List, 2003: 16). The environmental consequence of international policy, thus, results from each state's responsibility within its own sovereignty. The policymaking process in reality consists of overlapping stages of policy in initiation, formation, implementation, evaluation and review (Hague and Harrop, 2010: 370). However, in analysing the development of international environmental policy agreed by states, this research focuses more on the implementation, enforcement and evaluation stages because the problem definition and agenda setting stages have already been set at the international level.

While there is a regional policy structure to sustain international environmental regimes, and the involvement of various kinds of actor interacting transnationally to govern the issues acts in a similar way, there are also key differences serving as independent variables for the two cases to examine whether there are any conditions for policy networks to engage in the international policy development process more effectively. The network approach and the concept of political opportunity structure are helpful to comparatively analyse attempts of political forces to engage in the different stages of international environmental policymaking.

The difference in political context can be a critical point in articulating the independent variables for the comparative study. The different degrees of politics

resulting from the different kinds of transnational issue provide various constraints and opportunities for political actors to engage with and influence the policy development process. Within the political context of each case, the formation of a policy network and its structure in linking different kinds of political actors are further differences in their role in governing the issue.

The international political context provides the structural constraints and opportunities for political actors to secure their political goals and interests. The different political context can be noticed from the scope and scale of the issue (which can in turn be noticed from the number of political actors and the consequences of the activities), the control of the environmental problem (whether it is under the control of states or beyond states' legal jurisdiction), the advancement of the agenda (which is the development of a strong or weak regime that could allow relevant political actors to get involved) and the level of democracy (Potter, 1995: 101–103). These considerations are useful for observing the political context for the case study.

The perspective of political opportunity in this research is partly guided by the social movement approach. This approach allows us to examine the structural change caused by social movements which attempt to find a political opportunity structure to achieve their common goal (McAdam et al., 1996). The concept of political opportunity structure, according to Gamson and Meyer (1996), is widely applied in the study of social movement, political institutions, political alliances and political shifts. However, this causes difficulties for the concept since political opportunity can mean many things, including the openness of political structure for actors, the opportunity made by political movements, the balance of structure–agency elements, and the group's perception of what opportunity is in a shared situation (Gamson and Meyer, 1996: 275; McAdam et al., 1996: 8). Therefore, the concept is not well defined and it should be purposive and clear on what opportunity means (Gamson and Meyer, 1996: 275).

The concept of political opportunity structure is useful in providing analytical aspects for studying the relations among actors in finding opportunities to engage in the policy development process; however, this research is far from a social movement study. The social movement is different from NGOs and policy networks, which are

the focus of this research. In addition, although there is a relationship between environmental NGOs and environmental movements in some countries, the intention for such a movement is structural change at the national level. *The intention of using the language of political opportunity structure is to identify the degree of openness of institution structure for actors to become involved in the international policy development process.* The political context can be a factor that determines different political opportunities for civil society organizations to participate in and influence the formal international policy process.

Although the two cases studied in this thesis are both international environmental cooperation under the ASEAN framework, the difference of international political context provides different political opportunities for civil society actors to directly influence at different levels of ASEAN meetings. In analysing the role of NGOs in influencing environmental politics, Potter proposes four structures helping to identify why one NGO tends to be more powerful than others. The structural constraints and opportunities for an NGO include the existence of international agreements which provide a point for NGOs to leverage and engage in the issues, the character of the target organizations whose policies are causing the environmental issue, the character of the network and the possibility for an NGO to gain access to it, and the political structures that NGOs confront (Potter, 2003: 32–37). These points are useful for assessing the structural constraints and opportunities for network actors, as well as examining how the connections among actors can increase their channels or political space through cooperative interactions among actors.

3.3 Data collection methods, validity, reliability and ethical issues

Multiple sources of data and triangulated methods are core characteristics of qualitative research, applied to cross-check reliability, strive for comprehensiveness and overcome problems of validity as well as bias (Bennett and Elman, 2007: 185; Jansen, 2010; Bouteligier, 2013: 69; Creswell, 2014: 201). As a result, data used in this thesis was collected from different sources including documents, qualitative questionnaires and semi-structured interviews. Information technology devices usefully accommodated different stages of data gathering, whereas the Gephi software program assisted in drawing network graphs, which were advantageous in

visualizing the components of networks in each case study. Three sets of data gathering are set out below.

The first set of data collected was documents. This method was crucially important through all stages of this research. Primary and secondary data included official documents, online newspapers, press releases, reports of projects and meetings, organizational charts, academic journals, photographs of events (workshops, operations on the ground) and documentary films (YouTube). This data was obtained from the official websites and Facebook pages of organizations, and from online databases.

At an early stage, primary and secondary data helped to identify organizations possibly involved in policy networks. Documents revealed key organizations for circulating qualitative questionnaires; in addition, they presented names of key informants for the interview method. However, some limitations in documentary research could be pointed out. Firstly, it was difficult to find certain evidence and answers by analysing documents alone since they did not appear in certain types of document and some were not available to access (Creswell, 2014: 14). Secondly, some claims, for example by NGOs on their influence over the policy, casted doubt on the validity of information (Burnham et al., 2004: 190). Thus, to meet validity and reliability criteria, qualitative questionnaires and semi-structured interview methods were designed to minimize certain constraints in data insufficiency.

The second set of information was gathered from qualitative questionnaires. This method was intentionally applied in this research for the following reasons. Firstly, the method allowed me to cross-check the information obtained from other sources. This was done by asking a similar set of questions applied in interviews to respondents who worked in organizations that were part of policy networks. It also included questions assessing the performance of other organizations that they were working with. Secondly, closed and open-ended questions were designed to gather information from wider samples since standardized questionnaires could be considered an option for semi-structured interviews by translating the research questions into inquiries (Jansen, 2010). The questions sought to obtain general data on regular activities such as sharing information and joint programmes. Participants

were asked straightforwardly and clearly to avoid any misunderstanding. Thirdly, questionnaires were designed to save participants' time. Time spent answering the questions was less and it was considered more flexible than interviews. Moreover, this method offered a chance to recruit participants for interviews by asking at the end of the section if the respondent was willing to be interviewed or could suggest any other people who could answer these questions.

Bryman (2012) points out the benefits of questionnaires over the structured interview. The questionnaire method is cheaper, quicker and more convenient for respondents, and is less liable to bias from an interviewer. However, researchers should be aware of drawbacks. Some possible problems are the lack of chance for respondents to ask the researcher to clarify a question, limitations in adding data, a limited number of questions, and lower response rates (Bryman, 2012). Fink suggests that, to make a good survey, researchers should ask purposeful questions that make it easy for respondents to identify the relationship between the intention of the question and the objective of the questionnaire (1995: 13). With an awareness of these recommendations and limitations, I used an online questionnaire in Google Drive to gather this data. A hyperlink to the survey website was sent to participants via email. Despite the questions being developed to minimize any confusion, some problems arose. For example, some participants had changed their jobs and/or organizations but were still working in the environment field. Therefore, they chose to clarify their answers by filling in the open-ended questions or sending an email to me after they had done the online survey. I could therefore adjust and develop the online questions before sending them to other participants. The saving in cost and time in circulating the survey and receiving the answers was a distinct advantage of using this method. In addition, compared to the semi-structured interview approach, the survey functions better in delivering some kinds of information, especially on the name of organizations they had worked with and activities their organization conducted, which they could select from choices, with an alternative option for them if they preferred. The same questions asked in the questionnaire helped to identify participants' similar and different opinions on their perceptions of the cause of the environmental problems, the assessment of the role of the state and IGOs in

managing the problems, and their organizations' approach to dealing the problem collectively with other organizations.

In conducting the research, organizations' staff involved in policy networks were contacted and the link to self-complete the questionnaire was sent via email. The online questionnaire was not distributed randomly since organizations involved in policy networks were specified and the participants were chosen owing to their experience (Jansen, 2010). The survey also requested that respondents provide their position in the organization. This was for checking the credibility of information if contradictory data appeared. Data derived from questionnaire was used for checking against other types of information.

The third set of data was derived from in-depth interviews with key informants who worked in organizations included in policy networks. Interviews were conducted mainly by telephone and Skype. The advantages of elite interviewing, as pointed out by Richards, involve assisting the researcher in interpreting documents, explaining the outcomes of events, providing information not recorded, providing access to other interviewees, and setting the context that interested investigators (Richards, 1996: 200). The online interview method is also practical for respondents who face time constraints (Burnham et al., 2004: 202). In contrast, it should be noted that information derived from interviews offers participants' subjective analysis and interpretation (Richards, 1996: 200; Vromen, 2010: 258). Concerning the bias which interviewees may present, the data received from the interview method was analysed and interpreted together with other sources.

Interviewees were intentionally recruited from intergovernmental organizations, non-governmental organizations, and governmental agencies involved in networks. The semi-structured questions were developed to gather certain information that could not be obtained by other methods such as details about actual relationships among organizations in networks, constraints and conflicts within networks, the role of organizations they were working with, the experience and strategies that actors in networks used to influence the regional policy process, and the actors' perceptions of changes occurring from interactions and operations. Some selected questions were submitted to informants before carrying out the interview. Interviewees were

asked whether their opinions could be recorded. An interview was expected to be completed within 45 minutes; however, the time was quite flexible and depended on participants' willingness to discuss the topic.

To obtain empirical data gathered from online qualitative questionnaires and semi-structured distance interviews, emails were sent to fifty people who could be identified as persons working with organizations. Twenty-three participants accepted the request to participate in my research. Four of them were willing to complete the survey and discuss in-depth details by interview. The number of participants in the wildlife case was fourteen, while there were nine informants in the haze case. Participants in the wildlife case consisted of IGO officials, governmental agencies and NGO staff. However, there was no IGO official participating in the haze case. Balancing the number of participants was beyond my control since this empirical data was based on participants' willingness and consent. However, the data obtained from participants was sufficient, for example, to identify key organizations within their network and their opinion and assessment of other network's actors. In addition, Mogalakwe and Gaborone (2006) argue that 'documentary research in social science is a useful and under-utilised approach that can be adopted by researchers in the full confidence that it is also a scientific method that requires rigorous adherence to research protocol' (Mogalakwe and Gaborone, 2006: 222). Therefore, the document method was applied as another source to secure and complement the reliability of this research. Validity and reliability was done by triangulating documentary data from the wide range of textual evidence produced by states, intergovernmental organizations, NGOs, media and companies.

Different strategies set out to confirm validity for this research including using various sources of information from different groups of participants to cross-check the credibility of information obtained, maintain reflectivity, and willingness to present negative information when there was contradictory evidence. This research also set up a detailed protocol, document steps of the research procedure, and check the accuracy of transcription and codes to ensure reliability (Creswell, 2014: 203).

To maintain ethical standards for all participants, I conformed strictly to university policy and procedure. The information sheet and consent form were given to all

participants. Anonymity was an option for participants. Since the nature of this research emphasized cooperative activities among related organizations in networks, it was not difficult to identify who was in position to provide the information. Therefore, anonymous identity was automatically set for participants answering sensitive questions such as their opinion of conflicts between their organization and others.

Moreover, the identification of organizational representatives' positions would support the credibility of the findings. Therefore, balancing reliability and confidentiality was an important concern. Thus, before starting the interview, participants were asked if they were comfortable with the disclosure of their identity. Interviews were recorded if the participants did not object to this. The audio file was coded and used only for transcription purpose.

While the audio files were stored on a password-protected computer, anonymous transcription of the respondents and the identification data were kept separately in password-protected files stored on the main university hard drive, which provides a secure location. No direct quotes or any other information allowing the identification of the source was included in the research when informants decided to remain anonymous. This was to ensure that anonymized data could not be traced back to specific individuals. Audio files, transcriptions and participants' identification data will be retained for a period of one year after the end of the project for peer review. After that all files will be destroyed.

3.4 Conclusion

This chapter comprises three main sections that interrelatedly explain the research procedure which has been developed from methodological choices to gather empirical evidence. The first section revealed that the nature of research questions were the main factor justifying methodological choice. Since the aim of this research was to find the causal relationships between policy networks and the effectiveness of regimes, a qualitative approach was suitable for answering this kind of research inquiry. A qualitative method allows the investigation of particular causal relations between independent and dependent variables observed and implied from empirical

evidence revealed in the case studies. A comparative method was applied to find the similarities and differences between the two selected case studies. Comparison across cases not only aimed to confirm the hypothesis of those causal relationships; it also revealed factors that explain – by their presence or absence – why one regime was more effective than the other.

The second section clarified the definitions of the key terms – regimes, governance, governance gaps and policy networks – applied in this thesis. It also demonstrated how these concepts were interrelated. Terminologies were the foundation for constructing an analytical framework to be applied in the selected case studies. These terminologies were used in gathering and categorizing empirical evidence. Clarity in the terms used in different cases allowed equivalent evidence to be found for comparative analysis.

The last section illustrated the data gathering methods applied in this research. Three sets of data – including documents, online questionnaires and distance semi-structured interviews – were collected from various sources and different kinds of actors. This was strategically aimed to confirm validity and reliability in delivering answers to the research questions. To maintain academic integrity in doing this research, ethical standards and considerations conformed strictly to university policy and procedures.

Chapter 4 Policy networks in governing transboundary haze issue

Transboundary haze pollution is a crucial environmental problem that has caused political tensions, mostly between Indonesia and her neighbouring countries. The haze problem in Southeast Asia attracted international attention shortly after the economic crisis in 1997. This led to regional cooperation and international assistance to deal with the haze. However, the recurrence of the problem raises the question of the effectiveness of ASEAN, as an important regional organization, in dealing with the haze issue. This chapter examines the role of policy networks in managing the haze problem. In order to do so, this chapter is divided into four sections. The first section discusses the background of the problem. It illustrates the causes of the problems deriving from natural and/or man-made factors. Since most of the recent recurrence of the annual haze is caused by human activities, the problem seems to be manageable. However, the returning of the haze raises questions about the state's effective measurement in preventing, monitoring and mitigating the issue.

The second section sets out the key international agreements, arrangements, initiatives and projects to tackle the haze, identifying the extent of states' efforts. This section discusses international efforts to tackle the haze issue. Although the emphasis of this section is mainly based on regional cooperation, global cooperation on climate change is also mentioned as it is another key international attempt to tackle the occurrence of haze. The limitations of state cooperation are discussed in the third section. States' constraints are understood as governance gaps in the anti-haze regime. The role of policy networks is analysed in the final section to illustrate how the inclusion of NGOs in the networks can help states to develop policies to fight the issue.

It is important to note that this thesis focuses on the investigation of haze in Indonesia, rather than in the Mekong region, where the emergence of cross-border haze is also recognized. Although the cause of haze in the Mekong region, especially in Thailand, Myanmar and Laos, is similar to in Indonesia, since it also comes from using the slash-and-burn method in the dry season (The Nation, 2015c; The Straits Times, 2016a), the main problem for individual countries in managing the issue is a lack of financial resources. The haze situation in Indonesia is a more appropriate

context for exploring the effectiveness of the regime and the role of policy networks. This is because international cooperation on the haze issue in the southern part of the ASEAN countries has developed over decades, while haze in the Mekong area has recently developed. Therefore, international cooperation on haze in the Mekong region can take lessons from Indonesia's experience, where the situation is more severe, intense and complicate.

4.1 Background to the problem

The transboundary haze issue is a crucial environmental problem in Southeast Asia, as the occurrence of fire and smoke causes considerable harm to the environment, people's lives and the national economy. While haze in the southern ASEAN countries still unsolvable, the smog from burning forests has recently become an annual phenomenon in the northern part (The Economist, 2015). In 2015, the pollutant standard index (PSI) reached an alarming level, 300, and led to the declaration of an emergency for forest fires in Riau (The Jakarta Post, 2015m). Since 1997, the haze has been an annual visitation during the dry season (The Straits Times, 1997d; The Straits Times, 2006b; Tay and Fang, 2013; The Economist, 2015). The problem is circular. When haze comes from the same provinces, several measures are taken to mitigate fires in response to complaints from people and neighbouring countries (The Jakarta Post, 2015j). Tay and Fang (2013) notice the less urgency and increasing fatalism on the part of the Indonesian government towards the issue. Gaveau et al. (2014) note that the haze has recently not been restricted to the severe drought years; a few consecutive days without rain can also start fires. Some notice that fires are recurring more often (Jakarta Globe, 2014b) and that it is harder to predict them (Gaveau, 2014). The situation is getting worse (Tay, 2014). Therefore, it is necessary to address the problem.

4.1.1 Impact of the issue

There are several impacts and costs deriving from haze each year. Firstly, when wildfires start, they directly and immediately degrade the environment, damaging air quality and causing biodiversity loss. The smoke also causes harm not only to humans but also to vulnerable and endangered species such as sun bears, orangutans,

elephants and tigers in Borneo, Sumatra and Kalimantan (The Jakarta Post, 2015o; The Jakarta Post, 2015p; The Jakarta Post, 2015h). In addition, the annual fires cause a major release of huge amounts of carbon dioxide and other greenhouse gases into the atmosphere and this contributes to the problem of global warming. In 2002, it was estimated that annual fires in Indonesia are damaging confidence in reaching the goals in the Kyoto accord on global warming (The Straits Times, 2006c). Faizal Parish, the director of the Global Environment Centre (GEC) in Malaysia, estimated that the slash-and-burn technique in Indonesia released nearly two billion tons of carbon dioxide into the atmosphere (The Straits Times, 2007a). In addition, the 2015 occurrence of fires in Borneo and Sumatra made Indonesia one of the world's largest carbon polluters, emitting the equivalent of a billion tons of CO₂ (Mongabay, 2015b).

Besides this, haze causes harm to people's health and countries' economies, and it disrupts normal activities in the areas affected. Furthermore, it brings about the irreplaceable cost of people lives from travel accidents, for instance the Garuda Airbus crash over Medan and the collision of two ships in 1997 (The Straits Times, 1997d; The Straits Times, 1997a). More importantly, the haze problem leads to international tension among Indonesia and its neighbouring countries since it significantly impacts people's lives and productivity (Contreras, 2008), especially in Singapore, Malaysia, Thailand and the Philippines, depending on the severity of the haze in that year (The Straits Times, 2000a; The Straits Times, 2005; The Straits Times, 2006a; The Straits Times, 2006c; The Straits Times, 2013e). The political tensions between Indonesia and her neighbouring countries appear in the news almost every year. Singapore, located upwind of the haze (ASB, 2013) during the dry season, suffers the worst of all the neighbouring countries. This annual harmful phenomenon unsurprisingly encourages Singapore to take a leading role on the international stage in dealing with the transboundary haze issue.

4.1.2 Cause of the problem

Understanding and realizing the root of the Indonesian forest fires is critical since this will lead to the means and solutions to tackle the problem. If the root of the fires is not addressed, the returning of the haze can be expected (The Straits Times, 1997d; The Straits Times, 2006a). Two factors that can cause fires are the natural conditions

(rising temperatures, which cause the ignition of the peat soils) and human activities, which directly and/or indirectly generate fires and haze in the region.

The most important factor that makes Indonesia's land very sensitive to forest fires is the peat soil. Indonesia possesses the largest tropical peat wetlands in the world, which are rich in biological diversity (Jayakumar and Koh, 2015). When peat swamps are drained in the dry season, dry peatlands deep underground are flammable. Once the dry peatlands are ignited, extinguishing them is almost impossible (Mongabay, 2015d). Peatlands produce around 90 per cent of the haze, and ASEAN countries contain approximately 25 million hectares of tropical peat soils, of which about 70 per cent are in Indonesia (Letchumanan, 2014a; ASEAN Haze Action Online, 2016a). The two main natural factors that directly impact the occurrence of the haze are peat soil and the dry weather. The warmer the weather, the easier the fires occur. The drought-inducing El Niño was one explanation of the fires in 1997 (The Straits Times, 1997d). The impact of El Niño, which causes a warming trend conducive to burning and extends the dry spell, is always referred to by the Indonesian government as one reason for the difficulty in solving the problem (The Straits Times, 2015f; The Straits Times, 2014b).

The second – but main – source of the fire is humans. It is believed that most wildfires in Indonesia are caused by humans (The Jakarta Post, 2015t; Jayakumar and Koh, 2015). The slash-and-burn method is a traditional way for farmers to clear their land. It is used extensively by smallholders as well as big companies since it is cheap, it saves time, it reduces problems with weeds, insects and disease, and it makes the soil looser, allowing for easier planting (Tomich et al., 2004: 12; The Straits Times, 2015j; The Jakarta Post, 2015t). This method is considered a direct cause of fires, since people intentionally light fires.

In reality, a mixture of these factors leads to forest fires. There are several factors that indirectly contribute to the haze problem. Indonesian Vice President Jusuf Kalla has identified as mistakes Indonesia's national policy since the 1970s, which has given too many concessions to foreign companies, a poorly conceived Suharto-era project to develop a million hectares of peatland for farming, and a long-standing openness to licensing peatland development for palm oil cultivation (Mongabay, 2015k).

The haze issue often only appears on the news when the situation gets worse, alongside high indicators to point out harm to people's health. This also raises a worry that people affected might get used to or grow immune to the problem instead of dealing with it (The Straits Times, 2006d; The Straits Times, 2013d). However, as the haze goes across borders and causes huge damage to others, it affects nearby countries. International tensions have appeared annually on the news. International cooperation has developed in the forms of agreements, meetings, bilateral arrangements and/or joint projects to manage the problem. The following section demonstrates the international arrangements and initiatives that have been established in response to the issue.

4.2 International cooperation to tackle the haze issue

Considering the cause of the haze, which results mostly from human activities, the issue should be manageable, even though the problem has not been solved successfully. This part of the chapter illustrates the key approaches and activities that states and international organizations have developed to deal with the haze problem. International cooperation within the ASEAN framework and bilateral initiatives between Indonesia and other international agencies outside ASEAN are also discussed as attempts that show the Indonesian central government's intention to stop the problem.

4.2.1 ASEAN cooperation on transboundary haze

Regional cooperation on the transboundary haze issue has developed strongly since the 1990s. In 1997, the head of the World Wide Fund for Nature (WWF), Dr Syed Babar Ali, observed that the scale of the forest fires catastrophe was international and beyond the borders of Indonesia (The Straits Times, 1997e). Since then, the haze problem has been the concern of the international community and ASEAN as it has worsened and reached hazardous levels in Malaysia, Singapore and parts of Indonesia (The Straits Times, 1997b). Institutional arrangements, coordinating bodies and cooperative activities have been set up to tackle the problem.

The ASEAN institutional framework to address the regional haze issue has been developed since 1995, first by setting up the Haze Technical Task Force (HTTF), which

comprises senior relevant officials from Brunei, Indonesia, Malaysia and Singapore, to operationalize the measures suggested in the ASEAN Cooperation Plan on Transboundary Pollution (Sunchindah, 2002). In December 1997, after the fourth meeting of the HTTF, the first ASEAN Ministerial Meeting on Haze (AMMH) was convened. This meeting discussed the haze problem at length and adopted the ASEAN Regional Haze Action Plan (RHAP) to address the problem (ASEAN Secretariat, 1997).

Before the haze crisis of 1997, the smoke haze had already affected Southeast Asian countries during the dry seasons in 1991 and 1994. Once agreed by the ASEAN environment ministers in June 1995, the RHAP was endorsed by the AMMH in 1997. It has three primary objectives: 'to prevent land and forest fires through better management policies and enforcement; to establish operational mechanisms to monitor land and forest fires; and to strengthen regional land and forest fire-fighting capability and other mitigating measures' (ASEAN Haze Action Online, 1997). Preventive measures emphasize the necessity to strengthen national policies and strategies to prevent and mitigate land and forest fires through the development of national plans, which should include policies and strategies to curb activities leading to fires, such as the prohibition of open burning and the strict control of slash-and-burn during the dry season. Regional monitoring mechanisms consist of the region's early warning and monitoring system to provide alerts of fires being started, to predict meteorological conditions, and to disseminate important data to support enforcement action. The ASEAN Specialised Meteorological Centre (ASMC) serves as a regional information centre to manage information with the aims of improving communication and increasing the effectiveness of the early warning and monitoring system. Firefighting capability is strengthened by measures including the preparation of resources (manpower, agencies, equipment, maps and funds), assisting programmes and sending regular updates to the HTTF on progress made in efforts to fight the fire (ASEAN Haze Action Online, 1997). The first AMMH has also recognized three main coordinative areas, with Malaysia taking a leading role on preventing, Singapore on monitoring, and Indonesia on strengthening firefighting capability (ASEAN Secretariat, 1997).

Two key monitoring systems which were developed and implemented to support the RHAP are the ASMC and the Fire Danger Rating System (FDRS). The ASMC, hosted by Singapore, was established in 1993 for the purposes of monitoring and assessing land and forest fires detected by the number of hotspots, providing climate predictions and serving as a technical support for different inter-agency committees. The information from the ASMC will be used by the relevant national authorities for issuing hazardous weather and environmental conditions in their countries (ASEAN Specialised Meteorological Centre, 2015). On the other hand, the Southeast Asian FDRS, handled by the Malaysian Meteorological Service since 2003, is a monitoring and warning system for forest and vegetation fire risk that aims to assist policymakers in fire management. The system provides maps with indicators calculated from temperature, relative humidity, rainfall and wind speed to assess the ignition potentials of the fine fuel on land surface, of the surface organic layers, and of the deep layer of compact organic matter (peat soils). These maps help authorities to identify the level of intensity of the fires and the difficulty of fire control for preparing firefighting capability (Malaysian Meteorological Department, 2015). The ASEAN-wide FDRS was displayed on Google Earth in 2012 (ASEAN Secretariat, 2012b).

The RHAP was supported by the Asian Development Bank through the Regional Technical Task Assistance (RETA) project, which aimed to strengthen the capacity of ASEAN to operationalize and monitor the RHAP, to assist the development of the detailed implementation plans (DIPs) of each ASEAN country and subregional firefighting arrangements (SRFAs) for Borneo and Sumatra, and to help set up the DIP for the RHAP to mobilize funding and technical assistance from several financial sources in the operationalization of the RHAP (Sunchindah, 2002).

In 1999, the zero-burning policy was adopted and promoted, especially in Brunei, Indonesia, Malaysia and Singapore (ASEAN Secretariat, 1999b). The Coordination and Support Unit was established within the ASEAN Secretariat to support the implementation of the RHAP (ASEAN Secretariat, 1999a). At the Eighth AMMH, Indonesia was urged to implement the law and regulations to enforce the zero-burning policy. While the ministers welcomed a dialogue session held in July that involved forestry concessionaires, plantation companies and governmental officials

to promote zero-burning policy in Sumatra, the idea emerged not to allow the open burning for the conversion of large areas of land into plantations (ASEAN Secretariat, 1999c). Recognizing the importance of preparedness in preventing haze, the zero-burning policy was emphasized along with the strengthening of law enforcement (ASEAN Secretariat, 2001b). However, it needs to note that ASEAN recognizes the difficulties of smallholders, farmers and shifting cultivators in implementing zero-burning practices, and they are exempted from the controlled burning ban. The Guidelines for the Implementation of Controlled Burning Practices, the Guidelines for the Implementation of the ASEAN Policy on Zero Burning, and *Fire, Smoke and Haze: the ASEAN Response Strategy* are available for them (ASEAN Secretariat, 2001a; ASEAN Secretariat, 2015a).

In 2000 at the Fifth Informal ASEAN Ministerial Meeting on the Environment (the informal AMME), the ASEAN Haze Action Online was set up to provide general information on the haze situation to officials and the public. With assistance from the UNEP, the first meeting of the Working Group of Legal and Technical experts was held to negotiate the possibility of the ASEAN Agreement on Haze (ASEAN Secretariat, 2000b). The Eleventh Meeting of ASEAN Senior Officials on the Environment agreed to develop the Haze Agreement, which would enhance cooperation in preventing, controlling and mitigating the issue through efforts at the national and regional levels (ASEAN Secretariat, 2000a). Indonesia, again, was requested at the Eighth AMME meeting to take more effective enforcement measures to fight the plantation and forest fires (ASEAN Secretariat, 2000c).

The ASEAN Agreement on Transboundary Haze Pollution (AATHP) was signed by 10 ASEAN member countries in June 2002 (ASEAN Secretariat, 2002a); however, it required national ratification to ensure the legal framework. The objective of the AATHP is stated as 'to prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated, through concerted national efforts and intensified regional and international co-operation' (ASEAN Secretariat, 2002a: 4). Key principles include the sovereign right of nations to exploit their own resources, alongside the responsibility to ensure that those activities within their jurisdiction do not cause damage to the environment and harm to the health of

people of other states; precautionary measures to prevent, monitor and mitigate land and/or forest fires; the sustainable management of the use of natural resources; and the involvement of all stakeholders as appropriate. The agreement also identifies the ASEAN Coordinating Centre for Transboundary Haze Pollution Control, or 'the ASEAN Centre', as an organization for facilitating and coordinating among parties to manage activities, for example monitoring, providing necessary information such as a list of experts and/or a list of technical facilities and/or list of donors from within and outside ASEAN to national focal points upon request, and establishing and maintaining contact with states and organization donors to mobilize financial and other resources for preventive and mitigating activities. The settlement of disputes between parties shall be done 'amicably by consultation or negotiation' (ASEAN Secretariat, 2002a).

At the Ninth AMMH, the ministers identified regional preparedness for coordination, communication, and disaster relief as the crucial elements of the arrangements. The existing institutions and resources were operationalized while the establishment of the 'ASEAN Centre' was pending owing to the process of ratification (ASEAN Secretariat, 2002b). The agreement entered into force in November 2003 and was finally ratified by all ASEAN member countries in 2014. In order to focus on the operationalization of several provisions and the implementation of the agreement, the issues discussed under the AMMH have been officially taken up by the Conference of the Parties (COP) to the ASEAN Agreement on Transboundary Haze Pollution and the AMMH has not convened since 2007 (ASEAN Secretariat, 2007c; ASEAN Haze Action Online, 2016b).

The preventive actions on the fire-prone areas, the peatlands, were addressed at the Tenth AMMH. An ASEAN Peatland Management Initiative (APMI), which was first proposed at the Ninth AMMH and adopted at the Twentieth Meeting of the ASOEN-HTTF (ASEAN Secretariat, 2014a: 2), had been introduced to build capacity, share best practices on peatland management and develop a regional strategy to sustainably manage the peat soils (ASEAN Secretariat, 2003). The wise use of peatland has been recognized by both local and international communities after the emergence of the threat of land and forest fires, which affect people's health, the regional economy

and global warming (ASEAN Secretariat, 2014a: 2). With financial support from the Global Environment Facility (GEF) and the EU contributing to the ASEAN Peatland Forest Project and associated SEApeat Project, good progress was made in fostering the ASEAN Peatland Management Strategy 2006–2020 (ASEAN Secretariat, 2012b). The pilot projects were conducted at sites in Indonesia, Malaysia, the Philippines and Vietnam. The Twelfth AMME sought international support from partnerships as these projects also address climate change and biodiversity loss through the alleviation of land and forest fires (ASEAN Secretariat, 2012c). Peatlands were also confirmed as a high priority to prevent fires and to mitigate the impact of climate change (ASEAN Secretariat, 2013b). In addition, the importance of peatland management can be seen from the establishment of the ASEAN Task Force on Peatland in 2013 as an ASEAN institutional framework – which assists and reports the progress to the Committee under the COP – to oversee the implementation and the monitoring of the ASEAN Programme on Sustainable Management of Peatland Ecosystems (2014–2020) (ASEAN Haze Action Online, 2016b).

In 2006, the Sub-regional Ministerial Steering Committee (MSC) on Transboundary Haze Pollution was set up to address specific issues occurring in the southern ASEAN countries including Brunei, Indonesia, Malaysia, Singapore and Thailand (ASEAN Secretariat, 2006; ASEAN Haze Action Online, 2016b). In addition, regarding the different dry season periods between the southern ASEAN area and the northern area – which comprises Cambodia, Laos, Myanmar, Thailand and Vietnam – the Sub-regional Ministerial Steering Committee on Transboundary Haze Pollution in Mekong Sub-region (MSC Mekong) was later established in 2011 to oversee programmes and activities related to fire and haze pollution (ASEAN Secretariat, 2011). This subregional group has focused more on on-the-ground, action-oriented projects, as well as setting specific targets (ASEAN Secretariat, 2007c). The MSC and MSC Mekong, supported by a Technical Working Group (TWG), have met separately once a year (ASEAN Haze Action Online, 2016b).

Since the RHAP was approved at the Second AMMH, bilateral cooperation within the ASEAN countries of Indonesia and Singapore, as well as between Indonesia and Malaysia, has developed strongly in the fire-prone areas (ASEAN Secretariat, 1998c).

Indonesian provincial authorities agreed, following the signing of bilateral memoranda of understanding (MOU), to work with Singapore and Malaysia to prevent fires in Jambi and Riau, respectively (The Straits Times, 2007b). Under the Jambi master plan, Singapore implemented several action programmes, such as capacity building for aquaculture industry, a sustainable peatland management project, efforts to teach zero-burning practices to farmers, installing tree air and weather monitoring stations, and training local officials to interpret satellite images to monitor hotspots (ASEAN Secretariat, 2008; The Straits Times, 2009). These attempts were highlighted as an achievement for the bottom-up approach (ASEAN Secretariat, 2009b; Ibrahim, 2009; Today Online, 2010), which contributed to a decrease in the number of hotspots in the assisted fire-prone areas between 2006 and 2009 (ASEAN Secretariat, 2009b). Therefore, a long-term preventive measure on peatland management was agreed (ASEAN Secretariat, 2009b). According to the previous achievement, bilateral collaboration between Indonesia and Malaysia, and between Indonesia and Singapore, through the MOU was undertaken again in 2014 (ASEAN Secretariat, 2014b).

As the ASEAN Agreement on Transboundary Haze Pollution (AATHP) was finally ratified by all ASEAN member countries in 2014, it is used as a critical point to examine the aims, key activities and achievements of the agreement. Indonesia's ratification of the Haze Agreement on 14 October 2014,⁵ followed by Indonesia's deposit of the Instrument of Ratification with the Secretary-General of ASEAN on 20 January 2015 (ASEAN Haze Action Online, 2016c; ASEAN Secretariat, 2015b), is an important milestone for ASEAN cooperation to tackle the haze issue. With approval from Indonesia's House of Representatives, the ratification forms a legal basis for Indonesia's neighbours to assist Indonesia to fight the haze by supporting on-the-ground activities and responsible agencies in the form of financial resources,

⁵ Participant J (2015) notes that the delay in Indonesia's ratification was because of two main reasons. Firstly, the haze issue was under the control of ministries including the Ministry of Forest and Environment, the Ministry of Agriculture and National Land Agencies. Consent from all of them was required before seeking approval from parliament. Secondly, the process was also delayed and even restarted when the newly elected government came into power.

personnel and equipment (Jakarta Globe, 2014b; Chua and Cheong, 2014b; The Jakarta Post, 2014; The Straits Times, 2014c). In addition, the ratification also signals that Indonesia is ready to work collectively with its neighbours. For example, Indonesia may be less reluctant to share land use data, which helps to accelerate the ASEAN joint haze monitoring system to be able to function (Chua and Cheong, 2014b). Moreover, the ratification of the agreement also sheds light on the hopes of Singapore (The Straits Times, 2014c; Jayakumar and Koh, 2015) and Malaysia (Tan, 2015b; The Malaymail Online, 2015; The Straits Times, 2015l) of the renewal of bilateral MOUs with Indonesia on on-the-ground operations in fire-prone areas such as Riau and Jambi provinces, where successful outcomes in reducing the number of hotspots have been recognized (ASEAN Secretariat, 2015b; Jayakumar and Koh, 2015).

4.2.1.1 Monitoring measures

The critical role of the digital geo-referenced concession maps as a tool to deal with the plantation companies and land owners responsible for using slash-and-burn methods was discussed at the Fourteenth MSC. More transparency and accountability were required; therefore, the sharing of concession maps among the southern ASEAN governments was proposed (ASEAN Secretariat, 2012a). Singapore – affected severely from the haze occurring in Riau province – began acting actively to seek concrete outcomes, for example by getting official and accurate land concession maps, as this would help Singapore to collect substantial evidence to authoritatively identify guilty parties who are contributing to the peatland fires (Kassim, 2013a). The ASEAN Sub-Regional Haze Monitoring System (HMS), developed by Singapore, was recommended to be adopted as a joint haze monitoring system among ASEAN countries, with the digitized land use maps and concession maps of fire-prone areas shared on a government-to-government basis (ASEAN Secretariat, 2013b; ASEAN Secretariat, 2013a). In order to operationalize the HMS to track down culprits, according to Prime Minister Lee Hsien Loong, cooperation on information and coordination was necessary for ASEAN countries to collectively address the issue (The Straits Times, 2013b; The Straits Times, 2013a). However, while Singapore wanted the maps to be publicly shared as a to signal to firms that states were keeping

an eye on them, Malaysia and Indonesia disagreed on making the maps available on public owing to their legal concerns (The Straits Times, 2013a). Thus, the HMS has not yet been operationalized as the maps are not provided because of the difficulties of some southern ASEAN countries (ASEAN Secretariat, 2014b). Realizing the difficulty in sharing the concession maps, the MSC supported member countries to take the action necessary to operationalize the HMS, including sharing hotspot areas on a government-to-government basis (ASEAN Secretariat, 2015c).

Indonesia's objections to revealing the official concession maps to its neighbours could be seen before Indonesia ratified the agreement. It should be an obligation for Indonesia to provide relevant information sought by any affected states to mitigate and minimize the impact of the haze (Jakarta Globe, 2014b). Singapore repeatedly urges Indonesia to provide plantation maps in order to operationalize the HMS (ASEAN Secretariat, 2014c), to hold companies accountable for their actions (The Jakarta Post, 2015v), to provide authorities with the evidence necessary to enhance enforcement of the law (Tan, 2015a) and to punish parties who apply irresponsible and unsustainable practices (Mongabay, 2015c); however, Indonesia cannot fulfil the request because of domestic laws on public information access, which limit the disclosure of national assets to the public (The Nation, 2015a; The Jakarta Post, 2015v; The Jakarta Post, 2015u), as well as the separate regulatory and legislative systems in Malaysia and Indonesia (The Jakarta Post, 2015v), the technical constraints of the information that can be shared (ASEAN Secretariat, 2015b), and even the absence of an accurate and comprehensive map to begin with (The Nation, 2015a).

The problem of information sharing is not limited only to the public space. Sharing information on a government-to-government basis on the hotspot areas is also constrained (ASEAN Secretariat, 2015b). The director general of climate change at the Indonesian Environment and Forestry Ministry, Nur Masripatin, gave an interview to the *Straits Times* that, even on the government-to-government basis, the Indonesian government cannot reveal on whose land a certain hotspot is, as this will disclose the concession map, which is classified information (The Jakarta Post, 2015u). The problem of sharing information causes tension between Indonesia and Singapore. While ASEAN aims to achieve its vision of a haze-free ASEAN by 2020

(ASEAN Secretariat, 2015b), Singapore Environment and Water Resources Minister Vivian Balakrishnan became frustrated and impatient with the timeframe and slow progress as the pollution has been too long (The Jakarta Post, 2015v). Indonesia's minister of environment and forestry, Siti Nurbaya, responded to Singapore that Indonesia would fulfil Singapore's demand for the list of companies, which could be verified and published; however, a multilateral approach was not applied for this case (The Jakarta Post, 2015v). She also reaffirmed during an interview that, although Singapore needed information to prosecute its citizens or other nationals who were proven to cause fires when they were in Singapore, Indonesia's position on the request depended on Indonesia's law, in particular the Act on Public Information Disclosure, which mandates that certain information not be shared publicly or handed to other countries (The Batam Post, 2015). The strict requirements applied to the sharing of Indonesian maps to the public can be exemplified in the case of an ASEAN application – Air4ASEAN – that provides people with general air quality information (ASEAN Secretariat, 2014c); however, the Indonesia page has recently (April 2016) been unavailable. Since Singapore wants to prosecute guilty parties on Indonesia's land using Singaporean legislation, this is a sensitive issue for Indonesia (The Jakarta Post, 2015v). Minister Siti rejected that claim, on the grounds that the Indonesian state has to protect its citizens and the whole nation from being prosecuted in other countries (The Batam Post, 2015).

Besides Indonesia's domestic law on the public access to information, a more critical question is the absence of an authoritative map for national governments to refer to. In 2011, President Susilo Bambang started the One Map Initiative to create an all-encompassing map for all its lands and concessions through the President's Instruction (Inpres) No. 10/2011 (Samadhi, 2013). As there is conflicting data at the different levels of government, as well as private sectors, the initiative aims to compile land use, land tenure and other spatial data into a single database (Spatial Informatics Group, 2016). However, as the project is still incomplete, the operationalization of the HMS has been delayed (Tay and Lau, 2015a).

4.2.1.2 Preventive measures

According to Article 9 of the Haze Agreement, the prevention and control of haze are taken by member parties through developing and implementing laws and regulations to promote zero-burning and other appropriate policies to control activities causing land and forest fires. Preventive measures also include the strengthening of local firefighting capacity, the promotion of public awareness and participation in fire management, the supporting of indigenous knowledge and practices in fire prevention, and the setting of legal measures to control open burning to prevent land clearing by fire (ASEAN Secretariat, 2002a: 8). Regional cooperation in preventing haze is instead developed through the peatland forest management activities at the community level, rather than legal mechanisms. A variety of different policies, laws and regulations in ASEAN countries related to peatland management, the inappropriate or conflicting policies affecting peatland, and problems of poor law enforcement are recognized as challenges for regional cooperation on sustainable peatland management (ASEAN Secretariat, 2014a: 4–6). However, it should be noted that, under the framework for the sustainable management of peatland forest in Southeast Asia, which has been seen as a long-term effort in addressing the haze problem, individual national action plans are encouraged to naturally link with and complement the regional strategy (ASEAN Secretariat, 2014a: 11).

Since it is estimated that 90 per cent of the haze comes from peatlands, which are important to the natural ecosystem but little recognized, minimizing peatland fires could significantly reduce haze pollution (Letchumanan, 2014a; National Environment Agency, 2015). The burning of organic peat releases huge amount of smoke (Parish, 2013). Southeast Asia contains around 60 per cent of the world's tropical peatlands, and over 70 per cent of Southeast Asian peat soil is in Indonesia. Other major areas of peatlands are found in Malaysia, Brunei and Thailand; however, smaller areas of peatlands are in Vietnam, the Philippines, Cambodia, Laos, Myanmar and Singapore (ASEAN Secretariat, 2014a: 4). Because of the meagre understanding of the peatland ecosystem, peat swamps were seen as useless and waste wetlands, which were then dried and over-exploited for economic development activities such as plantation, agro-forests, cash crops and peat-mining (ASEANPeatProject, 2011;

Letchumanan, 2014a; Ma, 2011). As water was drained from the peat areas, it created the perfect conditions for fires and smoke haze (Letchumanan, 2014a).

In order to prevent and minimize the haze and fire, the APMI was established under the framework of RHAP and the Haze Agreement to address the issues of peatland management on a sustainable basis (ASEAN Secretariat, 2005a: 1, 3). The initiative aims to reduce fire, especially in the peatland (Letchumanan, 2014b). The lack of understanding of the unique ecosystem of peatland and the continuity of turning the peat swamp to agricultural land make the land vulnerable to fire when water is dried from the peat soils (ASEAN Secretariat, 2005a: 3). Therefore, the objectives of this initiative are increasing understanding and capacity building in regional peatland management; reducing the incidence of peatland fires and haze; encouraging national and local activities on peatland management and fire prevention; and developing regional strategy and cooperation mechanisms to support sustainable peatland management (ASEAN Secretariat, 2005a: 1). The ASEAN Peatland Management Strategy (APMS) 2006–2020 was developed under the framework of APMI and the Haze Agreement to set out the operational objectives of delivering one or more of the areas of enhanced awareness and knowledge on peatland; addressing haze pollution and environmental degradation; promoting sustainable peatland management; and enhancing collaborative regional cooperation on peatland issues (ASEAN Secretariat, 2014a). The APMS also aims to overcome common problems related to peatlands – including fires, drainage, inappropriate management practices, livelihood options and sustainability – which are found among ASEAN members (ASEAN Secretariat, 2014a: 6).

Two key projects that complement each other to support the implementation of the APMS at the regional and national levels are the ASEAN Peatland Forests Project (APFP) and the Sustainable Management of Peatland Forests in Southeast Asia (SEApeat) (ASEAN Peatland Forests Project, 2016a). Additionally, the projects provide guidance to ASEAN member states to use climate change funding mechanisms to benefit local communities from climate mitigation and adaptation funds, REDD mechanism and voluntary carbon funds by finalizing national action plans for peatland forests, which relate to the cross-sectoral and integrated approach to tackle

deforestation and forest degradation (ASEAN Peatland Forests Project, 2016a). Under the APFP-SEApeat Project, which focuses on peatland management issues including the inappropriate drainage of peatlands, the over-exploitation of peatland resources, peatland fires and haze, illegal logging, loss of carbon storage, and the loss of biodiversity (ASEAN Peatland Forests Project, 2016b), activities aiming to avoid new emissions from land use change, to restore peatlands, and to re-wet drained peatlands (ASEAN Peatland Forests Project, 2016c) implemented at the community level are crucial for preventing and controlling peat fires. Best management practices for communities living on peatlands supported by the APFP-SEApeat Project in several ASEAN peatland areas include the Buying Living Tree System (in Indonesia and the Philippines), seedling buyback (in Malaysia), the Green Contract (in Vietnam), Sorjan farming (in Indonesia and the Philippines), Floating Gardens (in the Philippines), peer learning (in Vietnam, Malaysia, Thailand and Indonesia), community fire prevention and control (in Indonesia), water management (in Vietnam, Malaysia and Indonesia), research and development (in Vietnam and Indonesia) and ecotourism (in Cambodia, the Philippines, Thailand and Indonesia) (ASEAN Peatland Forests Project, 2015).

The peatland management projects under the ASEAN framework are also received operational and technical supports from the Global Environment Centre (GEC), which is a non-profit organization based in Malaysia (ASEAN Secretariat, 2005a: 7; ASEAN Secretariat, 2014a: 2). Since the APFP comprises different components – including regional projects led by the GEC, country projects led by respective national executing agencies, and other non-profit organizations participating in the country project (Parish, 2014) – the GEC plays a critical role in implementing and coordinating the project to ensure an integrated approach with the government focal point. Moreover, it also works with the plantation sector and communities to provide and document the guidance adopted by the Roundtable on Sustainable Palm Oil (RSPO) and sharing the best practices through transferred projects such as Sorjan farming (Parish, 2014) – farming in the swampy peat areas – which helps the Philippines site gain better crops by learning best practice from the method from Indonesia (Andres, 2014). This is the strength of the regional project that has been shared from one to another countries (Parish, 2014). The APFP, funded by the Global Environment

Facility (2009–2014) through the International Fund for Agricultural Development (IFAD), and the SEApeat Project, supported by the EU, were considered an ASEAN achievements and substantive progress in promoting sustainable management of the peatland, sustaining local livelihoods and minimizing the risk of fires and smoke haze (ASEAN Secretariat, 2015b; ASEAN Secretariat, 2015c).

However, there are some problems limiting these efforts, such as the returning of the haze. To reduce the risk of the peatland and forest fires effectively, preventive measures – such as flooding the peatlands to reduce fire ignitions, and building canal blocking to stop the draining of peat areas – need to be prepared and done before the dry season. Even though prevention through hydrological management of peat areas is more cost-effective and less difficult than extinguishing the fires (ASEAN Peatland Forests Project, 2016c; Parish, 2013), these measures are still inadequate because of the limited resources (selective efforts can only be implemented at some prioritized areas) (ASEAN Secretariat, 2014a: 9), the existence of liberal burning (Parish, 2013) and/or even the Indonesian government’s technical and administrative gaps, where the provincial governments were reluctant to take preventive measures without official letters and technical instruction from the Indonesian central government (The Batam Post, 2015).

4.2.1.3 Mitigating measures

Mitigating measures were initially developed under the RHAP with the purpose of strengthening firefighting capacity at the national and regional levels (ASEAN Haze Action Online, 1997). Each country is encouraged to prepare firefighting resources (such as agencies, manpower, equipment and hazard maps), to compile a list of equipment and technical expertise to coordinate with the regional body, to identify the sources of technical assistance for firefighting (such as aircraft and water bombers in operations) within and outside the region, and to establish a mechanism to provide regular updates – including on the number of hotspots, their locations, the types of fires, the adequacy of deployed resources, the effectiveness of enforcement, and ground operations – to the HTTF when the fire breaks out (ASEAN Haze Action Online, 1997). According to Florano (2004), the RHAP was a soft norm initiated from executive agreement, which saved a lot of time from the progress of treaty

ratification that was under way (Florano, 2004: 5). Therefore, even though Indonesia – which takes a leading role in the area of firefighting (ASEAN Secretariat, 1997) – did not ratify the agreement until 2014, the guidelines for firefighting cooperation had been set in the RHAP with unwritten pillars of volunteerism, a no-fault rule and an expertise-based offer of assistance (Florano, 2004: 5–7).

However, as the agreement on haze is legally binding, it clarifies details on procedures in the case of land and forest fires. Before the fire occurs, each party should firstly individually or jointly prepare for response strategies and plan to manage and control the risks of fires to people and the environment. Each party is obliged to set up its own designated and authorized focal point(s) to receive and transmit communications and data with the ASEAN coordinating centre and other parties. When the fire originates in its own soil, each party should ensure that there are sufficient and appropriate resources to mitigate the impacts of such fires and immediately inform other parties and the ASEAN coordinating centre. International assistance to fight the fire can be requested from other parties, the ASEAN centre and/or external entities. The joint emergency response and assistance, according to Article 12 of the agreement, ‘can only be employed at the request of and with the consent of the requesting Party, or, when offered by another Party or Parties, with the consent of the receiving Party’ (ASEAN Secretariat, 2002a: 9). This clause represents the principle of sovereignty, which is of strong concern for parties even in context of cooperative response to transnational environmental disaster. In addition, under Article 27 of the Haze Agreement, any dispute between parties, whether on the interpretation, application or compliance of the agreement, will be amicably settled through consultation and negotiation in the ASEAN Secretariat (2002a: 17). Therefore, the agreement cannot do much more than the RHAP, except for being as a source of legal reference to the parties in the cooperation against haze with the absence of international sanction; on the other hand, the non-interference and sovereignty issue is settled by Article 12 of the Haze Agreement.

Indonesia, as the main source of the haze pollution, has put in a great deal of national effort in terms of manpower and resources to extinguish land and forest fires. Since 1997, it can be seen that the Indonesian government has allocated manpower and

financial and other necessary resources to combat land and forest fires. For example, in 1997 the government spent around 3.1 billion rupiah, with 50,000 units of territorial personnel (The Straits Times, 1997c) and over 8,400 firefighters in the affected area (The Straits Times, 1997e), whereas, in 2014, the spending on putting out wildfires in Kalimantan and Sumatra was more than 300 billion rupiah, which was used for weather modification and operational funds (Jakarta Globe, 2014a). An action plan at the provincial level in the prioritized fire-prone areas, including Jambi, Riau, South Sumatra and West and Central Kalimantan, has been created to prevent and prepare for the occurrence of the fire (The Jakarta Post, 2015m). However, the preventive measures could not stop the fire in 2015. In September of that year, the PSI reached 463, causing poor visibility and the closure of airports and schools, while more than 1,000 soldiers were deployed to fight fires (The Economist, 2015). Officials used 13 helicopters for water-bombing efforts and three Casa 212 aircraft for cloud-seeding across affected areas (The Straits Times, 2015g). To improve coordination and effective operations on fire extinguishing, the haze emergency task force was set up, consisting of the Indonesian Environment and Forestry Ministry (who was the main coordinator), the National Police and the Indonesian Army and the National Disaster Mitigation Agency (The Jakarta Post, 2015l). In the meeting of the task force, governors of the fire-prone provinces and environmental authorities were involved (The Straits Times, 2015g; The Jakarta Post, 2015l). In addition, Indonesian President Joko Widodo has indicated a firm intention to take the harshest sanctions against anyone involved in starting illegal fires (The Straits Times, 2015f).

However, those preventive and mitigation efforts of the Indonesian government alone were not sufficient to stop the severe haze situation. Multilateral emergency cooperation on forest fire mitigation from Indonesia's neighbouring countries was finally launched in October 2015 (The Jakarta Post, 2015c), followed by the order of the Indonesian president to immediately evacuate babies, children and vulnerable people from areas with worsening air quality (The Jakarta Post, 2015g). The Indonesian minister of environment and forestry explained that, in dealing with fires in 2015, Indonesia deployed soldiers, conducted water-bombing (with 18 million litres of water in Riau and 12 million litres of water in South Sumatra and Jambi), as well as operating cloud-seeding (with 120 tonnes of salt in Riau and 56 tonnes of salt

in South Sumatra) to emphasize that Indonesia was serious in putting out the fires (Channel NewsAsia, 2015a).

It was noticed that, when the haze came, the Indonesian government reacted to its neighbours' complaints on the situation differently. At the international level, former Indonesian presidents often delivered apologies to their neighbours affected by the crisis (The Straits Times, 1997d; The Straits Times, 2000b; The Straits Times, 2013f). In contrast, the president's apology faced criticisms for dragging down national pride and his position seemed to stand alone (Kassim, 2013b). Some politicians reacted to the complaints with harsh words. For instance, Indonesian Coordinating Minister of People's Welfare Agung Laksono said that Singapore should not have behaved like a child in making so much noise (The Straits Times, 2013e). Indonesian Vice President Jusuf Kalla said that Indonesia was sorry as it could not control the wind and recalled that it never asked neighbours to pay for 11 months of good weather (Mongabay, 2015n; The Straits Times, 2015e; The Economist, 2015).

Nationalism, national pride and the principle of non-interference still played significant roles in the progress of international cooperation. Although transnational haze pollution affected the people of Indonesia and other nearby countries, the assistance offered by neighbouring countries was not easily accepted by Indonesia. As Singapore demanded and expected Indonesia to act fast, this caused an adverse reaction to Jakarta, which felt that Singapore was telling it what to do about its own backyard (The Straits Times, 2006e). Indonesia made it clear that it alone would determine when and how it would tackle the haze problem (The Straits Times, 2013e). The uneasy acceptance of the international offer of joint emergency assistance to tackle the haze could be observed from the previous haze fires. In 2006, Singapore diplomat Kevin Cheok found that it was difficult to persuade the Indonesian authorities to accept international help to tackle the haze, while the Indonesian representative at the UN, Adiyatwidi Adiwoso Asmady, saw Singapore's call for international assistance as an interference in Indonesia's domestic affairs (The Straits Times, 2006c). Similarly, when the haze was worsening, Indonesian Environment Minister Balthasar Kambuaya affirmed that Indonesia could handle the haze problem on its own and would not accept help from Singapore and Malaysia

since it had given Indonesia a bad image when the two countries called for substandard equipment to be given to Indonesia as part of the assistance (Jakarta Globe, 2014c). Since 2005, Singapore has consistently offered Indonesia a package consisting of 'one C-130 aircraft for cloud seeding operations, up to two C-130 aircraft to ferry a fire-fighting assistance team from the Singapore Civil Defence Force (SCDF), an SCDF team to provide assessment and planning assistance in fire-fighting efforts to their Indonesian counterparts, high-resolution satellite pictures and hotspot coordinates and a Chinook helicopter with one SCDF water bucket for aerial fire-fighting' (The Straits Times, 2015o). However, while Singapore had offered the package to Indonesia several times since the haze began in June 2015 (The Straits Times, 2015o; The Straits Times, 2015m), Indonesian Environment and Forestry Minister Siti Nurbaya Bakar declined the offer as Indonesia still had sufficient resources (The Jakarta Post, 2015u). Furthermore, she commented that one more water-bombing unit from Singapore would not make much difference, and 'Unless if it's, say, 20 units ... then that would be good' (The Straits Times, 2015j). On 7 October Indonesian government finally accepted foreign help to fight the forest fires after facing pressure at home as well as abroad to end the haze crisis (The Straits Times, 2015h).

4.2.2 Indonesia's global cooperation

Another attempt that focuses on air pollution is the Indonesia–Norway cooperation on reducing greenhouse gas emissions from deforestation and forest degradation (REDD). According to the letter of intent signed in 2010, Indonesia and Norway, as parties to the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and the Convention on Biological Diversity, agreed to achieve the goal of reducing greenhouse gas emissions from deforestation, forest degradation and peatland conversion through policy dialogue on international climate change policy and through collaboration in the development and implementation of Indonesia's REDD+ strategy (The Government of the Kingdom of Norway and the Government of the Republic of Indonesia, 2010). The basic concept of REDD and REDD+ is that the governments, companies or forest owners in the south should be rewarded for maintaining the forests instead of cutting them down (REDD Monitor,

2011). While REDD emphasizes only reducing emissions from deforestation and forest degradation, REDD+ involves the conservation of forest carbon stocks, the sustainable management of forests and the enhancement of forest carbon stock (REDD Monitor, 2011). The project does not aim to stop deforestation but it intends to slow down the rate of deforestation and environmental degradation. However, since Indonesia has voluntarily committed to reduce CO₂ by 26 per cent by 2020 and 41 per cent by 2050, avoiding fires from the forest and peatland sectors could, importantly, help Indonesia to reach its targets (Velde, 2014). Therefore, the REDD+ programme examined in this research is considered a way to deal with the haze problem under the global cooperation on climate change.

The Indonesia–Norway cooperation on REDD+ can be considered a sustainable development programme as it clearly recognizes the necessity of economic development and poverty reduction as goals for human welfare (The Government of the Kingdom of Norway and the Government of the Republic of Indonesia, 2010). According to President Yudhoyono (2011), while economic development and the eradication of poverty have been prioritized, the government also intensified its efforts to cut down emissions from land use, land change and forest exploitation. Several policies were formulated, with the aim of achieving sustainable forests in Indonesia within the REDD+ framework. Government initiatives carried out to reduce greenhouse gas emissions by 2020 by 26 per cent from business-as-usual levels are included the moratorium on new licences to exploit the natural primary forest and all peatlands, the creating of indicative maps for implementing REDD+ and for formulating better policy related to forests, and other initiatives in the provision of funding run by forest-edge inhabitants and local villages at the grassroots level (Yudhoyono, 2011). In order to support these programmes, Norway has provided financial support to Indonesia to set up the REDD+ mechanisms (the national REDD strategy, the REDD agency, an independent national monitoring body, a transparent instrument for financial funding and a selected province-wide REDD+ pilot) and to assist Indonesia's capacity building at the national level, policy development and implementation, as well as legal reform and law enforcement (The Government of the Kingdom of Norway and the Government of the Republic of Indonesia, 2010). To complete the second phase, Presidential Instruction (Inpres) No. 10/2011 on the

Suspension of Granting of New Licenses and Improvement of Governance of Natural Primary Forest was released as a policy instrument to impose a two-year moratorium on new forest concession licences, as well as establishing the Indicative Moratorium Map (IMM) for the suspension of new permits in the primary forest area and peatlands (The President of the Republic of Indonesia, 2011). Indonesia would receive annual contributions from Norway of up to USD 1 billion for independently verified national emission reductions relative to a UNFCCC reference level (and other potential partners) for Indonesia's REDD+ efforts in the third phase (The Government of the Kingdom of Norway and the Government of the Republic of Indonesia, 2010).

However, although Inpres was the president's attempt to maintain a balance between the development of national economic growth and the conservation of forests, it was criticized by the business and environmental communities. For the palm oil companies, the moratorium went too far as it included peatlands less than three metres deep, which were allowed by the Ministry of Agriculture; on the other hand, the environmental groups point out the difficulty in implementing the moratorium as the Ministry of Agriculture and the Ministry of Energy – having a crucial role in deforestation practices – were not involved in the policy (Jakarta Globe, 2011). Despite the president facing lobbies from major logging, palm oil and mining companies (who saw the ban as causing lower profits, hurting their ability to expand and hindering national economic growth) (Eco-Business, 2013), the moratorium on new forest concessions was extended twice, by President Yudhoyono in 2013 and by President Jokowi in 2015 (The President of the Republic of Indonesia, 2013; The President of the Republic of Indonesia, 2015). In April 2016, President Jokowi's announcement that new concessions for palm oil plantations and land for mining activities would no longer overlap with conservation land was pointed out by industry analysts as an indication that the government was listening to green groups (The Straits Times, 2016b).

However, Murdiyarto et al. (2011) point out critical loopholes in implementing the moratorium. Firstly, Inpres is a non-legislative document. Legal consequences come when presidential instructions are implemented by relevant ministries and other governmental agencies. Since the Ministries of Agriculture and of Energy and Mineral

Resources – which is also concerned with deforestation and the associated land-based emissions – are not involved in Inpres, the application of the moratorium is limited to the activity in those sectors. Inpres exempts the land needed for national development projects, such as geothermal energy, oil and natural gas, and sugar cane, even though those areas are close to conservation areas. For instance, before President Jokowi extended the moratorium, he announced a plan to achieve 1.2 million hectares of new rice field in Papua within three years as part of the Merauke Integrated Food and Energy Estate (MIFEE) Project (REDD Monitor, 2015). Therefore, even though Papua harbours the largest areas of shallow peat soils, this development area would not be included in the moratorium. Secondly, because the moratorium uses the term ‘primary natural forest’, instead of ‘natural forest’ as stated in the letter of intent, the problem of terminology arises. The moratorium covers only untouched, unmanaged and undisturbed forests. The secondary natural forests (or the logged-over forests, which are also rich in biomass) are excluded despite being part of the ‘natural forest’. The difference between the extent of the ‘natural forest’ and that of the ‘primary forest’ is substantial. Thirdly, the moratorium excludes the existing concession licences and those that had already been approved before the announcement of Inpres. Therefore, there is the possibility that the approved concession areas could overlap with those included in the moratorium. Finally, while the moratorium gives special attention to peatlands, it does not protect all peatlands. It does not cover non-forested peatland, which is especially prevalent in Sumatra and Central Kalimantan, where the deep peats are harboured (Murdiyarso et al., 2011).

4.3 Governance gaps in dealing with the haze issue

The previous sections describe the existence of international cooperation on the haze problem; however, several challenges limit its success. This section attempts to examine the underlying causes of failures in monitoring, preventing and mitigating the fires and haze. This section aims to identify governance gaps caused by the limitation of international institutions and Indonesia’s internal difficulties in pursuing international demands for fighting haze. These limitations are identified to consider how policy networks can find any possible opportunities to fill those gaps. To avoid redundancy in understanding the gaps, particular issues underlying the problems in

tackling fires and haze are explained by how they obscure the achievement in delivering an effective mechanism. The challenge in getting maps to monitor the haze is illustrated by the investigation of the land rights and responsibility over the land. The problem in identifying conservation areas is understood by the questions on balancing the desire to increase economic growth and the ambition to maximize the protected areas of natural forest. The difficulties of on-the-ground firefighting operations are revealed by investigating the constraints in coordinating between the central and local authorities.

4.3.1 Governance gaps in the regional monitoring system

The big challenge for implementing the HMS is the absence of authoritative maps shared by Indonesia. This is an information gap for achieving the monitoring system. To understand why it is difficult for Indonesia to share the maps with its partners, it is necessary to investigate Indonesia's internal administrative structure, which leads to the overlapped authority and responsibility for issuing licences for land rights between the central government and local authorities. In addition, this is more complicated when the traditional law (*adat* law) is also recognized by the state and applied by local communities. This results in various maps being issued by different governmental bodies. The lack of a referable, authoritative map also bring about the problem of enforcement and the state's inability to punish any transgressor despite there being laws and regulations banning open burning.

The land management problem in Indonesia is the basis for the difficulty in getting maps for monitoring the haze issue. Poor governance over land is also widely acknowledged as sources of conflicts among stakeholders who claim their right over overlapping lands (USAID, 2010: 1). Ambiguities of laws and regulations play a crucial part in explaining this poor management issue. Before Indonesia achieved independence, traditional informal, or *adat*, systems persisted across the archipelago. *Adat* is the customary law of the indigenous peoples. According to Tyson, *adat* refers to 'a fluid, contingent concept encompassing a wide range of customs and traditions unique to each of Indonesia's major ethnic groups' (Tyson, 2010: 1). Therefore, *adat* practices and principles in any particular issues can be diverse as they are community-based applications and interpretations.

In the process of nation-building after becoming independent, Indonesia was governed by President Suharto, who centralized the military and bureaucratic system highly under his New Order regime. During this period, the traditional sources of authority and local diversity were suppressed and weakened as the national government tried to standardize village and regional affairs (Tyson, 2010: 10). On land matters, the national government attempted to replace a diverse land management system and the local system of regulating property rights with uniform rules by simplifying, ignoring or eradicating them (Suartika, 2007: 168; Moeliono and Limberg, 2013: 221). Two key national agencies directly related to land management policy were the Ministry of Forestry (MOF) and the National Land Agency (Badan Pertanahan National: BPN). While the MOF was in charge of forest zones, the BPN took responsibility for national land policy and non-forest areas. All land was administered through their branch offices at the province and district levels (Moeliono and Limberg, 2013: 222). It should be noted that, while the national government attempted to unify laws and regulations, the *adat* law was functioning on the ground. The first layer of land overlapping issue arose, for instance, in the forest areas, where concession licences for plantations and mining were issued by the MOF without considering the indigenous community and the people living and depending on forests.

The second source of the overlapped land problem is the Basic Agrarian Law (BAL), or Law No. 5 of 1960. The BAL was based on Dutch concepts that 'land is either private individual property or belongs to the state' (Moeliono and Limberg, 2013: 221). The BAL defines the fundamental types of rights holding by individuals, the role of the state in its direct use of land, and the regulation of private rights and uses of land (Mitchell et al., 2004, cited in USAID, 2010: 6). The BAL was applied to the entirety of Indonesia's land during 1960–1967; however, the BAL ceased to be used to forests when the Basic Forestry Law (Law No. 5 of 1967) and the 1967 Law on Mining were adopted (USAID, 2010: 6). Since 1967, the tenure system has been under the BAL. It was believed that the drafters of the BAL anticipated that the official legal system would gradually replace the *adat* system (Moeliono and Limberg, 2013: 222; USAID, 2010: 6). Article 5 of the BAL recognizes the *adat* law as long as it does not contradict national interests or other regulations set out in the BAL (USAID, 2010: 6); therefore,

there are two systems of land tenure and rights run in parallel. Private ownership can be recognized by the state when it is registered under the BAL in the form of the right of ownership, the use right, the right to exploit and the right to build; in other words, unregistered land is owned by the state for the sake of the people (USAID, 2010: 7). Although the land registration system was set under the control of BPN to record private land ownership, progress has been slow. At an annual rate of one million parcels being registered (2004), it would take around 60 years to complete the remaining approximately 60 million unregistered cases (USAID, 2010: 8). This is partly because the cost of registration is considered expensive for people who hold the land under the *adat* law. Therefore, although the law recognizes the continuation of rights derived by customary practice, the right can be fully recognized by the state only when a holder purchases a stipulation from the BPN (USAID, 2010: 8). Besides, while land leasing is illegal under the BAL, the lease of land is common owing to the failure of bureaucrats to enforce the law. This has led to informal leases of land, where actual land ownership is under the control of village officials not the BPN (USAID, 2010: 8). In short, the absence of private land registration records, the technical land leases, and the limitation of the BPN to access the actual landholders present complexities in Indonesian land governance.

The third layer of confusion in land management in Indonesia came in the period of decentralization, when power was devolved from national government to local authorities. Although this can be considered a higher stage of democracy, accountability and participation, as the interests and demands of constituents could be greater articulated in policies and decision-making at the local level (Tyson, 2010: 10), this seriously weakened the centralized national legal system for land. More complicated functions among the national government, local authorities and local communities have increased conflict over tenure as each body seeks revenue and the shared benefits of the land by issuing concessions on unregistered lands that are claimed or owned by local people under the *adat* law (Sudana, 2013: 207; Moeliono and Limberg, 2013: 222). Political and financial devolution was implemented under Laws No. 22 and 25, which transferred financial management and responsibility from central government to regional authorities (UNDP, 2014: 7). Land conflicts in Malinau can well illustrate the ineffective nature of national policies relating to land

(Moeliono and Limberg, 2013). Although the MOF and the BPN branches at the province and district levels were liquidated or taken into the control of an autonomous district, local government also established forestry offices as well as land offices as part of their district structure (Moeliono and Limberg, 2013: 222). However, the MOF and the BPN continually attempted to regain and keep control over forest and land resources by claiming that a strategic national resource was not included in the general decentralization system (Moeliono and Limberg, 2013: 222). While customary laws have persisted with the contradictory legal system, local people and communities have to seek solutions for dealing with land conflict by themselves (Moeliono and Limberg, 2013: 222, 229).

Poor land management in Indonesia after decentralization did not only bring about higher tensions among stakeholders at different levels; it also led to less effectiveness in enforcing tougher laws relating to dealing with the land and forest fires. It seems that concessions could be granted to companies without consulting with local communities governed by traditional law. Legal loopholes on land governance offer the possibility of rampant corruption in the forestry sector (Gill and Bin, 2013; Eco-Business, 2013; Kassim, 2013b; Greenpeace, 2015). It is noted that while concessions were given to President Suharto's cronies to back his regime, decentralization makes corruption fragmented and more pervasive (Eco-Business, 2013). Conflicts over land claims have increased as local elites could make profit from natural resources through the allocation of concessions at the expense of smallholders (Gill and Bin, 2013). Fire may be used as weapon by both companies and smallholders to challenge opponents to land rights (Gill and Bin, 2013; Neo, 2013).

Ambiguous land rights and ownership also result in difficulties in enforcing the law on burning as it is hard to identify and prosecute the transgressor. Although the law states explicitly that burning to clear land is prohibited under Indonesian law (No. 32/2009 Article 108 of the Plantation Law), and that those who found guilty could face up to 10 years in jail as well as a maximum fine of 10 million Indonesian Rupiah (Neo, 2013; Velde, 2014; The Jakarta Post, 2015f; The Jakarta Post, 2015w; The Jakarta Post, 2015x), implementation has proved difficult. In order to enforce law effectively, sufficient evidence and reliable data are required. Some difficulties in

implementing and enforcing the law are set out below. The first challenge is diffused responsibility across different levels of government (Velde, 2014). For example, even though the forest minister knew the list of companies proven to be involved in setting forest fires, the minister confirmed that his role was responsible only for extinguishing fires, not for arresting and investigating wrongdoers, which should be done by the police (The Straits Times, 2006f). The second complication is the political will to enforce laws. This is also due to the existence of legal loopholes in land management, which help to sustain corruption between officials and lawbreakers. Corruption at the local level causes less incentive for authorities to find evidence to prosecute perpetrators (The Straits Times, 2009). The third difficulty is the insufficient resources and capacity in policing and gathering evidence to prosecute. Many areas in Sumatra and Kalimantan are hard to access and inspect (The Straits Times, 2007b); in addition, financial resources and manpower to trace responsibility are limited (PM.Haze, 2014). The fourth difficulty is the application of obtaining substantial evidence to prosecute culprits. This difficulty is partly derived from inadequate resources in the long legal processes. Since a fire starter can be prosecuted only when there is clear evidence that the fire was intentionally set by a landowner (The Straits Times, 2002a), it is not easy to get strong evidence to bring the cases into court. Although there are high-resolution images taken by satellites that could claim about 80 per cent accuracy, collecting evidence on the ground by authorities is still necessary to validate information (Letchumanan, 2015). Since many accusations can be made by different actors, and since law enforcement is weak, some people are more willing to take a risk by burning as it is the cheapest and quickest way compared to other land clearing methods.

The land tenure chaos has been recognized and key attempts to handle it can be pointed out. Previously, the Highest House of the Legislature imposed MPR Degree No. IX of 2001 on Agrarian Reform and Natural Resources Management, instructing the House of Representatives and the president to reconcile laws related to the use of land and natural resources; however, most parts of the instruction have been barely implemented (USAID, 2010: 6). In addressing the haze and the greenhouse gas emission problem, the absence of accurate information and maps was first reported by the REDD+ Task Force to President Susilo Bambang Yudhoyono, who then

responded to the report by launching the One Map Initiative (Chua and Tseng, 2013). Although this initiative intends to resolve overlapping land claims, progress in consolidating data and maps is slow. The project is quite ambitious and sensitive as it goes to the heart of land conflicts, where all levels of governments relating to lands and stakeholders are involved (Spatial Informatics Group, 2016). The slow move of the initiative is partly from obstacles in cutting through red tape and laws preventing map-sharing across different agencies, as well as between central and local authorities (Chua and Tseng, 2013). In late 2014, it was reported that a standard land cover map from 13 governmental agencies had been made; however, much work has to be done on overlapping land boundaries (The Nation, 2015a). In addition, while the project was planned to start by harmonizing overlapping land claims province by province, the consolidated map in fire-prone areas such as Sumatra and Riau have not been achieved yet (Tan, 2015a). In 2014–2015, an estimate of two to three years to complete the Indonesian authoritative map was made by the Indonesian government (The Straits Times, 2014c; Tan, 2015a; The Straits Times, 2015i; The Straits Times, 2015f). The project is obviously time-consuming and labour-intensive; but, if it is completed, it will bring considerable benefits for solving long-standing land conflicts among stakeholders, improving instruments for Indonesian government agencies, and assisting the monitoring systems to prevent illegal activities (The Nation, 2015a).

However, as the One Map Initiative is still not complete, it frustrates people and neighbouring countries taking negative impacts from the fires and transboundary haze. Singapore has been clearly frustrated at the slow pace of progress (The Nation, 2015a; The Straits Times, 2014c). As the map is not finished, Indonesia can only provide the information to parties on a case-by-case basis at the government-to-government level (Chua and Tseng, 2013; The Straits Times, 2014c; Tan, 2015a). Suffering from haze pollution for decades, Singapore actively supports any means to enable HMS. Indonesia points to the Act on Public Information Disclosure, which specifies that data that could disclose the country's wealth of natural resources cannot be made public (The Straits Times, 2013h; Tan, 2015a). This therefore prevents sharing maps or even offering information on hotspot locations as ownerships can be traced; however, some Indonesian law experts take the view that

such regulations that discourage transparency is questionable (Tay and Lau, 2015a). Moreover, as the HMS has not been functioned, several efforts from Singapore and non-state actors have been made to get around the problem.

4.3.2 Governance gaps in peatland conservation efforts

Although prevention of the fire is much better than stopping it, policy on peatland management is not strictly for implementation. While it is recognized that conserving peatlands is crucial for preventing land and forest fires, Indonesia has to develop its economy, which based primarily on natural resources. This section highlights key obstacles in establishing peatland conservation areas. Conserving peat soils is prioritized as a key policy for supporting both ASEAN regional peatland management projects and the REDD programme.

Several efforts have been made to conserve the peatlands as a means to reducing transboundary haze and the greenhouse gas emission. At the international level, President Jokowi discussed with Prime Minister Najib Rasak of Malaysia successful preventive measures and techniques and the idea of building a network of canals (The Jakarta Post, 2015r). At the national level, a ministerial coordination meeting was set by the president's instructions to work in unison to prevent peat fires; in addition, the instructions include the need to review all concession licences especially on peat areas (The Jakarta Post, 2015a). Moreover, the president also suggested that the environment minister work with environmental experts from at the Gadjah Mada University (UGM) in drawing the topographic mapping of peatland, which will help identify which lands should be in protected zones or be used productively (Mongabay, 2015f; The Jakarta Post, 2015a). The president's announcement and attempts to protect the peat swamps by banning the further expansion into peat soils, and to restore millions of hectares of drained peat by re-wetting or blocking the drainage canals, are welcomed by green groups, even though these efforts are not yet codified in law (Mongabay, 2015g). According to Vice President Jusuf Kalla, Indonesia has planned to restore two to three million hectares of peatland; this will reduce forest fires, although the end of the problem cannot be guaranteed (Mongabay, 2015l).

However, the conservation of peatlands faces many critical challenges from supporters of economic development. Indonesia is a developing country and its economic growth relies heavily on industries based on exporting natural resources – such as palm oil, pulp and paper – which are still promising and lucrative (The Nation, 2015b; The Economist, 2015). In addition, since these industries are labour-intensive, they can help reduce the Indonesian unemployment rate (The Nation, 2015b; The Jakarta Post, 2015n). For instance, Cargill Tropical Palm Holdings Pte Ltd, possessing 80,000 hectares of planted land, provides employment for close to 18,000 people and works with more than 21,000 farmers in producing crude palm oil (The Borneo Post Online, 2015). The haze seems to be a test case for the government in balancing economic development, social issues and the environment (The Nation, 2015b). Therefore, while the president encourages the protection of peatland, the policy does not receive support from the Ministry of Agriculture and/or local government, which back economic growth through allocating concessions with less consideration of whether those areas include peat or not (Forests News, 2014; Mongabay, 2014b). Indonesia has struggled in land use governance, and it was found that approximately 5.5 million hectares of concession areas overlapped with the moratorium zone (Today Online, 2013b). Moreover, despite there being a plan to reform Indonesia's peatland, in order to achieve the food security goal targeting self-sufficiency by 2019 the agricultural minister still promotes the conversion of burned peat soils into agriculture land (Mongabay, 2015n). Further, some dissent against the president's moratorium initiative can be pointed out. For example, the Ministry of Forestry resisted President Yodhoyono in setting up a REDD Taskforce (The Financial Times, 2013a), and companies protested against the moratorium banning expanding new peat areas (Letchumanan, 2014a). Since the Ministry of Agriculture, which is a key player, is not included in the presidential instruction – despite its important responsibility in the conservation of peatlands – the absence of integrated and coherent plans discourages the success of the project.

Furthermore, legal loopholes in terms of prevention can be pointed out. Two laws distorting the success of preventive measures are the Agriculture Regulation of 2009 on Guidelines for Peatland Utilization for Oil Palm Cultivation (Tempo.co, 2015) and Article 69 of the 209 Environmental Law, or Law 32 (The Jakarta Post, 2015a; The

Straits Times, 2015k). While the first regulation offers the possibility of cultivation on peatland, the second allows smallholders with two hectares of land or less to conduct controlled burning as part of the rotational agricultural system (The Straits Times, 2006d; The Straits Times, 2015k). These two laws can increasingly cause harm to preventive efforts in the dry season. In the overlapped boundaries, in particular, it is very difficult to prove whether fires are set by smallholders or companies. As a result, there was a movement to repeal the Agriculture Regulation (Tempo.co, 2015), though there is no legal instruction yet to end these two laws.

It is noted that the issues of interest behind the fires are very complicated, so the Indonesian president's attempts alone would not be sufficient to resolve the fires (Tay, 2015). Increasing the effectiveness of peatland conservation policy depends on how far Indonesian leaders want to go, as well as how much the Indonesian people support the policy.

4.4 Seeking solutions and the role of policy networks

This section reveals the suggested means to tackle the haze problem, attempts that have been initiated and made by actors within the restriction of intergovernmental cooperation on haze, and the connection of actors in creating networks for closing the existence of governance gaps.

4.4.1 Suggested means for better results

While poor land management in Indonesia is a critical source underlying the problem, it cannot be addressed precisely at ASEAN meetings. Therefore, policy responses to the issue are likely to deal with the symptoms rather than tackling the underlying cause (ASB, 2013).

Several approaches have been suggested to governments in order to gain better results. The first recommendation emphasizes the prevention of land and forest fires by imposing a ban on illegal logging and encroachment (The Straits Times, 2002a), protecting the remaining peatland and forest areas (Mongabay, 2014a; PM.Haze, 2014), improving irrigation methods and ceasing further drainage of peat soils (Gaveau et al., 2014; The Straits Times, 2002a), expanding water-catchment areas

(The Straits Times, 2002a), re-wetting and reforesting drained and unused peatlands (PM.Haze, 2014), building canals to engulf fire-prone peat zones (The Jakarta Post, 2015k) and ensuring zero-burning by plantations (PM.Haze, 2014). These recommendations mostly prioritize sustainable management (Letchumanan, 2015) and the improvement of spatial planning of fire-prone peatlands (Mongabay, 2015o) as critical means to prevent the recurrence of forest fires.

The second suggestion aims to improve the monitoring system by identifying the importance of authoritative maps, especially in the concession areas. However, to get an up-to-date concession map or Indonesia's One Map Initiative, good governance on land management between different levels of governments and agencies on matters including tax collection, permit auditing and spatial planning needs to be established to end the conflict over overlapping land claims (Mongabay, 2015d). Local institutions relating to palm oil expansion should also be included in government planning and control (ASB, 2013; The Straits Times, 2013c). While an authoritative map has not been completely drawn, a company may present its concession map in order to be more transparent about its landholding and practice to guard against causing fires (Tay and Chua, 2014). An up-to-date map will benefit firefighting efforts and law enforcement, prevent fire before it starts and improve accountability among stakeholders (Mongabay, 2015d).

The third piece of advice is incentive orientation. Government policy to deal with the haze issue should be focused on stakeholders' motivations. Government should create policy offering opportunities for people living on peat areas to move off for a better way of living (Forest News, 2015b). Where forests are protected by communities, government should recognize their rights (Mongabay, 2015d). Local governments should gain benefits from fiscal policy if they practise low-carbon sustainable programmes (Mongabay, 2015d). Since obtaining permits on land concessions seems to be easier than increasing yields, and bank loans are provided without checking the situation on the ground, companies tend to expand their cultivating areas (PM.Haze, 2014). Therefore, tax breaks should be applied to companies that encourage sustainable management and focus on improving productivity (Mongabay, 2015d). In addition, affected countries and the international

community may play a greater role in increasing Indonesia's incentive to preserve forests by supporting capital incentive programmes similar to REDD+ (Ewing, 2013) and/or by offering financial incentives for ecosystem restoration projects on degraded areas (Mongabay, 2015d). Moreover, increasing the role of Southeast Asian customers to boycott products that cause fires may be a potential means to create a powerful economic incentive for companies to cease their burning practices (The Straits Times, 2015q). Boycotts could be more effective than legal action when various sectors (such as the media, NGOs, activists, the government and academic institutions) work together to raise people's awareness, which would cause a huge impact on offending business (The Straits Times, 2013j; Gill and Bin, 2013). A certification system is another attempt for consumers to check whether producers' products are made under sustainable standard.

The fourth opinion on how to tackle the haze problem suggests looking at the issue as beyond an environmental problem. The haze should be related to the economic cost as well as the impact on people's health (The Straits Times, 2007b). This prioritizes people's interests in finding solutions to fight forest fires (Jakarta Globe, 2014d; Tsjeng and Fang, 2011; The Straits Times, 2015r). In order to achieve this, robust evidence on environment, economic and health impacts should be gathered, and then the incontrovertible scientific findings should be explained in an easily understandable way for dissemination to the public via the media and/or through advocacy groups (The Straits Times, 2015r; The Straits Times, 2013i). The example of connecting the haze issue to other problems can be seen in the protest led by activists and environmentalists in Riau against the government and their demands that the environment and forestry minister and their acting governor be dismissed because they had not been able to provide their people with a healthy environment (The Jakarta Post, 2015j).

4.4.2 Looking beyond intergovernmental frameworks

Although the increasing role of relevant stakeholders, especially private sectors and NGOs, were addressed and welcomed in ASEAN documents as parts of a holistic approach to fostering regional cooperation on the transboundary haze problem and other environmental concerns (ASEAN Secretariat, 1998b; ASEAN Secretariat, 1998a;

ASEAN Secretariat, 2007b; ASEAN Secretariat, 2014b), the involvement of these non-state actors was very limited. For example, in 2009 the MSC agreed to hold an annual MSC forum on the prevention and mitigation of land and forest fires – which brought together representatives from governmental agencies in different levels, international organizations, NGOs and the private sector to share their experience and promote collaboration on the haze issue (ASEAN Secretariat, 2009a); however, the second forum was held only in 2012, followed by the key outcome recognizing the critical role that plantation companies can play in achieving the vision of a haze-free ASEAN (ASEAN Secretariat, 2012a).

4.4.2.1 Singapore's role in combating haze pollution

Singapore is a critically proactive actor in tackling the annual haze problem. While intergovernmental and bilateral cooperation on the haze has relied mostly on Indonesia's approval of Singapore's offers, Singapore applies various means to reduce the severity of transboundary pollution. Despite cooperating directly with Indonesia during the haze crisis (Lee, 2013; Balakrishnan, 2013), the Singapore government has pursued a multipronged approach to dealing with the complex haze issue of engaging stakeholders and interest groups (including NGOs, think tanks and the private sector) to tackle the problem together (Govsingapore, 2013; Ibrahim, 2009). The Singapore Institute of International Affairs (SIIA), one of the leading think tanks in the Southeast Asian region, has responded to this effort actively by organizing several key regional dialogues – which can be considered long-term advocacy to maintain the haze problem at the top of the agenda – including relevant stakeholders to address the haze problem since 1997 (Lee and Lau, 2015; Tay, 2014). As the problem is complicated, Singapore also needs to bring together the private sector, NGOs and local communities for more effective results especially on the ground (Tay, 2014; Tay and Cheong, 2015; Tay and Fang, 2012). By engaging non-state actors (such as the private sector, the investment and financial sectors, citizens, environmental NGOs, and activists), Singapore can go beyond foreign policy and diplomacy, which currently restrict the progress of environmental cooperation (Tay and Cheong, 2015).

Singapore has played a critical role in establishing several mechanisms to tackle with haze pollution. At the international and ASEAN levels, Singapore has visibly applied pressure on Indonesia to quickly address the underlying causes of annual fires, as well as pushing Indonesia to reveal the concession map for launching the HMS (Today Online, 2013a; Chua and Cheong, 2014a; Mongabay, 2015h). At the national level, Singapore's Transboundary Haze Pollution Act was passed as an attempt to punish errant companies that contribute to haze pollution. Furthermore, there is a consumer movement to boycott businesses proven to be behaving in an unsustainable way by clearing lands.

The role of customers is part of a means to act against companies causing haze pollution. A civil society group called the Haze Elimination Action Team has prepared itself as an information hub for the boycotting of any companies identified to cause haze pollution (The Straits Times, 2013g). However, some consider that a boycott in Singapore would send a signal to businesses to be more accountable, rather than make a huge impact on them, owing to the small size of the Singapore market (Tay and Lau, 2015b) and the demand on palm oil in bigger markets such as India and China (The Jakarta Post, 2015t). In addition, as palm oil provides the highest-yielding edible oilseed crop, to replace palm oil with other crops would lead to further deforestation because it requires at least nine times as much as land to grow them (Mongabay, 2015i; The Straits Times, 2015b). It is almost impossible to be in a palm oil-free world; therefore, a boycott is not a long-term solution (The Straits Times, 2015b). Instead of banning palm oil products, the CEO of WWF Singapore, Elaine Tan, suggests promoting a sustainable direction to avoid the occurrence of haze (Mongabay, 2015i). The Singapore Environment Council (SEC), an independent NGO and a member of the Global Ecolabelling Network (GEN), has launched the Singapore Green Labelling Scheme (SGLS) to notify customers if products are produced in an environmentally friendly way (Singapore Environment Council, 2016). The SEC has also attempted to take all members of the Singapore Manufacturing Federation on board to apply green practices; it also worked to raise the number of products certified by the RSPO or the Singapore Green Labelling scheme (The Straits Times, 2015n). These are examples of Singaporean civil society groups' efforts to apply

economic pressure to errant businesses where the legal penalty cannot be effectively imposed.

Singapore's Transboundary Haze Pollution is a recently crucial attempt to deal with the haze issue. Ewing notes that this effort obviously presents Singapore's inclination towards further internationalization through its response options (Ewing, 2014). It was developed from the principle of state responsibility in international law, which ensures that the state's right to exploit the natural resources of states does not damage its neighbour. This Singapore legal innovation aims at battling the haze since international law has proved ineffective in further addressing it (Ewing, 2014). Letchumanan notes that the Singapore Bill complements the provision of the Haze Agreement, which Indonesia has already ratified, since the agreement calls for measures that oblige parties to prevent, monitor and respond to the problem promptly through sharing information and consultation sought by an affected state (Letchumanan, 2015). The Bill, according to Singapore's environment minister, was drafted to be a tool to make Singaporean or Singapore-linked companies involved in illegal burning face criminal penalties in Singaporean courts; the legislation is also an attempt to deter errant companies (The Financial Times, 2014). However, Alan Boyle sees the Bill as unusual because national courts have to work on the transboundary pollution issue (The Financial Times, 2014). The Bill is seen as 'the most ambitious domestic effort to date for address Singapore's haze problem' as it seeks to increase companies' accountability, deters them by employing financial penalty (Ewing, 2014) and creates 'extra-territorial liability for entities engaging in setting fires abroad that cause transboundary smoke' in Singapore (Tan, 2015a). Companies can face the maximum fine of SGD 100,000 per day if they are found guilty, though this is limited to a total fine of SGD 2 million (SIIA, 2015b). The fine may be another channel to mobilize the ASEAN Transboundary Haze Pollution Control Fund to assist efforts in firefighting in ASEAN countries (Chua and Cheong, 2014a). It is a means to encourage business transparency and accountability, even if the activities causing fires are outside Singapore (Tay, 2014).

There are potential mechanisms that Singapore may apply to enforce the Bill. While Singapore is indirectly linked to deforestation – it is a major palm oil trading hub and

a major financier providing loans for plantation companies (The Straits Times, 2015k) – the Singapore government could cooperate with those banks and key retailers to impose financial sanctions such as withdrawing loans and banning products. The Malaysian natural resources and environment minister, Datuk Seri Dr Wan Junaidi Tuanku Jaafar, revealed that the Malaysian New Law, which is similar to Singapore's Bill, was also being drafted as a strategy to act in law against those responsibility for causing haze (The Jakarta Post, 2015q). Therefore, when Indonesia claims that Singaporean and Malaysian firms are also connected to the haze crisis, there is a legal tool to punish them. On the other hand, when Indonesia has not given detailed information on suspected companies, Singapore has launched financial sanctions by removing products supplied by those firms and ordering retailers to clean up their supply chains (Mongabay, 2015k). Singapore's National Environment Agency (NEA) was responsible for gathering evidence by investigating information on hotspots, maps, meteorological data and satellite images; suspected companies were then sent notices (The Straits Times, 2015m).

However, some challenges in enforcing the Bill can be pointed out. In order to enforce penalties on transgressors, Singapore has to collect concrete evidence to determine the origins of fires and the actions behind them (Ewing, 2014). This would be very difficult if Singapore acts unilaterally as most fires occur outside its territory. To make the law more effective, Singapore has to cooperate closely with the Indonesian government and/or collaborate with non-state actors working on the ground in Indonesia. On the one hand, Singaporean cooperation with Indonesia to prosecute firms is very limited. This is because Indonesia often refuses to share information on maps, or the names of companies causing fires (Mongabay, 2015k); in addition, Indonesian Vice President Jusuf Kalla insists that the government will not allow its citizens and companies to be prosecuted under Singaporean laws (Channel NewsAsia, 2016; The Straits Times, 2016c). On the other hand, realizing that the prosecution cannot be successful without eyes and ears on the ground, the Singaporean government can work with the SIIA, which works with environmentalists and land rights lawyers in Indonesia and Malaysia who are willing to help by finding robust evidence, to form a reliable network of verifiers on the ground (Chua and Cheong, 2014b).

4.4.2.2 The role of non-state actors in dealing with the haze pollution

While the progress of intergovernmental cooperation on transboundary haze has been limited by Indonesia's indecision and unwillingness – based on the principle of sovereignty and non-intervention, not that of responsibility, even though the pollution affects its people and those of neighbouring countries – non-state actors including civil society organizations, NGOs and regional think tanks seek alternative means to overcome such deadlocks by working individually as well as mutually to achieve particular outcomes. This section illustrates crucial activities that organizations have done to ensure better governance. The first way has been to organize dialogues to create networks of key stakeholders in order to seek solutions, share opinions and find common directions to combat haze pollution together. The second effort has been to draw maps to improve the monitoring system and finding evidence to support law enforcement. The third highlights the importance of conservation of the remaining peat ecological system, non-deforestation and/or reforestation in ending the haze episodes. Activities include conducting research to apply empirical evidence and best practices recommended to stakeholders, overseeing policy and licences issued by government agencies permitting concessions over forest areas, and implementing activities promoting peat and forest conservation and rehabilitation. The final approach is activities to support green products through the notion of sustainability.

4.4.2.2.1 Dialogues focusing on the regional haze issue

Organizing dialogues among stakeholders is an important platform for mobilizing and seeking alternative solutions in combating the haze issue. This research looks at three key organizations that often arrange a forum focusing on regional haze concerns. They are the SIIA, the Center for International Forestry Research (CIFOR) and the RSPO. Without emphasizing the principle of sovereignty and non-intervention in domestic affairs, the non-state actors' discussion can address directly, for example, poor land management, the slow progress of Indonesia's authoritative maps, and the lack of law enforcement in Indonesia. Additionally, the forum may help initiate and/or sustain networks of organizations whose works relate to tackling forest fires and haze at different levels and/or across levels. Organizers and participants can have

two-way communication that facilitates the exchanging of data, facts, evidence, best practices and/or new scientific findings. Forums serve as a stage for different interest groups to share their various perspectives; this can help actors to find practical solutions, adjust their strategies and/or work collectively for any specific compromised goals in a more powerful direction.

The first important organization is the SIIA. The SIIA has played a crucial and active role in seeking solutions to deal with the haze problem since 1998, when the first regional dialogue about the transboundary haze was held. At this event, participants also included Malaysian and Indonesian experts, as well as NGOs (Tay, 2014). In 2002, the dialogue programme also included public lectures delivered by intellectuals from Indonesia's think tanks and the coordinator of Project FireFight Southeast Asia (The Straits Times, 2002b). The 2006 dialogue gathered at the period of the haze crisis. The cost of the loss to Indonesia's economy was estimated by the members of the forum at more than USD 9 billion (The Straits Times, 2006e). The forum went further by saying that the Indonesian government should not be the only one to take responsibility for the smoke haze; collective action among NGOs, think tanks and companies was necessary (The Straits Times, 2006a).

In 2014, the first Singapore Dialogue on Sustainable World Resources (SDSWR) was launched, with a main focus on the annual haze and the role of the palm oil industries. This time, representatives from multinational firms were also invited, as the chairman of the SIIA, Simon Tay, pointed out the role of producers, traders, banks and consumers in the globally connected world to prevent fires and the haze (The Straits Times, 2014a). By looking beyond the blame game and the poor enforcement to punish wrongdoers, the forum shifted to a focus on an approach to incentivizing stakeholders to take the right path (Today Online, 2013a). At the SDSWR dialogue, Indonesia's deputy minister for environment degradation control and climate change, Arief Yuwono, proposed that, while Indonesia's economic development relied on natural resources, and while investment in plantation-based industries was good for employment in Indonesia, the sustainability of the environment was central for encouraging social welfare. He also said that land expansion for palm oil plantation and the use of the slash-and-burn method would cause negative effects

on the environment (The Nation, 2015b). Singapore's minister of environment and water resources, Dr Vivian Balakrishnan, presented at the dialogue that the use of technology (such as good branding and marketing, supporting sustainably sourced products, and offering better opportunities for businesses that demonstrate good records on sustainable governance) in the environment and sustainability sector would be a powerful game changer for better monitoring, as well as reducing cost in the long term (The Borneo Post Online, 2015). Importantly, the delay in delivering the Indonesian authoritative map was also addressed in the forum. The World Resources Institute's (WRI) Indonesia country director, Nirarta 'Koni' Samadhi, recommended a forward step for the Indonesian government to take on the ground and that coordination among different governmental agencies for drawing maps should be improved, which would help end the question of land claims. The government could start from Riau, where the forest fires and land conflicts obviously persisted. Further, he proposed that companies release their concession map for better accountability (The Nation, 2015a; Cheong, 2015). There was a closed-door workshop among experts considering issues including the accuracy of concession maps available on public domains, the advantage of community maps and the legality of publishing unofficial maps (Cheong, 2015).

The second SDSWR was held in 2015. Arief Yuwono also attended in the dialogue and shared Indonesia's news on the extending the moratorium (Lee and Lau, 2015). Best practices in green production, procurement and financing in ASEAN's resource sectors were the highlight of the forum (Cheong, 2015). The dialogue was followed by the round table, which was a smaller scale to specifically focus on the role and effectiveness of innovations and technologies. Both SDSWR and its following round table were aimed particularly at 'fostering cooperation NGOs and civil society across borders' who 'deserve credit, particularly in cases where the authorities or companies may be slow or unwilling to act' (Lee and Lau, 2015).

Further, the SIIA also organizes seminars for public knowledge relevant to the haze. The SIIA seminar on the topic of 'Fighting The Haze – Insights From Indonesia's Worst-Hit Provinces' invited Indonesian representatives of the areas that suffered the most from the fires to share their experiences and problems (SIIA, 2015c). Simon Tay

affirmed that their perspectives and recommendations were included in the policymaking process (Cheong, 2015). This is an example to illustrate that the SIIA has engaged with the Singaporean government as well as working in parallel with civil society organizations at and across different levels to tackle the transnational haze problem.

Furthermore, the SIIA has launched the Haze Tracker, a web portal that is open access for the public on the latest development of the regional haze issue. Information, news, articles, analysis and/or reports on dialogues, for instance, from Singapore, Indonesia, Malaysia and Thailand can be found on the website (Cheong, 2015; Today Online, 2015). This user-friendly tool not only helps facilitating people who are interested but is also a platform for circulating associated information to all stakeholders.

The Center for International Forestry Research (CIFOR) is another key actor with particular concerns in conserving forests and peatland as a means to solve forest fires and smoke haze. In January 2014, the CIFOR co-organized a workshop that included more than 50 participants, including government officials, leaders of communities, civil society organizations and the private sector to address the problem of land use and fire in Indonesia (Forests News, 2014); this was followed by the Forest Asia Summit in May under the theme of 'Sustainable Landscapes for Green Growth in Southeast Asia', which was attended by more than 2,200 representatives from government, intergovernmental organizations, civil society and the private sector (CIFOR, 2014). In addition, in a high-level policy dialogue held by the Ministry of Environment and Forestry and the CIFOR, David Gaveau, a landscape scientist from the CIFOR, suggested that the government allocate a large part of the national budget – which might come from rehabilitation funds or the commodity export tax – to restore peat lands to hydrological equilibrium, since research finds that the 70 per cent of fires in 2014 and 2015 were from draining peat for cultivation (The Jakarta Post, 2015t).

The third key organization in governing the haze issue by controlling oil palm producers to practise in a sustainable way is the RSPO. Members of the RSPO are NGOs and financial and private-sector institutions and are voluntarily involved.

Members of the RSPO are governed by the principles and criteria (P&C), or the guidelines on how to produce sustainably, which are reviewed once every five years (Eco-Business, 2014).

4.4.2.2.2 Efforts to draw maps

The referable, authoritative Indonesia map under the One Map Initiative is currently developing. If the project is completed, great benefits can be expected. It will feed the existing monitoring tools with data identifying where the fires occur and who should take responsibility for them. When the monitoring systems are fed with accurate land owners, it will help governmental agencies as well as companies to apply measures to control the fire before it starts or becomes uncontrollable. In addition, information on the matching hotspots and the maps can be used by authorities as evidence in court against any offender under Indonesian or Singaporean laws. This will help to enforcing the laws (Tan, 2015a; The Nation, 2015a). In addition, while small-scale landholders and plantation companies always point their fingers at each other as being the source of fires, the map will help to end the blame game as evidence can be shown of who actually lit the fire or whether the fire was set intentionally. However, achieving a complete version of authoritative Indonesian concession maps is a long and arduous process because Indonesia needs to resolve conflicts over land disputes (SIIA, 2015a), which could be done by dealing with 'inter-ministerial competition, divergent local claims and corruption in the land-allocation space' (Ewing, 2014).

In the absence of the authoritative map to feed into the satellite and monitoring systems, non-state actors have attempted to draw concession maps to operationalize the existing monitoring systems as a method to combat the issue. On the one hand, as some companies realize the benefits of reducing the reputational and operational risks derived from undisclosed information, they decide to be more transparent and accountable (Chua and Tseng, 2013; Tay and Lau, 2015b; Letchumanan, 2015). Revealing all their concession areas and geographical coordinates and then making such information available for the public to access have been requested by NGOs and think tanks (Neo, 2013). While Greenpeace's demands for the Indonesian government to publish detailed digital maps in the public domain have not been met

(Greenpeace, 2015), campaigns launched by Greenpeace and Forest Hero pressuring big companies and traders such as Asia Pulp and Paper (APP) and Wilmar to release maps of their suppliers' concessions (The Straits Times, 2015k) can be an example of success in this movement. Many member companies have submitted their concession maps to the RSPO secretariat, even though 'there have been reports that the Indonesian authorities have instructed companies and the RSPO not to publish the maps and to restrict the maps already in circulation' (Tay and Lau, 2015a). By setting a certain transparency standard to its members, the RSPO can therefore provide a chunk of concession maps to other organizations via the Global Forest Watch website (RSPO, 2015), even though missing data exists and some companies cannot fulfil their obligations (Mongabay, 2015o). Under the Global Forest Watch (GFW) programme developed by the WRI, the GFW-Fires platform was launched in 2014 to monitor forest loss, hotspots, active fires and air quality in the ASEAN countries. The concession maps hosted on the GFW are based on data derived from the Indonesian Ministry of Forestry in 2010 and the RSPO (Global Forest Watch, no date). However, these maps are not definitive, firstly because the concession maps from Indonesian Ministry of Agrarian Affairs and the Ministry of Agriculture are not included (Mongabay, 2015o) and, secondly, the concession maps derived from the Ministry of Forestry are not up to date. WRI filled these information gaps by using satellite imagery and ground checks on mapped plantations (Mongabay, 2015o). Although the process is not complete, the existing data is useful for the WRI to categorize the types of fires, which helps to identify what sort of actors tend to light fires (Mongabay, 2015o).

The SIIA also has an attempt to develop an accurate map to feed them into the satellite monitoring tool, called the SIIA's Haze Tracker. The absence of the authoritative concession maps causes difficulties for the organization in establishing accountability for the fires (Channel NewsAsia, 2015b). In 2015, the assistant director of sustainability at the SIIA, Cheong Poh Kwan, went to Jakarta and Bogor in Indonesia and pointed out that the challenges in mapping are not so much technical, as civil society in Indonesia had already mapped around five million hectares of land, which were usually disputed. The greater challenge was how to 'get the government to recognise these maps, and also reconcile the differences between these community

maps and the ones that the government has in their possession' (Channel NewsAsia, 2015b). The SIIA Haze Tracker portal, the site aiming to close the information gap, provides a platform to link users to other international organizations tools and maps derived from the National University of Singapore's Centre for Remote Imaging, Sensing and Processing, provided by companies and/or developed by mapping experts, whose works have already been made with the collaboration of local communities (Yang, 2015; The Straits Times, 2015c; Mongabay, 2015k). There is a link from the SIIA to the Eyes on the Forest (EoF)'s website. The EoF is an NGO coalition involving the WWF-Indonesia, Jikalahari (Forest Rescue Network-Riau), WALHI (Friends of the Earth-Indonesia) and KKI WARSI (Indonesian Conservation Community) that aims to publish information on the issue relevant to forests in Riau. Beside the provision of interactive concession maps (based on the Ministry of Forestry), the group has also established on its website a database of information on forest cover, carbon stock, biodiversity and fire alerts (Eyes on the Forest, 2011).

4.4.2.2.3 Strengthening law enforcement

The role of non-state actors in facilitating law enforcement through gathering evidence can be seen in two broader ways. The first is through analysing scientific data obtained from their satellite tools; the other is their activities in collecting robust evidence on the ground. Evidence is used in court not only for proving that offenders intentionally set the fire for land clearing but also for getting compensation from the wrongdoer.

NGOs have utilized the best available data by superimposing hotspot maps on their available concession maps to find out whether the fires occurred within or outside companies' responsible areas. The WRI, Greenpeace, the EoF and WALHI-Riau have made this kind of evidence and then circulated it via media to point out that most of the many fire hotspots occur on lands allocated to big agribusiness companies such as the Singapore-based Asia Pacific Resources International Ltd (APRIL) and Wilmar, the Indonesia-based Asia Pulp and Paper (APP) and Malaysia's Sime Darby (Neo, 2013; The Financial Times, 2013b; Gill and Bin, 2013; Mongabay, 2014b; Chua and Cheong, 2014b; The Jakarta Post, 2015b; The Jakarta Post, 2015i; Mongabay, 2015j; Velde, 2014; The Straits Times, 2015d; Mongabay, 2015e). However, the outdated

concession maps hinder the prosecution of the transgressor, allowing them to refute the allegation. Moreover, some have observed that the law seems to be more effective in dealing with small-scale landowners rather than larger land concessions and few companies were prosecuted, owing to the absence of evidence (The Straits Times, 2009; PM.Haze, 2014). In contrast, it is more reasonable to say that small farmers, local companies or big firms that intentionally set fires on the overlapping claim areas take advantage of the doubt (Mongabay, 2015o). Therefore, high-resolution images from above may not be sufficient for law enforcement. Chua and Cheong (2014b) noted that, while the SIIA was informed by the WRI's satellite images confirming that hotspots were detected in the pulpwood supplier's concession areas, they found only palm oil cover on those locations. Therefore, robust evidence conferred by 'a reliable network of verifiers on the ground' was necessary for the law to be applied (Chua and Cheong, 2014b).

There are local NGOs collecting fieldwork evidences. The EoF and Greenpeace Indonesia are key watchdog groups that monitor on-the-ground violations as well as keeping an eye on legal prosecution. Aditya Bayunanda from WWF-Indonesia revealed that the WWF and other NGOs in the EoF commit to support the government moratorium by monitoring its implementation in the field (Mongabay, 2015g). Additionally, Indonesian NGOs formed the EoF to make use of their proximity on the ground in order to follow up the work of the authorities (Lee and Lau, 2015). The groups have worked by going to parts of the concession areas to observe and then report to the media if a company encroaches on the protected forests and drains the peat; it observes whether a company encroaches on the conserved peat area, uses fires to clear land and/or uses fires to clear the land. The dispute between Kusnan and the EoF in Riau was an example of the NGO's work (Jakarta Globe, 2014d). Further, the WALHI has gone further by working with other local NGOs and seeking public support to sue the government (Mongabay, 2015o) and companies (The Jakarta Post, 2015d).

4.5 Conclusion

This chapter investigates the environmental governance in the haze case. In the first part, the impacts and causes of the problem illustrate why international cooperation

is necessary to resolve the issue. Despite peatlands being naturally sensitive, fires are lit on peat mainly for land clearing. Recognizing the unmeasurable costs, ASEAN has addressed the issue and created a regime. A set of regulatory mechanisms – including institutional meetings (HTTF, AMMH, MSC, TWG and COP), regional monitoring mechanisms (HMS, FDRS), zero-burning and controlled burning policies, the ASEAN Haze Agreement, and peatland management strategies, for example – was initiated under cooperative ASEAN efforts to deal with the issue. In addition, Indonesia also cooperates with Norway under the REDD programme. However, key challenges for the effectiveness of the regime are fundamentally based on the absence of an authoritative Indonesia map and the need to use the peatlands for economic development purposes. Although Indonesia's Plantation Law prohibits the use of the slash-and-burn method, poor land management and overlapping lands claimed by stakeholders have resulted in the failure of deterrence and law enforcement to prosecute culprits. To respond to the ineffectiveness of regional and national mechanisms, policy networks were formed to improve the poor function of the regime.

As the most affected neighbour, Singapore has taken a proactive role in applying various means and has worked with non-state actors. To deter the business from setting fires on peats, the Singapore Transboundary Haze Act was enacted. Along with the Act, consumer boycotts of businesses proven to be applying unsustainable methods in draining peatland or clearing lands were introduced. Moreover, there have also been attempts to control palm oil producers through a certificate system. To make these mechanisms function, collaborations in the form of networks reveal the sharing of information among network actors through organized dialogues and other activities. While there is still an absence of an authoritative map, concession maps were published and shared on the websites of the RSPO, Haze Tracker and the EoF. To identify transgressors, high-resolution satellite pictures have to be matched with on-the-ground evidence, which is gathered by local and national NGOs. These actors are not working alone; they collectively work in the form of networks to support better policy monitoring and enforcement complementing inter-state cooperation in governing the haze issue.

Chapter 5 Policy networks in governing the illegal wildlife trade and smuggling issue

The illegal trade and smuggling of wildlife are two of the most important international crimes threatening biodiversity in Southeast Asia and the world. The issue does not directly affect people and states in the sense that it results in a concrete impact on the state's economy and/or people's health, like was the case with transboundary haze. However, the issue has an international and transnational dimension in two aspects. Firstly, the issue is one of transnational environmental crime since the trade of wildlife and its derivatives is an activity contravening international law (the Convention on International Trade in Endangered Species of Wild Fauna and Flora: CITES); and, secondly, goods that are sourced illegally are then smuggled across borders (Elliott, 2007: 1). The first aspect brings about the second, and international cooperation is necessary to deal with that illegal activity more effectively. To identify the role of policy networks in governing the transnational illegal wildlife trade, this chapter attempts to explore the opportunity for non-state actors, especially NGOs, in engaging states and intergovernmental organizations at the international, regional, and national levels in policy processes.

Four sections on how NGOs and networks can improve the effectiveness of regime and governance are structured as follows. The first section explores the background of the issue to answer why this kind of transnational environmental issue is crucial for Southeast Asia; in addition, it examines how the effectiveness of regional cooperation is important to other states in the broader context of the global illegal wildlife trade in relation to security issues. Difficulties in controlling the illegal wildlife trade in the region are also dealt with in this section. The second section reveals the main aspects of international cooperation in the Southeast Asian region, which is part of global cooperation on CITES, and the development of regional mechanisms to support the convention within the ASEAN framework, such as the establishment of the ASEAN Wildlife Enforcement Network (ASEAN-WEN); the role of NGOs can be most obviously noticed here, in the formation and development of this intergovernmental network. The United States Agency for International Development's (USAID) contribution to funding the establishment of ASEAN-WEN

through Freeland, an NGO, seems to be significant to the sustainability of the network. This has been particularly noticeable since the support programme was terminated. Therefore, the role of NGOs in ASEAN-WEN can be comparatively investigated in two periods. The first is their roles in the establishment of the ASEAN-WEN network. The other is when the support project ended. NGOs have less resources owing to the limits of funding; however, they are still important in supporting activities for achieving the purposes of ASEAN-WEN. The third section identifies the governance gaps at the international and national levels, where difficulties in coordination and the capacity of state authority occur at both levels. In addition, translating and adopting international obligations into national law is not an easy procedure and seems to be states' greatest challenge, partly owing to certain traditional factors and beliefs. In consequence, better enforcement cannot happen instantly and it needs time for adjustment. The last section considers those governance gaps to examine how individual NGOs, on the one hand, can work with the government to develop and carry out national policy on endangered wildlife conservation and protection and, on the other hand, these NGOs internationally and transnationally form networks among each other to support both CITES and ASEAN to achieve their mutual goal of protecting endangered species.

It should be noted that, although combating the transnational illegal wildlife trade seems to be focused on the cooperative enforcement of international law, the large number of species protected by the law are, conversely, diversifying efforts owing to different operations conserving specific species prioritized by different states and NGOs. Therefore, the roles of NGOs in filling governance gaps at the international levels are firstly focused on coordination and capacity building activities, whereas the regional mutual goal of ASEAN countries can be identified as achieving better monitoring and implementation of CITES. This mutual goal can be seen from the increasing numbers of seizures of illegal transportation at transit ports and routes. On the other hand, at the national level, the roles of the NGOs are observed from the engagement of NGOs in the law and policy development process to deter lawbreakers from illegal wildlife trade activities. However, since the aim of CITES is to protect wild fauna and flora from over exploitation and to ensure that international trade on wildlife will not lead to the extinction of certain species, conservation should

be considered another international goal. Thus, the second emphasis of international cooperation involves conservation activities to balance the trade on wildlife. The role of NGOs and their networks in protecting endangered wildlife species can be also observed through their mutual conservation activities. Since global demand is threatening endangered species that live in different geographical areas, NGOs in each country may have different focuses in monitoring and conserving particular endangered species, depending on each organization's mandate and the endangered wildlife situation in that country.

5.1 Background to the problem

Southeast Asia is 'home to some of the world's greatest biological diversity' (ASEAN-WEN, 2015b). This high level of biodiversity makes the region attractive as a source of desirable specimens for trade in the global market. However, the region also has the undesirable status of being a hub of illegal activities (Rosen and Smith, 2010: 29), a hotspot for wildlife crime (Schaedla, 2007: 42) and a centre for shipping illegal goods (Maneesai, 2007: 37) because of several key factors. The first and most important factor is the increasing consumer demand for illegal wildlife commodities, which are used for several purposes, such as symbols of success and social status or decoration (e.g. ivory), food, clothing items, pets, traditional medicine, and even good luck charms; they also provide a source of livelihood and a means of biopiracy (DSWF, 2012: 77; The Guardian, 2013a; WWF-Thailand, 2016; Rosen and Smith, 2010; ASEAN-WEN, 2015b; Shepherd et al., 2007: 3–4; Thanh Nien News, 2015c; Van Asch, 2013; Thanh Nien News, 2015b; Wilson-Wilde, 2010: 211; WWF, 2002: 2). The countries in the region are not only key exporters of illegal wildlife but also major importers as well (WantChinaTimes, 2015). The increasing demand for wildlife products in China (Shepherd et al., 2007: 5; Cyranoski, 2015; Gabriel et al., 2012), Vietnam (Van Asch, 2013: 77; Thanh Nien News, 2015d) and other destinations is a driving force for poaching and illegal wildlife trade and smuggling. Some notice that the increasing consumption of illegal wildlife products is related to the growing middle class and its burgeoning affluence, and the rising purchasing power of the Asian population (UNODC, 2013: vii–viii; Van Asch, 2013; Shepherd et al., 2007; IFAW, 2006).

The second factor is the insufficient resources allocated to dealing with the illegal trade issue (Schaedla, 2007: 42). For instance, limited financial resources and equipment constrain the authorities' capacity in patrolling operations (Channel NewsAsia, 2015c). Moreover, some countries have large territories that are difficult to patrol adequately (Wilson-Wilde, 2010: 222). This allows the illegal trade to go on unimpeded. Considered from the supplier side, the illegal wildlife trade is a lucrative business because it potentially generates high income at relatively low risk of detection (Gabriel et al., 2012) with a 'minimal disincentive in terms of the punishment associated with wildlife crime' (Shepherd et al., 2007: 5).

The third factor facilitating the boom in the illegal wildlife trade in the region is well-established transportation routes and limited state capacity to detect the illegal activity. Shipments across borders, whether by air, land or sea, enjoy a well-connected transport infrastructure as part of the regional economic development policy, especially the road infrastructure in the East–West corridor linking nodal points across countries in mainland Southeast Asia (Shepherd et al., 2007: 2). In addition, considering the location of the region between Africa (a huge source of wildlife goods) and China (a big wildlife consumption market), Southeast Asian countries can potentially be major trans-shipment routes. Illegal traffickers have more options for transporting wildlife products. Along with the authorities' limited capacity to control the trade and smuggling of illegal wildlife, these transportation infrastructure and open borders not only makes remote areas more easily accessible for poachers and traders (Van Asch, 2013: 80) but also provide illegal business with 'wildlife trade superhighways' (Shepherd et al., 2007: 1), especially when considering the poor level of law enforcement on major road connections (Shepherd et al., 2007: 5).

The fourth factor is poor public awareness of the importance of the illegal wildlife trade problem. While there has been a dramatic decline of many wildlife species, most people have a very limited awareness of it (Van Asch, 2013: 78). Moreover, in some cases, wild animals seem to be a threat to people and their communities, especially in the rural areas of some developing countries. Humans encroach on forests for land use, which destroys wildlife habitat; for instance, the expansion of

palm oil plantations in Indonesia has destroyed forests, which caused human–animal conflict when elephants entered local villages, trampled villagers and caused financial loss (The Jakarta Post, 2015e). Furthermore, animals have been targeted to satisfy cultural beliefs for their medicinal benefits, even though these benefits have been scientifically refuted (Van Asch, 2013: 77). For example, some Vietnamese believe in the use of ground rhino horn to treat and prevent cancer (Wilson-Wilde, 2010: 221; Van Asch, 2013: 77), and some people in both China and Vietnam consume pangolins' blood as a tonic (Thanh Nien News, 2015c; Shepherd et al., 2007: 4).

Combating illegal wildlife trade and smuggling is important not only for preventing the loss of biodiversity and the extinction of species, which are irreversible, in Southeast Asia and the world. The illegal trans-shipment of wildlife can also lead to transboundary security problems such as pathogen transmission from wild animals to humans and/or domestic animals (Rosen and Smith, 2010: 30). The movement of the monkeypox virus from Africa to the USA, the SARS virus from bats, and severe pneumonia in humans from a zoonotic respiratory infection called psittacosis are good examples of this kind of threat originating from the smuggling of illegal wildlife, causing harm to people and states (Wyler and Sheikh, 2008; Rosen and Smith, 2010; The Straits Times, 2015p). Additionally, the illegal wildlife crime issue can also be linked to national security problems. High profits from the illegal trade can be sources of funds for terrorist activities, rebel movements and other armed groups in Africa (The Straits Times, 2015p; Wyler and Sheikh, 2008). These factors make the issue important not only to the region but also to other external actors who consider their interests to be potentially affected if the issue is not managed effectively. One of the key external states contributing to combating illegal wildlife activities in the region is the United States.

Some difficulties in dealing with the transnational illegal wildlife trade should be pointed out. Firstly, while the illegal wildlife trade is valued at around US\$5 billion to US\$20 billion a year, the actual scale and scope are extremely difficult to identify (Rosen and Smith, 2010; Shepherd et al., 2007: 4). This is not only owing to the number of species involved in this business that are openly sold in the market, but also the illicit trade that has been growing online (UNODC, 2013). Further, the data

sources are highly diverse, while the available data such as market surveys and seizure data is very limited (Van Asch, 2013: 84). More importantly, professional criminals control much of the illegal trade (Ives, 2015). Secondly, illegal wildlife businesses apply numerous different tactics to avoid detection while trafficking their trade. These include importing 'legally' by falsifying certificates, obtaining genuine documents corruptly, intentionally mislabelling goods, making false declarations and concealing illegal goods among other legal products (Van Asch, 2013; Rosen and Smith, 2010: 27; Ives, 2015). To deal with these difficulties in detection, relevant authorities require specific skills and capacity. However, the limit on resources in developing countries is generally the main obstacle for tackling this problem. Thirdly, it is not easy to stop poachers when the demand for wildlife increases. This seems to be a dilemma. When some rare wildlife species decrease, the price in the increases. This creates more incentive to poach. Otherwise, poachers would find other wild species to substitute for those animals (The Jakarta Post, 2015s).

5.2 International cooperation to combat illegal wildlife trade and trafficking

The increasing illegal wildlife trade across borders has been an important challenge for Southeast Asian countries. To stop the transnational illegal wildlife trade, international cooperation among countries is necessary.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an important international agreement, aiming to ensure that 'international trade in specimens of wild animals and plants does not threaten their survival' (CITES Secretariat, 2015). In order to protect certain species of wildlife against over-exploitation through international trade, 'species are classed as Appendix I (trade permitted only under exceptional circumstances), Appendix II (non-detriment finding and export permit are required for trade), Appendix III (one member country has asked other CITES Parties for assistance in controlling trade), or non-CITES' (Rosen and Smith, 2010: 25). Parties to the agreement have an obligation to monitor, control and take action on the trade of wildlife listed in Appendices I, II and III (CITES Secretariat, 1983). TRAFFIC, an NGO, works closely with the CITES Secretariat to assist in investigating illegal wildlife trade, conducting research about

the true scale of illegal trade and providing available data (Rosen and Smith, 2010: 25). Another key role of TRAFFIC is to gather information on the illegal trade in each country and submit it independently to the CITES Secretariat alongside reports presented by countries (Participant D, 2015).

All members of ASEAN are parties to CITES. In order to fulfil the objective of the convention, the ASEAN Experts Group on CITES (AEG-CITES) adopted an ASEAN Regional Action Plan on Trade in Wild Fauna and Flora (2005–2010). The Regional Action Plan received full support from the ASEAN senior officials on forestry and the ASEAN ministers of agriculture and forestry (AMAF). Objective 2 of the plan, which is to ‘promote networking among relevant law enforcement authorities in ASEAN countries to curb illegal trade in wild fauna and flora’ (ASEAN Secretariat, 2005b), designates the activities of network development for wildlife law enforcement. As a result, ASEAN-WEN was launched by the ASEAN ministers responsible for the implementation of CITES (ASEAN Secretariat, 2005c). ASEAN-WEN is a regional intergovernmental law enforcement network that involves police, customs and environment agencies of all 10 ASEAN member countries (ASEAN-WEN, 2015b). Membership of the network is also open to officials from CITES, prosecutors, specialized governmental wildlife law enforcement organizations and other relevant national law enforcement agencies (ASEAN Secretariat, 2005c). Partners of ASEAN-WEN include the United States, the CITES Secretariat, Interpol, the UN and NGOs, which include Freeland, TRAFFIC and Wildlife Alliance (ASEAN-WEN, 2015a). An inter-agency task force, comprised of police, customs and environmental officers, is the backbone of a regional network operating on national and regional levels to combat transnational wildlife crime (ASEAN-WEN, 2015a). It is noted that ASEAN-WEN is a platform for bringing governmental agencies responsible for dealing with wildlife crime into a more structured collaboration, which would be the building block for bilateral and regional cooperation (Shepherd et al., 2007: 3).

ASEAN-WEN was established to support CITES; however, the network functions independently from the CITES body. The network is formed without a legally binding agreement, and thus is operated voluntarily by its members. The objectives of the network are to enhance the efficiency of intelligence exchange and enforcement

action and to increase deterrents, while better cooperation, coordination and communication are also crucial intentions underlying those objectives (Maneesai, 2007: 38). Participant E (2015), who has work experience from when ASEAN-WEN was being formed, explains that ASEAN-WEN was initiated by discussion among ASEAN countries on the problem of coordination across border crossings. Each country individually implemented CITES; however, attempts at protecting specific species became unsuccessful at those crossings owing to insufficient cooperation among governmental agencies. As a result, the goal of ASEAN-WEN was set broadly as being better implementation of CITES by improving international communication among ASEAN member countries. The network has applied the existing mechanisms of CITES as ASEAN-WEN's mechanism. Each country has to establish a national task force and a national focus point. National task forces serve as an internal network that includes, for example, the police, customs and relevant environmental agencies. National focus points, which are in the main the national CITES management authorities, function as national coordination centres to accommodate communication at the regional level. The ASEAN-WEN working group meets annually to discuss policy directions, regional planning and other key issues (Participant E, 2015). The creation of a wildlife enforcement network should facilitate effective enforcement action through better coordination among different countries and agencies through information sharing, capacity building and the sharing of resources (TRAFFIC, 2016a).

ASEAN-WEN was supported by the US under the ASEAN-WEN support programme to provide capacity building for task forces and to develop collaboration in the law enforcement community (Wylar and Sheikh, 2008: 30). Although the primary state-NGO partnership in the support programme is between USAID and an NGO called Wildlife Alliance, the actual activities are implemented by WildAid Foundation Thailand (which later change its name to the Freeland Foundation) and TRAFFIC Southeast Asia. The support programme is a five-year cooperative attempt between NGOs and donors agencies designed to assure the successful implementation of the network; however, it is not considered part of ASEAN-WEN (Schaedla, 2007: 44). Key areas of the support programme include facilitating ASEAN-WEN meetings, improving task force capacity, creating a legal climate conducive to successful

prosecution and sentencing, raising public awareness and transferring activities to the ASEAN-WEN Program Coordinating Unit (Schaedla, 2007: 44). According to (Participant E, 2015), the support programme is very significant for establishing key elements of the network. Without support from the programme, ASEAN-WEN would not be as well developed owing to insufficient resources for governmental agencies to gather in meetings for discussion on the protocols, rules and procedures applied to members (Participant E, 2015). The creation of an ASEAN-WEN programme coordination unit (PCU) was endorsed at the first ASEAN-WEN official meeting. The PCU serves as an official coordinating body to ensure the continuity of the network's activities after the support programme phases out.

Freeland and TRAFFIC are partners of ASEAN-WEN. According to Participant D (2015), both organizations support ASEAN-WEN agencies in enhancing capacity building through workshops, sharing information, and coordinating with agencies if there are any law enforcement issues. Freeland works closely with police on trafficking and public relations, while TRAFFIC works closely with customs authorities to provide technical assistance in identifying wildlife species (Participant D, 2015). Having a leading role in the USAID-supported coalition, called Asia's Regional Response to Endangered Species Trafficking (ARREST), Freeland has provided direct support to ASEAN-WEN (Gonzales, 2015). At annual meetings of ASEAN-WEN, representatives from Freeland, TRAFFIC and TRACE Wildlife Forensic Networks engage in an open session to report on the progress of activities that they have implemented in supporting ASEAN-WEN on capacity building, communications and fundraising (ASEAN-WEN, 2010). TRAFFIC and Freeland are regular participants, and other national NGOs in different countries can also take part in the session as well (Participant G, 2015). According to Participant E (2015), in this open session NGOs play a key role by raising important issues around their concerns, discussing what they can do to support the network, what kind of workshops could be set up to enhance skills, and who can support those workshops. Although the support programme has already terminated and the network now has to find financial support to organize workshops by themselves, NGOs still have an important role in supporting capacity building activities for the networks (Participant E, 2015).

The progress of law enforcement can be noted from some indicators. Firstly, the seizures resulting from improved networking under ASEAN-WEN could be considered progress in international cooperation. After the establishment of ASEAN-WEN, several high-profile wildlife seizures of illegal products such as pangolins, ivory, forest turtle and tigers in individual countries within the network were noticed (Maneesai, 2007: 39; TRAFFIC, 2016a; DSWF, 2012; The Bangkok Post, 2015a; TNA, 2015; AFP, 2015; RFA, 2015; Thanh Nien News, 2015c; TRAFFIC, 2015c; ASEAN-WEN, 2012). Secondly, compared to other developing regions, ASEAN-WEN has had better progress than others in terms of the development of regional mechanisms (meeting, focal points, task forces), enforcement agencies' capacity, and the intention to achieve a common goal among members, even though the network has not yet reached its goal (Participant E, 2015). ASEAN-WEN is currently recognized as a precedent-setting model for promoting cross-border collaboration to combat transnational organized crime involving the illegal wildlife trade, and it has been replicated in South America, China, South Asia (South Asia WEN), Western Asia and Africa (e.g. the emerging 'Horn of Africa WEN') (Gonzales, 2015; ARREST, 2013b; Freeland, 2016c). Moreover, as ASEAN-WEN meetings convene annually, this leads to closer cooperation among members as they can meet regularly to discuss particularly the enforcement issue (Participant G, 2015).

5.3 Governance gaps

Governance gaps in preventing wildlife from over-exploitation in Asia can be generally identified in two broad aspects. The first one is the absence of environmental policy and law that effectively contributes to balance the economic incentives and the conservation of biodiversity. This can result from a lack of focused effort and collaboratively international control, backed by political support and resource allocation, to implement environmental conservation activities, such as training (ARREST, 2013c), which is inadequate to curb wildlife crime (Wilson-Wilde, 2010: 221). The second aspect of governance gaps present in operational activities, especially on coordination between agencies including intra-agencies at the national level and inter-agencies at the international and cross-border levels. Schaedla (2007), for example, points out the absence of authority and capacity of environmental

agencies, which are largely responsible for combating regional wildlife offenders and stopping professional criminals and syndicates (Schaedla, 2007: 42). Even though the main focus of this thesis is on the regional level, it is necessary to refer to CITES as a global regime that ASEAN member countries mutually aim for better implementation of at the regional level (ASEAN Secretariat, 2004). Governance gaps demonstrated in this section are placed into three categories: governance gaps in CITES at the global level, governance gaps in ASEAN-WEN and governance gaps in implementation and enforcement by ASEAN countries in general at the national level. It should be noted that the governance gaps existing at the national level of ASEAN countries are parts of the challenges for effective cooperation at both CITES and ASEAN-WEN on wildlife conservation. Therefore, classifying it as a separate category helps to avoid repetition in explaining those shared obstacles.

5.3.1 Governance gaps in CITES

Several gaps can be identified in the international cooperation on CITES. The first governance gap is the difficulty in gathering and sharing information on illegal wildlife trade monitored by intergovernmental organizations. According to Chandran et al. (2015), CITES has a sanction mechanism handled by resolutions and decisions of the Conference of the Parties (COPs), which attempts to ensure that parties align their national laws to the regulations of the Convention through annual and biannual reports about species status, export–import statistics of CITES listed species, and the effectiveness of internal laws. However, the Trade Infraction and Global Enforcement Recording System (TIGERS), by CITES, and other systems operated and managed by the EU, ICPO–Interpol and the World Customs Organization (WCO), have failed in their information sharing on monitoring and enforcement; the submission of data has been haphazard and incomplete (Chandran et al., 2015: 448-449). Even though NGOs and/or institutions have conducted their own information and then submitted it to the CITES Secretariat, this data is from alternative sources whereas ‘the data validity is decided by CITES Secretariat, CITES CoPs, and CITES standing committee’ (Chandran et al., 2015: 449). While those international bodies receive incomplete information, legitimate sanctions cannot be imposed on states that cannot comply with the

agreement. Incomplete and invalid data, therefore, weakens CITES's enforcement ability.

Another governance gap occurring in operations of law enforcement globally is the problem of coordination and communication. In order to increase capacity on the law enforcement, the International Consortium on Combating Wildlife Crime (ICCWC), the collaborative effort of five intergovernmental organizations including the CITES Secretariat, Interpol, the United Nations Office on Drugs and Crime, the World Bank and the WCO, was established in 2010 to 'bring coordinated support to the national wildlife law enforcement agencies and to the subregional and regional networks that, on a daily basis, act in defense of natural resources' (CITES Secretariat, 2016b). The ICCWC meeting, which also aims to strengthen the wildlife enforcement networks and encouraged member states to 'facilitate the creation and coordination of the "network of the wildlife enforcement networks"', identified 'a general lack of inter-agency cooperation at the national and international levels' as one of the key gaps challenging cooperation among these WENs (ICCWC, 2013). Further, the problem of communication (such as language and information sharing) was differentiated from difficulties in sharing real-time intelligence (such as the need for secure communication channels to share intelligence) (ICCWC, 2013).

5.3.2 Governance gaps in ASEAN-WEN

ASEAN-WEN is also a regional attempt to cooperate in stopping the trade in illegal wildlife since existing coordination, such as the CITES authorities, may not be enough to control it (Maneesai, 2007: 41). Although several environmental outcomes and better cooperation among ASEAN countries can be pointed out after the establishment of ASEAN-WEN, several challenges can be considered governance gaps that need to be improved for better cooperation.

The first important challenge among others is the lack of funding. This challenge is very obvious especially since the support programme has been phased out. Even though Freeland is still supporting the network, support has decreased because the organization has new obligations to work with other regions. According to Participant E (2015), ASEAN-WEN is facing a financial problem because the network is not a legal

entity; as such, it is not easy for the network to start fundraising. Donors cannot provide funds directly to ASEAN-WEN because it is an unofficial entity (Participant E, 2015). Consequently, other difficulties such as in capacity building or the investigation of cases can occur. Since training can be more effective if 'training is a regularized process that requires the same officers to attend over time' (Elliott, 2007: 8), the absence of funding to organize those workshops and/or the absence of the same person attending the workshops can together result in training to increase officials' capacity being fruitless. In addition, inadequate financial support also causes problems in deterrence since kingpins are not caught. Galster (2015) points out the lack of money, along with a lack of capacity on the part of officials to carry out complicated inquiries as the source of 'zero apparent progress in finding the kingpins' when big seizures such as of illegal ivory occur but nobody is arrested (Galster, 2015).

The second governance gap is regional coordination and communication among agencies at both national and international levels. In order to effectively cut the illegal wildlife trade chains, Schaedla (2011) points out several coordination links, which can close institutional gaps among organizational agencies. These include the link between national and provincial coordination in information sharing and enforcement network within park protection areas, the links between customs border authorities and provincial and national wildlife enforcement authorities around protected areas, the strong coordinating link among national WEN and border liaison offices, the strong coordinating link of the ASEAN-WEN PCU and local and national enforcement authorities, and the firm links among the ASEAN-WEN PCU and other key international bodies such as Interpol, national central bureaux and the WCO Green Customs Initiative (Schaedla, 2011). However, the governance gap in coordination and communication manifests as difficulties and challenges of ASEAN-WEN member countries. The first is information and intelligence management, even in the ASEAN-WEN implementation period (Maneesai, 2007: 41). Inadequate information for the successful interception of illegal wildlife shipments was reported as a challenge by Myanmar and Singapore (ASEAN-WEN, 2010). The lack of equipment and access to necessary resource materials was also part of the failure in cooperation (Shepherd et al., 2007: 5-6), while self-reporting completed by

enforcement agencies also revealed the lack of legal agreements facilitating data sharing as well as cooperative investigations (Schaedla, 2007: 43).

The second difficulty in coordination among agencies at both national and international levels derives from 'jurisdictional and institutional complexity over who can act and who should act' (Elliott, 2007: 3). Elliott (2007) sets out three layers of this difficulty: the problem of determining jurisdiction to implement national legislation and international law; the jurisdictional confrontation among governmental agencies, i.e. environmental agencies and enforcement agencies; and the question of the jurisdictional role of the private-sector agents such as financial institutions in engaging and tracing suspicious transactions that might be linked to environmental crime activities (Elliott, 2007: 3). Minimal levels of intra- and inter-agency cooperation can be seen as an aspect of the problem in dealing with the illegal wildlife trade in the region (Shepherd et al., 2007: 5-6). Within each country, according to Chrisgel Ryan Ang Cruz, who was an assistant senior officer of the ASEAN-WEN PCU, there are gaps in coordination and communication (GMA News Online, 2014). For instance, there was a challenge for Indonesia in establishing joint inspections at ports and airports among the CITES Management Authority, customs and quarantine; on the other hand, Vietnam identified inter-agency cooperation and the language barrier as the areas that needed to be improved (ASEAN-WEN, 2010). Moreover, according to Participant E, if the aim of ASEAN-WEN is to stop or reduce illegal wildlife trade in Southeast Asia, the effectiveness of this effort depends on two variables: international cooperation and the role of the leading country in prioritizing and monitoring species for regional attention. International communication is very important in making the members of network become closer if countries actively communicate. Since currently we have several wildlife species that are highly smuggled, ASEAN-WEN should raise these as issues to cooperate internationally on, for instance, the illegal trade in pangolins, which include several countries on the trade route. Pangolins are exported from Indonesia and Malaysia, from where they are transported through Thailand for consumption in Laos and China. Therefore, if ASEAN-WEN can take particular species as its priority issue, international cooperation in terms of information sharing for forensic investigation starting from exporting countries to destination countries can be potentially developed. This can at least

make illegal wildlife traders aware that there are enforcement authorities taking responsibility on the issue seriously. But this kind of coordination among state authorities does not presently happen within the ASEAN-WEN framework (Participant E, 2015).

The lack of regional focus in setting priorities in controlling particular endangered species can be considered a challenge for regional cooperation and coordination. Although there are huge number of species that are listed in the CITES appendices, particular wildlife species in Southeast Asia – those that are highly demanded include pangolins, Siamese rosewood, tigers, ivory and turtles (Participant E, 2015) – should be prioritized as common concerns for regional cooperation. However, since each country has different priorities and agenda (GMA News Online, 2014; Participant C, 2015), reaching consensus on the major problems is very difficult at the regional level (Participant C, 2015). Further, despite considerable numbers of wild species having to be protected and controlled by states, it is noted that wild plants such as rare orchids are overlooked in favour of endangered wild animals (TRAFFIC, 2015d; Forest News, 2015a). The lack of regional priorities in conserving particular endangered species may not be obvious as a factor that directly affects the difficulty of coordination; however, specific policies and initiatives such as training programmes for increasing authorities' skills and specialization or activities to raise public awareness on the current situation of species in focus are not likely to be developed.

The final governance gap of ASEAN-WEN is the role of the ASEAN-WEN PCU after the support programme has phased out. Sustainability seems to be a critical challenge of the network (Participant H, 2015; Participant E, 2015; Participant D, 2015). Two factors contributing together to the gap are the lack of sustainable financial support and the inactive function of the ASEAN-WEN PCU. When the support programme was running, almost all regional planned activities, including meetings, training programmes and the establishment of the ASEAN-WEN PCU, were supported by USAID (Participant D, 2015; Participant E, 2015). Further, while Thailand allocated office space and support officers to set up the ASEAN-WEN PCU, Freeland supported it by hiring three to five international staff members facilitating the PCU, giving office equipment and developing the ASEAN-WEN website (Participant E, 2015). A

competent secretariat or coordinator is important to effectively facilitate and coordinate activities in the region (Participant H, 2015). During the five-year support programme, the ASEAN-WEN PCU worked independently to facilitate 10 member countries equally without preference to particular countries. However, Participant D (2015) noted that, before the support programme terminated, an agenda on the regional budget to support programmes after the USAID phased out had been raised several times, but there was no conclusion on how members would contribute to the network. In addition, since there was no budget to hire the ASEAN-WEN PCU staff, the PCU is instead run by Thai-WEN. Since the financial support to run the PCU is currently from the Thai government, the budget set for regional activities is weighted towards supporting bilateral cooperation between Thailand and its neighbouring countries rather than ASEAN-WEN ones (Participant D, 2015). Fundraising is needed, but this cannot be an option for ASEAN-WEN owing to its lack of legal entity; support from member countries is needed to sustain the basic function of the PCU. Even though ASEAN-WEN is not dying, it is becoming quieter. This suggests a problem for the sustainability of the programme, which partly derives from the decreased role of the PCU.

5.3.3 Governance gaps at the national level

While the two categories set out above emphasize cooperation at the international level, this kind of governance gap results from individual ASEAN countries' capacities and abilities in translating international obligations into their national policy and laws. These gaps can be grouped and exemplified as follows.

The first gap is insufficient legal laws and penalties to effectively stop the illegal wildlife trade at the national level. Shepherd (2007) observes that, even though Sun Bears and Asiatic Bears are listed in Appendix I of CITES, domestic legislation protecting bears in each ASEAN country varies. Many cannot meet this obligation owing to inadequate legislation and insufficient enforcement. This weakens the effectiveness of CITES since the illegal trade in bears, often carried out across borders, is still going on (Shepherd, 2007: 22-3).

The second one is the presence of national law loopholes. Parties attempt to make their national laws comply with international agreements; however, the compromise between the need to totally protecting particular species from the illegal wildlife trade and the fact that wildlife products are part of their culture and society make it difficult for governments to find a decent solution. This gap can be obviously seen in the case of combating the illegal ivory trade in Thailand. Thailand is one of the eight countries of 'primary concern', needing to develop its national ivory action plan to strengthen the control of trade in ivory and ivory products (CITES Secretariat, 2016a), such as where illegal ivory from Africa is being transported to China, or laundered and carved to sell in the legal market. Threatened by the CITES sanction (The Guardian, 2013b; TRAFFIC, 2014b), Thailand has to take adequate measures to tackle the illegal ivory trade by submitting national plans demonstrating urgent measures – including legislative, enforcement and public awareness actions along with specific timeframes and milestones for implementation (CITES Secretariat, 2016a). However, it is noted that Thailand cannot effectively regulate trade in domestic elephant ivory, and this is considered the legal loophole that thwarts attempts to stop the sale of illegally imported African elephant ivory (WWF-Thailand, 2016). As a result, Thailand has enacted legislation and regulations for better control of the domestic ivory trade and launched the national ivory registration system to monitor the ivory market (DNP Thailand, 2015). However, this seems not to be enough, especially for those who support the total ban of the ivory trade, to prevent the laundering of African ivory. According to Naomi Doak – an expert on the global wildlife trade – although Thailand has passed regulations to stop ivory smuggling and filled loopholes in its respective legal ivory markets, the absence of independent monitoring and a clear, workable enforcement mechanism makes the system pointless (Ives, 2015).

Another example of the governance gap resulted from the national law loophole is the illegal wildlife trade at the Golden Triangle Special Economic Zone (GT SEZ). According to a recent report conducted by the Environmental Investigation Agency (EIA) and Education for Nature-Vietnam (ENV), geographically the GT SEZ is a part of Laos. Despite Laos having a Wildlife and Aquatic Law 2007 and a Penal Law 2005, enabling authorities to investigate and prosecute wildlife crime (EIA, 2015c: 11-13), the area 'has become a lawless playground, catering to the desires of visiting Chinese

gamblers and tourists who can openly purchase and consume illegal wildlife products and parts', including those of endangered tigers, leopards, elephants, rhinos, pangolins, helmeted hornbills, snakes and bears (EIA, 2015c: 2). The trade in the prohibited category of wildlife specimens needs government permission; however, Article 40 of the 2007 Wildlife Law allows the trade from breeding activities of the second generation of prohibited specimens. Therefore, this is a legal loophole that smugglers can use to sell wildlife products (EIA, 2015c: 11-13). Moreover, the legal loophole in Vietnam reveals different aspects of national legislation in combating illegal wildlife trade. More severe penalties are imposed to an offender who smuggles local wildlife than one who smuggles the same species of foreign origin (Thanh Nien News, 2015b). More importantly, a Vietnamese officer from the Central Environment Police Department described how the law prohibits only smuggling of animals found locally; it is hard to deal with the smuggling of species not on the list. Vietnam can easily deal with the smuggling of Javan rhino horns and Asian elephant tusks but finds it difficult to do so with their African equivalents (Thanh Nien News, 2015b).

A third gap is difficulties in enforcing law. Insufficient law enforcement to effectively control the illegal wildlife trade at the national level is often pointed to by scholars (Rosen and Smith, 2010: 24; Schaedla, 2007: 42; Shepherd, 2007: 22; Van Asch, 2013: 80). Many combined factors can be identified as the cause of this kind of governance gap: a lack of political will, insufficient financial and human resources, and poor capacity of authorities in investigating the wildlife crime. In addition, as the ultimate purpose of the convention is to prevent the extinction of endangered species, the protection of wildlife in the field should also be included in implementing law enforcement for stopping the illegal trade (Participant C, 2015). Law enforcement, therefore, covers several procedures, from maintaining the law in the protected areas to sentencing wrongdoers in court; these processes involve different government sectors cooperating and coordinating with each other. Effective law enforcement would be the best tool to deter illegal wildlife trade; unfortunately, this sort of deterrence measure has not been promising in the region recently. Since even a single problem could undermine the effectiveness of law enforcement, the combating of the illegal wildlife trade cannot achieve its results in terms of problem-solving in the near future. On the other hand, gradual improvement can be expected

if the gaps in the law enforcement are closed little by little. Some examples of this kind of governance gap at the national level follow.

In order to conserve endangered species from over-exploitation by trade, enforcement on the field has been constrained by insufficient officers operating to safeguard wildlife from poachers in the protected and/or remote areas. For example, while there was 40 rhino protection units to secure the rhino in Indonesia and Malaysia, twice that number was needed (WWF, 2002). Similarly, the lack of officers to protect wild animals has also been identified as a cause of failure in protecting wild elephants from killing for ivory smuggling in Laos (RFA, 2015). Further, ranger squads are experiencing a general lack of equipment to patrol and are often outgunned by poachers (Channel NewsAsia, 2015c). Inadequate government budgets allocating for field conservation and relatively small amounts of contribution from international community are sources of difficulty in anti-poaching patrols (WWF, 2002: 12). Moreover, in some countries, some domestic laws run contrary to the conservation of threatened species. For instance, although Southeast Asian countries have legislation protecting bears, there are some exemptions. Sun bears can be hunted under licence in the state of Sarawak in Malaysia; Asiatic bears can also be captured by permit in Myanmar (Shepherd, 2007: 22). These factors are challenges for effective enforcement on conserving endangered wildlife on the field.

Insufficient monitoring and regulation of domestic wildlife markets also contribute to ineffective enforcement. Despite there being a law prohibiting the trade of protected species, there are markets across Southeast Asia along international borders, such as the Three Pagodas Pass (the Myanmar–Thailand border), Tachilek (the Myanmar–Thailand border), Mong La (the Myanmar–China border) and Golden Rock (inside Myanmar), that openly sell illegal wildlife and wildlife products in an otherwise legal market context (Van Asch, 2013: 82). For instance, bear parts are illegally sold at markets along Myanmar's borders (Shepherd, 2007: 24) and wild orchids have also been traded illegally without domestic harvest permits at Bangkok's Chatuchak market in Thailand and the Thai borders with Myanmar and Laos (TRAFFIC, 2015d). Furthermore, insufficient monitoring of domestic markets also raises difficulties in proving whether traders have obtained genuine licences. The problem of controlling

the ivory trade in Thailand can be used to explain this obstacle. Thailand is considered to be 'the world's largest unregulated ivory market' and 'home to one of the world's largest and most active ivory carving industries' (WWF-Thailand, 2016). It is also a key place for laundering illegal ivory from Africa into products destined for China (The Guardian, 2013b). Currently, Thailand allows the sale of ivory from Thai domesticated elephants, whereas the sale of ivory from wild elephants is illegal. However, differentiating the ivory of wild elephants from that of domesticated ones is very difficult for enforcement agencies (WWF-Thailand, 2016). As they are unable to detect them, the domestic ivory trade is not properly regulated. This creates a chance for illegal ivory imported from Africa to be traded in legal markets. Therefore, even though the Thai government has a new policy to register existing ivory stocks owned by Thai citizens to better control the ivory trade, how 'to prove a piece is different from the last piece, or where it's from' is still a challenge for law enforcement agencies, according to Naomi Doak (Ives, 2015).

Another problem for law enforcement is also manifested in the process of investigating and pursuing legal action in wildlife crime cases. For example, the involvement of Laos politicians in the illegal ivory trade and other wildlife parts not only proves a hindrance to the progress of legislation on wildlife protection; it also leads to interference by those politicians and high-ranking officials in the investigation. This factor comes together with a deficient investigation of illegal wildlife smuggling cases by customs officials, causing lax law enforcement in Laos (RFA, 2015). In order to deter offenders, investigation should not end with the confiscation of wildlife; legal action should be taken to punish wrongdoers (Reuters, 2015). Moreover, the absence of standard sentencing guidelines for punishment and different penalties across Southeast Asian countries also go against deterring offenders. For instance, Thai national Chumlong Lemthongthai, who was caught and sentenced in 2012 to 40 years' imprisonment for smuggling South African rhino horns into Asia's black markets, had his penalty reduced to 13 years with a fine of around US\$90,000 after bringing the case to the Supreme Court in 2014 (EIA, 2015b: 3). Furthermore, different punishments appear even in the same country. In the case of hunting pangolins in Indonesia, whereas prosecutors demand the maximum of five years imprisonment and a fines of RP500 million to punish offenders in Jambi,

perpetrators get only an average of eight months in prison and fines of only RP10 million in Medan. Comparing the fine with the price of pangolins – each can be valued at around RP500,000–800,000 – some people are induced to go into forests to hunt them (Mongabay, 2015a). As a result, according to Irma Hermawati, a legal advisor from the Wildlife Conservation Society, this failure in deterring violators could be a factor that explains why the network of illegal wildlife business survives in Medan (Mongabay, 2015a).

The governance gap in the process of law enforcement exemplified above shows that the existence of national laws on wildlife protection cannot guarantee the decrease of the illegal wildlife trade if countries do not implement them seriously. Many countries have adequate laws, but they are unimplemented (EIA, 2015b: 3). In contrast, the statistics show the increasing numbers of wildlife confiscated from hunters in the Philippines, which rocketed by 1,600 per cent over the 2010–2013 period, even though the Republic Act 9147, enacted in 2010, criminalized activities involved in the endangered wildlife business (GMA News Online, 2014).

The fourth gap is insufficient resources, as shown below, to support the implementation of national policy and/or laws. Firstly, the lack of financial support is always the most frequent answer explaining why protecting wildlife is far from successful. Governments do not have enough funds, or an adequate legal framework, to combat wildlife crime (Channel NewsAsia, 2015c). In the Fifth Meeting of the ASEAN-WEN in 2010, Brunei, Cambodia, Laos and Myanmar identified funds as one of their key challenges and problems in progressing their activities to better control the illegal wildlife trade and trafficking to achieve their obligations under CITES (ASEAN-WEN, 2010). The scarcity of financial resources usually puts agencies in a hard position in selecting choices ‘based on the likely chances of success not just of interdiction but that seizures will proceed to legal action’ (Elliott, 2007: 7). Secondly, the lack of necessary equipment and overall human resources to support the operations related to protecting wildlife is also a key constraint for countries (ASEAN-WEN, 2010; Shepherd et al., 2007: 5-6).

The fifth governance gap is authorities’ inadequate capacity and/or ability in different processes of wildlife conservation. Good understanding of national wildlife laws,

international conventions and procedures relevant to wildlife cases is crucial for operational activities to combating illegal wildlife trade and trafficking; however, law enforcement authorities lack this (Schaedla, 2007: 43; Shepherd et al., 2007: 5-6). In addition, although particular professional skills are necessary to monitor and investigate wildlife cases, authorities working in Cambodia, Laos, the Philippines and Brunei have limited technical capacity and expertise (ASEAN-WEN, 2010). Further, officials' poor skills in identifying species and differentiating between protected and non-protected specimens are also an important challenge for some Southeast Asian countries such as Myanmar and Singapore (Shepherd et al., 2007: 5-6; ASEAN-WEN, 2010). Moreover, the lack of forensic skills and facilities challenges the national ability to act effectively against the illegal wildlife cases (Maneesai, 2007: 41; ICCWC, 2013). Therefore, specialized training to improve authorities' capacity – such as DNA/forensics training and sample collection and strengthening of existing facilities – is necessary for better management of illegal wildlife crime issue (ICCWC, 2013).

Several difficulties in enforcing and implementing environmental laws in Southeast Asia can be simply seen in the lack of political will among governments to give priority to environmental issues. In many cases, governments are not willing to act since they do not consider wildlife conservation to be important; thus, the issue is not prioritized and this results in weak enforcement (Suksuwan, 2015). Further, some countries consider wildlife and forests to be state commodities and politically connected to elite interests (The Straits Times, 2015p). However, despite these challenges, there are NGOs and policy networks that operate to improve the effectiveness of the CITES agreement and to change the environmental situation and outcomes in the region.

5.4 The role of NGOs and their networks in governing illegal wildlife trade issue

While the role of individual NGOs in environmental governance is obvious, their networks among them have not been much emphasized for international environmental outcomes in Southeast Asia. This section firstly investigates the role of NGOs at the national and international levels. Exploring the role of NGOs in closing governance gaps, some key NGOs can find political opportunities to work with governmental departments and agencies and/or intergovernmental organizations.

Secondly, examining those key NGOs in closing governance gaps at the different levels of governance reveals their connections with other actors in collectively working to support environmental policy and laws. Policy networks are formed among these actors, who collectively operate to achieving the CITES goals. It should be noted that the main focus of this chapter is the policy networks in governing transnational illegal wildlife trade in ASEAN countries. However, since ASEAN cooperation aims at better implementation of CITES, examining the key NGOs' connections with other intergovernmental bodies (such as UNODC Southeast Asia, and Interpol) – and/or the subregional cooperation initiatives (Heart of Borneo, for example) that they have engaged outside the ASEAN cooperative framework – cannot be avoided. Moreover, the purpose of CITES is to balance the conservation of biodiversity and the economic benefits from the wildlife trade; therefore, policy networks in governing transnational illegal wildlife trade have to include actors whose work is dedicated to the conservation of endangered wildlife species in Southeast Asia such as elephants, tigers and pangolins. These actors, focused on particular at-risk species, also create information sharing links among them and can be considered parts of policy networks in governing transnational illegal wildlife trade issues.

5.4.1 The role of NGOs in supporting IGOs and states to meet the CITES obligations

In order to support CITES, NGOs are working at different levels of governance to prevent the unsustainable exploitation of biodiversity. This part reveals the critical roles of individual NGOs in closing governance gaps at the global, regional and national levels. This allows us to see the links between NGOs, states and/or IGOs in operations to achieve better environmental outcomes at different levels.

5.4.1.1 The role of NGOs in supporting CITES

At the global level, TRAFFIC is the most important international NGO that directly engages with the CITES Secretariat in monitoring wildlife trade. TRAFFIC is the wildlife trade monitoring programme of WWF and IUCN and works closely but independently with them and the CITES Secretariat to ensure that the trade in wildlife is not a threat

to conservation (Rosen and Smith, 2010: 25; Schaedla, 2011). Since the key role of TRAFFIC is to monitor wildlife trade, its works consist of field monitoring, desktop research, advocacy works, enhancing capacity building and assisting enforcement (Schaedla, 2011). TRAFFIC helps the CITES Secretariat in activities including investigating illegal trade, conducting studies of trade, and suggesting plans of action for sustainable and responsible management on wildlife trade (Rosen and Smith, 2010: 25). According to Participant D (2015), the main obligation of TRAFFIC for the CITES Secretariat is to submit independent reports about the illegal wildlife trade in countries in parallel to national reports done by member countries. Report conducted by TRAFFIC does not only include government seizures; it also provides information derived from its fieldwork in black markets, a kind of information that may not be included in reports done by governments (Participant D, 2015). Therefore, reports done by TRAFFIC provide the CITES Secretariat with a set of data complementary to the one conducted by states, which might contain more bias in the interpretation of their own progress of law enforcement. This creates a more realistic picture of the global illegal wildlife trade situation; the better understanding of the problem would bring about a better solution for cooperation.

Further, TRAFFIC serves as important information databases for the conservation community. For example, TRAFFIC's seizures records are used for analysing trade routes and aid countries in reducing demand on particular endangered species (WWF, 2002: 9). In addition, the data gathered by TRAFFIC is a foundation for further studies. For instance, it helps to identify where the hotspots for illegal wildlife trade are and what needs to be done to prevent transboundary infectious diseases (Rosen and Smith, 2010: 24). Furthermore, information that TRAFFIC staff collects from markets has been reported to wildlife authorities and the public. This sometimes leads to seizures after reports highlight the issue and raise the issue to be prioritized at the national level. For example, birds were seized from East Java ports after TRAFFIC revealed the unsustainable trade of songbirds during the Asia Song Bird Trade Crisis Summit (TRAFFIC, 2015a).

TRAFFIC has a very critical role in monitoring illegal wildlife trade. Since the organization collects information by going into wildlife markets, information derived

from fieldworks can be used in analysing the effectiveness of states' law enforcement on the illegal trade of wildlife. In Southeast Asia, TRAFFIC observed the trade of endangered species parts such as bear bile along the international borders of Myanmar (Shepherd, 2007: 24) and ivory in Thailand (Ives, 2015). At the global level, TRAFFIC is responsible for the Elephant Trade Information System (ETIS). According to Participant G (2015), TRAFFIC has an influential role in monitoring global illegal ivory trafficking. Parties have to report their seizures to ETIS. The information includes the country of origin, transit countries through which illegal ivory passes, country of destination and where stocks have been caught. Then TRAFFIC assesses this information and records the transit countries that fail to detect those tusks. The records are used to evaluating the improvement of the law enforcement of relevant countries. And if those countries do not have a practical plan to control the illegal ivory trade domestically and/or stop the illegal shipments at their ports, they may face trade sanctions (Participant G, 2015).

5.4.1.2 The role of NGOs in supporting ASEAN and ASEAN-WEN

The contribution of NGOs in combating the illegal wildlife trade in Southeast Asia has been recognized as adding value to the work of governments in horizontal forms of governance (Elliott, 2007: 7). In the Asia-Pacific Economic Cooperation Pathfinder Dialogue with ASEAN and Pacific Islands Forum Partners on Corruption and Illicit Trade, many agencies highlighted the crucial roles of NGOs in raising public interest in the issue, providing capacity building, and communications support (ARREST, 2013a). Since cooperation can happen at both policy and operational levels (Elliott, 2007: 6), this part addresses the role of NGOs in two broad aspects: in terms of policy by increasing the importance of the issue at the regional cooperative framework, and in terms of operations through fostering better implementation of ASEAN-WEN.

The role of NGOs in terms of initiating policy cannot be obviously seen. According to Participant G, parties to CITES already have policy guided by the convention; therefore, NGOs mostly engage at ASEAN-WEN meetings to offer what they can in terms of fostering implementation (Participant G, 2015). However, in order to leverage the wildlife trade issue and gain more attention from states' representatives, there was an attempt to move the issue from being environmental

to security-related by considering it a transnational organized crime. According to Sallie Yang, a senior programme officer working for Freeland, the movement in this way would move the main handling of the issue from the agriculture, forestry and environment ministries to the national security ministries, which can apply more teeth and/or more resources in managing wildlife crime in addition to human trafficking and drugs (The Straits Times, 2015p). Although there are difficulties in the various definitions of wildlife crime, as well as different laws and penalties among ASEAN countries, it is hoped that working in this way might increase the effectiveness of the cooperation through information sharing and law enforcement backed by the United Nations Convention Against Transnational Organised Crime, which has been signed by all ASEAN member countries (The Straits Times, 2015p).

Recognizing the difficulties derived from the various legislations, the Eighth ASEAN Inter-Parliamentary Assembly (AIPA) Caucus tabled wildlife crime suppression as a special topic for the first time to seek potential legislative improvements to combat the issue. At the meeting, efforts in bridging the gap between existing international bodies (including ASEAN-WEN, AIPA, ASEANAPOL and ASEAN Senior Officials Meeting on Transnational Crimes) and harmonizing legal cooperation were mentioned as means to make progress on policies on wildlife protection. Freeland was invited to the caucus to present on the legal frameworks and toolkit compendium. In addition, Freeland has been a formal partner of AIPA on wildlife trafficking issues and works closely with AIPA to conduct research, engage members of parliament to advocate better policy on natural protection, as well as editing the *ASEAN Handbook on Legal Cooperation to Combat Wildlife Crime*, which stresses the importance of regional priorities for legislation harmonization (AIPA Secretariat, 2016). Prior to this AIPA meeting, delegates of the AIPA had been sent into the field to discuss with park rangers the main problems they encountered every day. The event aimed to gain more support from politicians through better understanding of those problems in implementation. IPA delegate and Philippine MP Maria Lourdes Acosta-Alba recognized the importance of the harmonization of legislation across ASEAN, which will take time; however, Steve Galster, Freeland's founder and executive director, stressed the necessity to strengthen laws before trade barriers are removed when the ASEAN Economic Community comes into effect (Channel NewsAsia, 2015c).

The role of NGOs is more obvious at the operational levels, especially in ensuring the success of ASEAN-WEN implementation. Freeland and TRAFFIC Southeast Asia actively engaged in supporting the support programme, funded by the USAID. Neither organization has any formal agreement with ASEAN; however, they have supported a resource available to ASEAN-WEN players in several ways (Schaedla, 2007: 44). In supporting regional cooperation in combating illegal wildlife trade, Freeland is considered a lead agency engaging in ASEAN-WEN, a central actor in the public-private partnership, as well as an honest broker in getting people's attention (Elliott, 2007: 6-7). On the other hand, TRAFFIC has also acted energetically in supporting the network in Southeast Asia (Sukswan, 2015). TRAFFIC bolsters the work of wildlife enforcement networks in several ways, including support for meetings and workshops, capacity building and technical assistance. TRAFFIC engages with ASEAN-WEN by sponsoring and co-sponsoring ASEAN-WEN conferences and workshops to promote coordination and commitment among governmental agencies within ASEAN countries, as well as other external governmental bodies, for example China's National Interagency CITES Enforcement Coordination Group and the East and Southeast Asia Biodiversity Information Initiative (ESABII) (TRAFFIC, 2016a). Further, TRAFFIC supports capacity building for ASEAN-WEN under ESABII and subregional cooperation such as the Heart of Borneo Initiative to combat illegal trade in marine turtles and other marine species (Schaedla, 2011).

Technical assistance, as well as the development of technology and sciences, is also a critical contribution that NGOs make to increase regional and national authorities' capacities to govern illegal wildlife trade. For example, TRAFFIC has developed an identification sheet to help government agencies' work easier in their search for contraband wildlife (TRAFFIC, 2016a). In addition, the DNA forensic tool, a collaborative project between the Thai government and TRAFFIC to help trace the origin of ivory, has been developed and trialled to examine ivory products commonly available in local markets (Wildlife News, 2015). Furthermore, Freeland has launched an application called WildScan, which was collaboratively developed by academics, law enforcement, scientists and other wildlife specialists from IUCN, the US Fish and Wildlife Service (USFWS), the Zoological Society of London, the World Animal

Protection, and the Cummings School of Veterinary Medicine at Tufts University. This application allows users, especially front-line wildlife law enforcement agencies, to input information of the animal in question to quickly identify the species; it also provides an easy report function designed for the users to report wildlife crimes confidentially or publicly to appropriate law enforcement authorities through secure servers (USAID, 2014; Freeland, 2016g). The device is available for free in English, Thai, Vietnamese, Khmer, Bahasa Indonesia (Freeland, 2016f; Freeland, 2016g; Freeland, 2016e).

5.4.1.3 The role of NGOs at the national level

At the national level, NGOs play a critical role in supporting environmental policy and laws. On the one hand, they generally and obviously criticize governments' policy and law once it negatively affects the environment and/or there is any legal loophole on environmental and conservation policy. On the other hand, some NGOs calmly collaborate with the government in developing, implementing and enforcing environmental law and policy.

NGOs always actively respond to governments' environmental policy when they find any legal loopholes on it. According to Participant F (2015), another key reason that the Seub Nakhasathien Foundation has to raise strong objections to controversial draft amendments is because of several legal loopholes. The drafts are adopted from previous laws that were written 10 years ago. They are not up to date. More importantly, the environmental conditions and contexts that have been continuously changed by time are not considered and adjusted. Therefore, if these two laws are passed it will severely damage to the forests and wildlife (Participant F, 2015). Another example of NGOs' role in finding flaws on national laws and regulations on wildlife is their observation on the ivory registration system in China; this system was later adopted in Thailand. According to IFAW (2006), China's ivory registration system could not (in 2004) lead to effective implementation; in addition, there has been an increase in both ivory processing and retail stores. IFAW also finds that the legal loopholes present challenges in law enforcement; in contrast, illegal traders seem to know very well about the loopholes in government trade controlling system (IFAW, 2006: 3-4). As a result, the ivory trade laws in Thailand are considered tiny progress

in a big fight against elephant poaching (Ives, 2015). NGOs' position in reacting loudly to national environmental policy is intended to gain public attention. However, this can lead to the perception that NGOs are working against the government despite, in several cases, complementarily working with national environmental departments and law enforcement agencies.

NGOs obviously play several roles in supporting conservation policy and national agencies to confront the illegal wildlife trade issue at the national level. Some examples can be revealed. Firstly, NGOs support government agencies in developing states' instruments to comply with international agreements. This crucial role of NGOs can be seen in the development of legal tools to control the illegal trade in ivory in Thailand, where TRAFFIC and WWF-Thailand have closely engaged with Thai government agencies. In Thailand, TRAFFIC, WWF and Freeland are the main NGOs concerning on the illegal wildlife trade issue; they keep an eye on a new wildlife issues and then provide some recommendations to the government to respond to it (Participant E, 2015). According to Participant G (2015), TRAFFIC and WWF have been invited to every meeting in developing national ivory action plans. WWF and TRAFFIC are recognized as government allies, making a positive contribution to the progress on government measures to control the wildlife trade issue (Participant G, 2015). TRAFFIC closely works with the Department of National Park, Wildlife and Plant Conservation. The key tasks include assisting the Thai government in the process of drafting the Ivory Trade Act and a national action plan to control the trade in ivory, making comments on revised drafts to close the legal loopholes, giving technical assistance on matters of law and providing statistical information in depth on the scale of the ivory trade in domestic markets and dealers (Participant D, 2015). WWF is not only a key observer in the CITES meeting; it is also very active in the ivory trade issue in Thailand (Participant E, 2015). According to Ongsiriwittaya (2015), since 2012 WWF has been working hard in mobilizing the wildlife trade issue to move to the top of the agenda in the relevant countries. The issue must be included, at least, in ministerial and/or cabinet meetings. Thailand is one of the countries of primary concern for CITES on the trade of illegal ivory; therefore, WWF is working at full scale to stop the trade in ivory. Initially, WWF supported the total ban of the ivory trade; however, this goal does not seem to be possible in the near future. Since the Thai

government has decided to control the ivory trade by law, the government has to amend its national laws into conformity with CITES. WWF works closely with the Thai government and provides suggestions, for example, on the drafts related to the sentencing guidelines, fines and permit fees. Further, WWF is the only NGO involved in the national committee of CITES, which consists of delegates from the Ministry of Natural Resources and Environment, the Ministry of Foreign Affairs, Thai Customs, the Immigration Bureau, the Airport of Thailand, Thai Airways, the government public relations department and the Department of Livestock Development. Therefore, WWF has constructively engaged with the government, from the policy level to the operational one (Ongsiriwittaya, 2015).

In order to engage with the government, a moderate approach is identified as a key strategy that WWF and TRAFFIC have in common. WWF and TRAFFIC take a similar approach in engaging with the Thai government in developing policy and national law to stop the ivory trade. These two NGOs apply a moderate approach to work with the government. According to Participant D (2015), TRAFFIC has changed its method of engaging with the Thai government. Previously, the government was attacked by TRAFFIC's finding on the illegal wildlife trade. However, TRAFFIC has changed tack to work with the government by reporting findings directly to government authorities with the questions that might be asked by the public before publishing the findings. Working in this way helps improve relations because the government does not feel humiliated in front of the public; at the same time, it prepares the authorities on how to solve the issue. Moreover, TRAFFIC is willing to provide updates on the progress of the government work through its channels (Participant D, 2015). Similarly, WWF has engaged the government through the existing formal channels. In addition, WWF has contacted the Ministry of Natural Resources and Environment, which is the focal point for providing information. WWF understands and respects the government's position. One feature that makes WWF different from some NGOs is its realistic approach. For example, in the case of the ivory trade, although the ultimate goal of WWF and some NGOs is a total ban of the trade, WWF recognizes that that goal is nearly impossible in the context of Thai society. Therefore, WWF works with the government and carefully considers the extent to which each authority can do within his power and jurisdiction. The organization thus gradually gains trust from the

government (Ongsiriwittaya, 2015). Participant E (2015) confirms the critical engagement of WWF in promoting the illegal wildlife trade issue. Although the government cannot promote the banning of the ivory trade, WWF still has a role in assisting the government to develop national measures to resolve the illegal ivory trade issue. Furthermore, WWF also has a communication role in promoting new environmental policy to the public (Participant E, 2015).

Furthermore, a moderate approach is also applied by WWF in Malaysia. According to Suksuwan (2015), WWF was invited by the Malaysian government in a consultation process when a new policy was issued or introduced. From his experience, the new Wildlife Conservation Act in 2012 and policy documents such as the National Tiger Conservation Action Plan were reviewed by WWF. WWF also worked on the National Physical Plan (land use plan) for peninsular Malaysia and the Malaysian Central Forest Spine master plan, which is about linking the different forest landscapes in peninsular Malaysia. Beside WWF's moderate approach, Suksuwan (2015) points out to a good mixture of organization's different skills including wildlife biology, policy people, GIS and environmental education. This covers almost every aspect of conservation, whereas other, smaller NGOs may not have enough capacity (Suksuwan, 2015).

The second complementarily role of NGOs in supporting environmental law and policy can be seen from their joint collaborations with governmental departments and agencies for better implementation and law enforcement. NGOs contribute to the field conservation operation. In the state of Johor, Malaysia, WCS coordinated other five state agencies (including national parks, the police, the Forest Department, the Wildlife Department and the plantations) on a joint patrol programme called 'Tiger Forever' to protect tigers and their prey species in the area such as bearded pigs and muntjacs (Participant A, 2015b). According to Participant C (2015), in countries where WCS functions, the organization actively works closely with government agencies in conservation science and wildlife. In Thailand, WCS works with the Department of National Parks, Wildlife and Plant Conservation (DNP). WCS is a science-based organization that does a lot of field science and field conservation works, for example conducting surveys on endangered species and assessing habitat integrity. In addition, WCS provides advice on protected area management and

enforcement issues related to wildlife on the ground. Moreover, it provides rangers with training to do better enforcement, better patrolling and better collection of data (Participant C, 2015).

Furthermore, NGOs help strengthen law enforcement by collaborating with national agencies in seizure operations. In Vietnam, WCS and ENV coordinated the Central Environment Police to arrest a Ho Chi Minh City pet shop owner who smuggled wild animals from Thailand for sale in Vietnam and advertised other rare species trade on the Facebook page of his shop (Thanh Nien News, 2015a). Another case is the role of WCS's Wild Crime Unit in helping the Indonesian National Police seize a large shipment of 13.8 tons of frozen pangolins smuggled through Indonesia and headed for China (WCS, 2015). In Cambodia, Wildlife Alliance has dedicated its two permanent staff to fully support the Wildlife Rapid Rescue Team – an animal police unit – serving as Cambodia's national task force for ASEAN-WEN (Wildlife Alliance, 2017).

While this information and evidence confirms the role of NGOs in governing environmental policy and law in wildlife conservation, this should not lead to the conclusion that they are working individually, fragmentally or without cooperation with other organizations. It can be noticed from the role of NGOs – which have supported the achievement of CITES at different levels – that some of them can engage with national governmental agencies, ASEAN-WEN and the CITES Secretariat. They have also formed information sharing links with other NGOs at different levels and across levels. Exploring the key NGOs in this part is a foundation before examining the links between them, which are presented in the following section.

5.4.2 Policy networks in combating the transnational illegal wildlife trade

While the previous section identifies the individual NGOs in joint collaboration with states and IGOs, this section reveals their connections with other NGOs at different levels and across levels in collectively operating to strengthen the CITES monitoring system, regional law implementation and enforcement, and national environmental policy and laws. This section firstly presents how international NGOs, WWF, TRAFFIC, WCS and Freeland have formed their structural network within their structural

organization (WWF-Global, 2017; Freeland, 2015a; WCS, 2017b; TRAFFIC, 2008d). And, secondly, since these actors do not always act alone, these create information sharing links among those who collectively operate to achieve their policy goal. Policy networks are established to support wildlife conservation policy and governing illegal wildlife trade.

International environmental NGOs share similar means in gathering information on the species in their concerns and use their expertise to engage with governments. Defined links as information and resource sharing, the connections between actors at different levels and across boundaries can be identified. TRAFFIC, WWF, IUCN, WCS and Freeland have regional and local offices around the world. Their bases in different countries monitor the environmental situation and keep an eye on development policies affecting the environment and wildlife habitats. In addition, in Southeast Asia, these international NGOs have a key contribution to the improving of environmental policy. For instance, WWF can give a consultation to the government partners on the policy problem because it has political understandings, intelligence and scientific knowledge and databases on the best practices and lessons learned, which are derived from its experiences working with other partners in different parts of the world (Ongsiriwittaya, 2015). Apart from TRAFFIC and WWF, which have offices in several countries across Southeast Asia, WCS also works in similar way in collecting scientific data on protected areas such as in Indonesia and Thailand. In Indonesia, WCS made records on the populations of rare animals in the park including Sumatran tigers, rhinos, elephants and orangutans and reported the decreasing number of them over the past 20 years (The Jakarta Post, 2015s). In Thailand, WCS has conducted research and collected information on hunting and on the trade in species of concern such as tigers; the organization attempts to use this solid information and science-based approach to advise policymakers at the national level (Participant C, 2015). Furthermore, emphasizing regional wildlife law enforcement, Freeland's offices in Southeast Asia – including Vietnam, Thailand and Indonesia – have organized meetings and training courses to promote regional joint efforts through information sharing and best practices among officers and partners from different countries (Freeland, 2015a). Similar attempts resulting from the network of NGOs

include the achievement of recommending the CITES COP17 to make pangolin species fully protected by Appendix I of CITES (Freeland, 2016b).

It can be seen that, at the international level, environmental NGOs have a strong role in providing scientific data in different countries to support the monitoring mechanism of CITES. Within their organization, there are branches around the world to collect information and work with other NGOs and/or government partners to make progress on wildlife conservation. These NGOs have been invited regularly to the CITES COP (Participant G, 2015) as well as the Consortium of the ICCWC (ICCWC, 2013). From the ICCWC perspective, representatives from the NGO community contribute their experiences, lessons learned and recommendations for better implementation in fighting wildlife crime (ICCWC, 2013); however, from some states' points of view, they complain that NGOs play too much of a role in influencing the CITES meetings (Participant G, 2015).

Information sharing among NGOs can be observed from their projects in updating databases on populations of concern to their organizations. For example, EIA acknowledges information contributed by TRAFFIC, WWF, IFAW and other NGOs in different geographical areas to update the map and data set on illegal wildlife products including rhino horns (EIA, 2017e), elephant ivory (EIA, 2017c), helmeted hornbills (EIA, 2017d), pangolins (EIA, 2017g) and tigers and Asian big cats (EIA, 2017f). Since natural habitats of wild species locate in different areas and some species are more threatened by consumption demand, this also creates information sharing across organizations whose concerns are based on those particular species. For example, tigers and big cats are prioritized by WCS, WWF, TRAFFIC, Wildlife Alliance, Freeland, EIA and EVN. Their offices in different locations in Southeast Asia work closely to monitor the species populations, farming and breeding, illegal trading in black markets, and the improvement of law enforcement in relevant countries. These NGOs also work as alliance in the Global Tiger Initiative, which aims to double the global number of wild tigers by 2020 (GTI, 2008). Likewise, in the case of sharks and rays, TRAFFIC, WWF, WCS, IUCN, Shark Advocates International and the Shark Trust work together to develop 10-year strategies to stop the decline of sharks and rays (TRAFFIC, 2016b).

Resource sharing among NGOs for the better implementation of environmental conservation policies can also be found from NGOs' projects in implementing conservation policies in protected areas that are home to several endangered species. Apart from supporting ASEAN-WEN, NGOs have also bolstered two subregional initiatives: the Heart of Borneo (HOB) and the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF). These activities also represent connections among NGOs in conserving wildlife species in the region.

The HOB initiative was proposed by WWF and led to the governments of Brunei, Indonesia and Malaysia signing a declaration to conserve and sustainably manage the core area of Borneo, where most of the forests are located (Sukswan, 2015). TRAFFIC collaborates with WWF to support HOB, initiated by the three governments with the aim of protecting the last vast contiguous natural Bornean forest. TRAFFIC continues support capacity building efforts of this framework (Schaedla, 2011). Both WWF and TRAFFIC were involved in the meeting to discuss wildlife trade issues as well as strategic outputs and action plan suggested for further collaboration (TRAFFIC, 2015a). Currently, WWF-Malaysia and WWF-Indonesia are playing a role in supporting coordination between the governments of Malaysia, Indonesia and Brunei (Heart of Borneo Rainforest Foundation, 2013a; WWF-Malaysia, 2016). In addition, this initiative also attempts to create the Borneo Hub to coordinate and map information on research station projects, concession boundaries and communities databases among action groups under one roof (Heart of Borneo Rainforest Foundation, 2013b). This exemplifies how an NGO supports the governments' initiative through implementing conservation project; it also attempts to set up a database on wildlife conservation by collaborating with civil society actors, communities and businesses to participate in and support sustainable management in the protected area.

On marine conservation, Conservation International (CI), the Nature Conservancy (TNC) and WWF are working together with the Coral Triangle centre, local NGOs and governments of Malaysia, Indonesia, the Philippines, Papua New Guinea, the Solomon Islands and Timor-Leste to protect the Coral Triangle under the CTI-CFF cooperative framework (WWF, 2009; UNEP, 2013: 8; CTI-CFF, no date). In

emphasizing the conservation objective, the Marine Protected Areas Governance programme was established and got financial and technical assistance from WWF, CI, TNC and WCS to support the Indonesian government in improving marine protected areas management, which includes activities such as support local partners in monitoring and patrolling the areas, collecting data on endangered marine turtles and preventing destructive fishing (WWF, 2017a; WWF, 2017b).

It can be noted that, while international NGOs can find opportunities to engage with governments and other NGOs through international species-based initiatives and protected areas collaborations, this creates transnational information sharing links among them and national or local partners to support monitoring systems on endangered wildlife species. In addition, it can mean that, aside from ASEAN-WEN, NGOs have more options to engage with other international frameworks or other networks in protecting wildlife and/or monitoring illegal wildlife trade in the region. This assumption is supported by Ongsiriwittaya's explanation of WWF's considerations in working with ASEAN. She comments that engaging with ASEAN framework is unlikely to be the best option. Since ASEAN countries insist on the principle of non-interference on domestic issues and environmental issues are always less important than other issues, NGOs engage with other international bodies, which are more constructive and active on environmental issues. NGOs will choose to engage with the body that provides more opportunity for the organization's success in conducting advocacy with less resources allocated to that activity (Ongsiriwittaya, 2015).

While species-based collaboration among NGOs provides several options for NGOs to create their networks, it is not easy for NGOs to specify which one should be the centre of the network. According to Ongsiriwittaya (2015), each NGO has its own priority, approach and goal in conservation, while intergovernmental bodies – which her organization engages with – have different mandates and jurisdiction. From her experience in working with other NGOs at the national level, she notes that there are not many NGOs working to protecting the environment; they generally know what each organization is working on and what each other's standpoints are. Complementary work with environmental agencies in protected areas in different

parts of Thailand can be a good example. NGOs acknowledge each other in their responsible areas. They do not try to work with a department that has already been supported by another, but they instead open up new areas to bolster other agencies in different parts of the country. Therefore, each NGO works individually according to its organizational mandate, but their works are not contradictory (Ongsiriwittaya, 2015). However, this does not mean that there is no network among them. Although they are working in different places to fulfil their organization's goal, information sharing for monitoring national policy related to wildlife conservation and illegal wildlife trade exists. Ongsiriwittaya (2015) and Participant F (2015) confirm information sharing among NGOs. Since NGOs work to monitor any matter affecting the environment in different geographical areas, together they work as an alliance to raise their voice when an environmental crisis occurs. The kind of alliance depends on the issue (Participant F, 2015). For example, an open letter jointly signed by NGOs in Thailand was sent to the government to include the wildlife agenda into the national agenda (Ongsiriwittaya, 2015). Participant F (2015) also notes that environmental issues are, on the one hand, an opportunity for NGOs to gather together to raise the importance of the issue to the public. On the other hand, the increasing number of environmental issues is also a crucial condition that obscures them from forming a strong alliance. This is because NGOs are facing challenges from limits of resources resulting from the lack of financial support in operations and recruitment (Participant F, 2015).

Apart from supporting agencies to better implement and enforce environmental policy, NGOs have formed a loose network at the national level to monitor national development policy, which potentially causes harm to wildlife habitat. This role is obvious in the NGOs' work on conservation or protected areas. For instance, when Cambodia's vast Virachey National Park in Cambodia was handed out for mining exploration, an NGO called HabitatID – supported by other three local NGOs – tried to persuade the Khmer government to end the mining permit by presenting a video recording of rare species found in the national park to show that the area should be protected to serve as a home for wildlife (Mongabay, 2015m). There was a similar example in Thailand, when the Seub Nakhasathien Foundation found that '[t]he Department of National Parks, Wildlife and Plant Conservation (DNP) is attempting

to pass controversial draft amendments to two laws that will allow national parks to be leased to private resort operators and the wildlife trade to be legalised' (The Bangkok Post, 2015b). The seminar, entitled 'Amending forest and wildlife laws for whom?', was held by the foundation itself, along with the Thai Journalists Association and the Thai Society of Environmental Journalists. Learning from the failure of the government's attempt in integrating tourism into the management of national park in the past, participants in the seminar had strong opposition to this commercialization of the parks in the name of tourist promotion. The strong opposition in the seminar led the DNP's representative to announce that a public hearing on the proposed amendments was planned later in the month (The Bangkok Post, 2015b).

The network of NGOs can be generally found at the national level in campaigns to reduce demand on wildlife consumption by raising people's awareness on the importance of the wildlife issue. Campaigning on wildlife protection can often be seen in countries across Southeast Asia. For instance, it is found that the WildAid's campaign on shark-fin resulted in a 50–70 per cent reduction of the shark-fin trade among consumers in Asia in some markets (Wyler and Sheikh, 2008). Freeland launched a campaign called iTHINK to encourage behavioural change in Thailand, Vietnam and China to persuade people to stop the consumption of endangered species (Freeland, 2016a). With the attempt to reduce commercial demand, which is the key factor driving poaching, celebrities, politicians and doctors have joined the campaign to protect wildlife and change people's beliefs that rare animal parts can cure diseases (Thanh Nien News, 2015c; Freeland, 2016a). In particular in Vietnam, which is a major market for wildlife consumption, the Vietnamese government, with support from the USAID-funded ARREST group, convened a meeting to form a coalition to address the wildlife trade in Vietnam. NGOs including the Vietnam Association for Conservation for Nature, the Asian Turtle Program, PanNature, Freeland, the Wildlife Conservation Society and the World Society for the Protection of Animals have together developed communication strategies for reducing the illegal consumption of wildlife; a detailed strategic communication plan was drafted (UNEP, 2013: 3). Further, with the attempt to reduce the demand for wildlife resulting from traditional medicine, TRAFFIC and the National Center for Health

Communication and Education of the Ministry of Health (T5G) of Vietnam jointly organized workshops for 600 scientists, professors and traditional medicine students to highlight their roles in creating sustainable and wildlife-friendly practices (TRAFFIC, 2015b).

Applying the network approach to identifying policy networks governing the illegal wildlife trade issue in the region, it is obvious that, even though NGOs can individually operate to support wildlife conservation and policies that tackle the trade in illegal wildlife, they are collectively complementary in their work to support the monitoring system of CITES in the broader picture. Policy networks are composed of actors at different levels of governance who are linked by information and resource sharing activities. Although the networks among national NGOs are not distinct owing to their responsibility to support government agencies in different areas, their contributions in gathering field evidence on wildlife populations, monitoring national law enforcement and increasing capacity building to state agencies make them parts of policy networks. Since some international NGOs have their offices based in different countries, on-the-ground information is sent to their headquarters. Then, this information can be disseminated to other network actors to be applied further in proposing policy recommendations to government actors and IGOs at different levels. Moreover, collaborations between NGOs for better implementation can also be pointed out. International NGOs – especially EIA, TRAFFIC, Freeland and WWF – which have offices based in various countries, can always find alliances at the national level to improve states' agencies capacities. For example, EIA and its partner offer hard intelligence to Interpol and WCO (EIA, 2017a); similarly, WWF-Malaysia and TRAFFIC-Southeast Asia (TRAFFIC-SEA) work closely with the Department of Wildlife and National Parks to fight a secret army of poachers in Malaysia (WWF-Malaysia, 2017). Policy networks, therefore, take a critical role in supporting national governmental agencies, increasing the ability of ASEAN-WEN in regional implementation and law enforcement of CITES, and providing solid evidence for the CITES to strengthen the monitoring and compliance mechanism.

5.5 Conclusion

Southeast Asia is rich in biodiversity. However, these natural resources, especially wildlife species, are threatened by unsustainable exploitation. The region has become a hotspot for illegal wildlife trade and trafficking. Although there is intergovernmental cooperation through CITES as well as ASEAN cooperation to tackle the illegal wildlife trade, this is insufficient and ineffective. At the international level, there are information gaps resulting from IGOs' incomplete information on states' enforcement of CITES. This weakens the ability of CITES to legitimately apply sanctions to non-compliant states. In addition, the problem of communication and coordination among law enforcement agencies can be pointed out at both global and regional levels. Although ASEAN-WEN was established to better implement and enforce CITES at the regional level, this difficulty is only partly resolved. In addition, inadequate resources of ASEAN-WEN in activities for improving agencies' capacity bring about governance gaps in regional implementation and law enforcement. At the national level, governance gaps include the inability of each individual country to formulate, implement and enforce national law and policy to effectively stop the illegal wildlife trade. The absence of political will can be a key explanation for why sufficient resources are not allocated to implement environmental policy on wildlife conservation or operations to fight illegal wildlife syndicates.

Exploring governance gaps in lengthy international policy process for tackling illegal wildlife trade, it is found that several NGOs can find opportunity in complementary work with IGOs, states and national environmental departments to close the governance gaps. At the national level, NGOs individually and collectively act in the form of networks, supporting government agencies to develop policy and laws, identify legal loopholes, implement conservation projects, increase state agencies' capacity and supply their expertise and technical assistance to governmental officials, for example. NGOs working in and responsible for different areas also form networks in monitoring national development policy that potentially causes negative effects for the environment. At the regional level, TRAFFIC, Freeland and Wildlife Alliance are included in ASEAN-WEN. With support from these NGOs, communication and coordination among ASEAN members has been improved through meetings and workshops. This results in better implementation of CITES, for instance in the

increased seizures of illegal wildlife at international ports and borders. At the global level, NGOs support the monitoring system of CITES by collecting and analysing information on wildlife situations and reporting the progress of wildlife law enforcement of states.

Linked by information and resource sharing for better monitoring and implementation of wildlife conservation and anti-illegal wildlife trade policy, policy networks are formed at different levels and across levels. While some NGOs' organizational structures have constructed their own networks by linking their national and regional offices with their headquarters, these offices have also collectively worked with other NGOs and partners to meet particular wildlife policy goals. Further, the networks can be based on particular endangered species in relevant countries where species' and/or their natural habitats are severely threatened. Working with states, IGOs and environmental or law enforcing departments to close governance gaps, NGOs can find opportunities to engage with those actors. Therefore, links among them are present. NGOs in policy networks take two roles in supporting networks' operations for improving the effectiveness of the CITES regime. Firstly, they take a crucial role in monitoring wildlife conservation and sustainable wildlife trade policy. The networks of NGOs support the CITES monitoring system by collectively transferring their analysed reports and recommending policy to the CITES Secretariat. At the national level, they also keep an eye on national development policy, and the progress of national law and policy on conservation and control of illegal trading of the wildlife. Secondly, NGOs individually and/or collectively work with states and/or ASEAN for better implementation and law enforcement. NGOs have shared their knowledge, technical assistance and financial resources to increase the capacity of national environmental officers and enforcement agencies at the national level and with regional inter-state agencies, as well as the coordinating centre of ASEAN-WEN. The improvement of regional environmental policy outcomes on anti-illegal wildlife trade, therefore, can be noted and revealed through the collective attempts by these networks' actors.

Chapter 6 Comparative analysis

To answer the main question on under what circumstances policy networks can facilitate inter-state cooperation in governing transnational environmental issues in Southeast Asia, this chapter compares the two case studies set out in the previous chapter to identify contextual and independent factors determining and influencing the progress of international regimes. There are three main sections in this chapter. The first section compares the cases through the analytical structural framework constructed in the methodological chapter. Within the similar categories, distinct differences are revealed and examined to assess why one case presents better international environmental outcomes. Comparison in this part also focuses on the importance of the international political context and the quality of regimes which underlie the connections between CSOs and state/IGO actors. In this part, policy networks – which are defined as the networks which aim to improve environmental policy – are classified into two different categories: transgovernmental networks and non-government networks.⁶ Similar governance gaps, where states and IGOs in the two cases cannot work effectively, are pointed out as similar political opportunities where policy networks can together operate to fill them. The second section compares the macro-structure of networks in the two cases to examine the relationships between the components of the networks and the effectiveness of the regimes. The network analysis method is applied to create the macro-structure of the networks, to observe the functional role of policy networks in improving the effectiveness of regimes, to consider the potentials of network actors in influencing political changes in terms of policy, and to examine the role of particular nodes in key positions of the networks. The final section discusses the similarities of the nature of states and ASEAN cooperation in developing the environmental regimes, the obvious

⁶ The categories are considered from the kinds and number of actors involved in a network. Transgovernmental networks are composed of nodes and links where the majority of the group are states and/or IGOs actors. On the other hand, non-government networks refer to connections among nodes where the majority of them are CSOs. In the haze case, non-government networks are much more obvious than the transgovernmental network. In contrast, for wildlife, the transgovernmental network (especially ASEAN-WEN) and non-governmental networks (networks among CSOs to support monitoring activities on particular endangered wildlife species) can both be clearly found.

attempts of CSOs and policy networks to shape environmental policy and outcomes at different levels, and the application of the network perspective in explaining and understanding actual environmental governance in the region.

6.1 Comparison of the cases through the analytical framework

This section compares two case studies through the analytical framework developed in Chapter 3. Regimes, their effectiveness and policy networks of the cases are comparatively examined to assess why one case is more successful than another. Similarities of the cases, ongoing environmental issues and the involvement of CSOs in supporting the development of policy to tackle them, are discussed. Differences between the cases, including the effectiveness of regimes and different kinds of policy networks, are revealed in different international political contexts which are conditions for forming links between IGOs/states and CSOs.

Although both cases are transnational environmental problems, they are different kinds of international cooperation problem: inter-state tension in the case of haze and operational problems for the wildlife case. Different degrees of conflict of interest for states involved in the issues not only explain the progress of the development of policy and functional mechanisms to deal with transnational issues but also result in constraints on NGOs to participate directly in the formal process. Political channels for CSOs to engage with states and ASEAN to improve the effectiveness of regimes can be observed and compared from links between them through the structural framework.

Within the same structural framework for comparison, the first important difference is the existence of ASEAN's transgovernmental network as a recognized intervention to improve the effectiveness of ASEAN cooperation, since every member has an obligation to fulfil the goal of CITES, the global regime for tackling the illegal wildlife trade issue. In contrast, the transgovernmental network does not exist in the haze case. However, the non-government network in the haze case can be identified outside the ASEAN forum. Its operations have contributed to governing the haze issue, for example in its attempts to improve the regional monitoring system and to

find alternative means to strengthen the enforcement of Singaporean unilateral sanction.

In comparing the development of regimes based on the content of international agreements, it is obvious that the global regime governing the trade in wildlife is more developed than the regional regime dealing with the haze pollution issue. This can be referred back to the nature of the international cooperation problem. At the global level, parties signed CITES to protect certain wildlife species - which are types of natural resources the loss of which is irreversible - against over-exploitation. States individually gain benefits from the trade in wildlife as well as mutual advantages from international cooperation on protecting listed or endangered species. The cooperation is a settled agreement which clarifies what illegitimate practice is. With a global agreement that contains a sanction mechanism to ensure parties' compliance and implementation, ASEAN countries established ASEAN-WEN – a transgovernmental network – to make international law enforcement on this issue more effective. An obvious mutual gain from this network form of regional cooperation can be the avoidance of trade sanctions if an individual state fails to enforce the law.

In contrast, since the effective means to solve the haze issue seems to be in the bargaining process, the ASEAN body managing the haze issue is the Conference of Parties, which is the ASEAN main forum for ministers to address the haze issue. The haze case is a transboundary issue causing loss to both the state that is the source of the problem and its neighbouring countries. To solve the haze problem effectively, Indonesia has to sacrifice parts of areas for agricultural development to conserve forests and peatland. However, this way limits choices for the government and its people in using their lands for agricultural or other economic development. Even though the basic cause of the fires and measures to prevent, monitor and mitigate this are stated clearly in the ASEAN Haze Agreement, it is difficult to do it in practice. At the same time, Indonesia's neighbouring countries continue to suffer from the recurrence of the annual haze. This negative externality leads to international tensions among the parties involved, while approaches to resolve the problem have been developed without the sanction mechanism.

The different kinds of international cooperation problem and the advancement of regimes have set different international political contexts, which provide different political channels for CSOs to engage with ASEAN. With back-up from CITES's sanction mechanism, an individual state has an obligation to comply with the agreement. In governing the illegal transnational trade in wildlife, ASEAN countries do not need to initiate regional agreements. Instead, regional cooperation in the form of the transgovernmental network is established to ensure collaborative operations. In the wildlife case, NGOs can take part in and obtain the status of partner in the transgovernmental network. NGOs take a crucial role in strengthening the network. They are invited to the open session at the annual ASEAN-WEN meeting. They organized several forums and workshops to create events for state agencies to form personal connections for better coordination and communication, as well as increasing state agencies' operational capacity. This kind of activity was hardly found in the haze case. There are very limited political channels for CSOs to take part in the ASEAN formal meeting. Further, considering the ASEAN principles for regional cooperation, which include non-interference, consensus and consultation, it is very sensitive for a state to urge Indonesia to take more action to improve its policy and implementation to support regional cooperation on the haze issue. Since common ground and mutual interest among Indonesia and its neighbouring countries have not yet been reached, it seems less possible for CSOs to engage in regional dialogue.

The two cases are similar when we measure the effectiveness of regimes in terms of problem-solving. Both cases are ongoing environmental problems. Effectiveness in terms of problem-solving has still not been achieved by the parties to the agreement. However, the failure in terms of problem-solving does not mean that there has been a lack of activities where the ultimate goal is to end the problem. There are both state and non-state actors that are currently working by various approaches to protect the environment. By looking through the process rather than the product, the improvement in environmental quality is actually derived from international cooperation and other kinds of governance activities. Therefore, emphasizing effectiveness in terms of the process would reveal both state cooperation activities and other kinds of governance activities, which leads to better consequences despite the recurrence of those environmental issues. To clarify, effectiveness in terms of

problem-solving can be perceived from physical evidence such as the decrease of hotspots in the haze case and the decrease in the list of endangered species in the wildlife case. On the other hand, the effectiveness of regimes in terms of better governance is emphasized in the processes directly or indirectly related to the improvement of policy and laws which would then bring about those better physical results. In other words, the progress of regimes is seen by the improvement of policy and laws, which can directly result from state cooperation, from collaboration among CSOs and/or from state–CSO collaboration.

Both cases share a similarity in the problem of deterrence, law enforcement and policy implementation. These problems constrain the effectiveness of the regimes. This thesis, therefore, set the boundary in investigating the governance activities where non-state actors directly or indirectly contribute to the effectiveness of the regimes in terms of better process. To clarify, while there are policies and laws across Southeast Asian countries that ban open burning and trading endangered wildlife items, these illegal practices are persisting. The existence of policy and laws by itself does not guarantee the effectiveness of regimes. The effectiveness of regimes occurs when states fulfil their international obligations by improving the process of monitoring, enforcing the law and implementing policy. However, since the processes are still ineffective and can be considered to be governance gaps, this is where networks' activities are explored. Different kinds of networks as an intervention to close the similar category of governance gaps are examined to see how their operations can improve the quality and process of those international regimes.

Comparing the effectiveness of two regimes through the development of regional policy and the progress of law enforcement, it is clear that the wildlife protection regime is more developed because the regime is supported by international law with sanction mechanisms to guarantee parties' compliance in implementation, while there is nothing to punish a state which causes pollution to others and the environment in the haze case. The sanction mechanism is a crucial factor that ensured that parties' obligations are addressed in the agreement. In the wildlife case, each country has to translate international agreement into the national policy and

law. Although a country has its own responsibility to control the illegal wildlife trade, the establishment of ASEAN-WEN to increase the effectiveness of enforcing international law presents a regional attempt to cooperate beyond their countries' commitment to CITES. At the least, ASEAN countries have admitted that there is a law enforcement problem in operations to tackle the transnational illegal wildlife trade issue. With the aim of making better law enforcement of the illegal wildlife trade, the progress of regional collaboration can be seen and partly implied⁷ from the increasing numbers of seizures, which have resulted from better communication and coordination among state agencies at international borders or ports. In addition, considering the purpose of the CITES regime, the network of law enforcement could contribute to the sustainable goal as better enforcement can help increase the number of endangered species if poaching is reduced and the criminals involved in the illegal wildlife trade chain are caught and prosecuted. Furthermore, effectiveness in terms of policy can also be measured alongside the operations of the transgovernmental network through the increase of law enforcement or a national action plan, and the number of operations to increase the capability of the state's obligation in monitoring the trade on endangered wildlife in countries where other kinds of non-government networks can provide support outside the state cooperative framework. With support from NGOs who worked with ASEAN-WEN during the support programme from USAID, it can be seen that the operations of the transgovernmental network resulted in an increased number of seizures owing to better communication, coordination and capacity. Although these better governance activities can partly contribute to the effectiveness of the regime to protect

⁷ An official suggests that the best way to see the effectiveness of network in dealing with the illegal wildlife trade be done by matching the number seizures with the coordination activities among government agencies. However, she admits that in assessing the achievement of the network through this method is very hard. This is because the communication record on operations is incomplete on ASEAN-WEN database due to that not every country reports this to the ASEAN-WEN coordination Unit. In addition, the measurement of the capture of the illegal trade may not mean the operation achieves; but, it may be because of the animals is hard to be found or the criminal groups stop trading and then shifting to supply the market by replacing the rarer one with other similar species. The decline number of illegal capture does not mean less cooperative effort since it may due to less criminal activity or rare endangered species left. In contrast, the decline of capture does not mean less cooperative effort since it may due to less criminal activity or endangered species become rarer.

endangered species, it presents the crucial role of the transgovernmental network in increasing the effectiveness of ASEAN cooperation to achieve the goal of CITES.

It is obvious that the CITES agreement is more mature in terms of the development of a mechanism to manage with the wildlife trade issue. The existence of a sanction mechanism and bodies responsible for ensuring compliance with the agreement to some extent make states act to develop their laws and regulations as well as plans of action in an acceptable way to ensure that wildlife will not be threatened by trade. As the structure of CITES allows NGOs to give recommendations to the committee, NGOs can have an influence on the committee by addressing the current situation of particular species. For example, when a state wants to remove a species from Appendix I to Appendix II, NGOs will use the information they have to hand to suggest whether the requested species should be moved from the list or not. NGOs can have an influence on the committee by proposing the current situation of the requested wildlife species. They submit fieldwork evidence such as increasing or decreasing numbers of wild species populations as another source of information to the committee before the decision is made.

The benefit of the sanction mechanism in CITES in pushing states to develop conservation policy is clearly seen in the case of Thailand's ivory trade. Since Thailand had not made much progress in law to prevent the laundering of ivory, the CITES committee warned that Thailand could receive trade sanctions as a necessary measure to ensure it meets its obligation to preventing illegal trade in ivory. This trade sanction mechanism did not only accelerate the Thai government to formulate a national action plan; it also made the Department of the Environment form a better coordination of the agencies and departments that could be affected by trade sanctions being imposed on Thailand. At that time, WWF-Thailand was also officially included in the working group that was to give an opinion on the draft ivory trade plan. This crisis formed trust between state and non-state actors. Therefore, the presence of the international sanction mechanism is a political opportunity that can open an alternative channel of communication for states and NGOs to mutually develop environmental policy.

The trade sanction mechanism offers more effective control of state behaviour so as to act more on transnational illegal trade issues; however, this global regime cannot stand alone without the effective role of NGOs in monitoring states' compliance with the regime. NGOs work in different parts of the world and transmit key reports and suggestions to the CITES committee for their decisions on sanctions. It can be seen that the role of monitoring networks led by TRAFFIC provides a more legitimate position for CITES by looking not only at information reported by states. Monitoring networks of NGOs do not only trace the failures of states in operations to tackle down wrongdoers; they also seek ways that states can improve their environmental situations. On several occasions, they have come to engage with governmental agencies to increase capacity building. They invest in technologies and circulate those to states as well as to members of the public who want to join the green policy.

In contrast, regional policy cooperation to tackle the haze pollution has been developed; however, the progress in terms of states' compliance and the implementation of those policies is rather sluggish when compared to the wildlife case. Regional policy to deal with the haze issue is clearly addressed, but there are many difficulties in translating the regional agreement into domestic law, especially in Indonesia, where there is highly decentralized government. While policy is informal, law is formal by nature. Policy can create new law, but policy must comply with the existing law. Therefore, the haze case is hard to manage as part of the problem is based on the national land law and this may relate to social justice on landholding by the poor. It takes a lot of time, not only for the Indonesian people to change their traditional way of practice in preparing their lands for agricultural development but for the Indonesian government to adjust its national laws, which are very complicated and highly related to politics of interest among various stakeholders. Without any international mechanisms to accelerate Indonesia's compliance with the regional agreement, there seems to be little prospect of seeing the changes in terms of law and policy. Having suffered from the transboundary haze issue for more than two decades, Singapore finally developed its own national law to punish anyone who sets fire for land clearing in Indonesia. This law is a unilateral mechanism that attempts to deter businesses investing in Indonesia not to use fires to clear land. However, high political tension between Indonesia and Singapore has

arisen; the law seems to use extraterritorial jurisdiction towards Indonesian business and its people without the consent of Indonesia. To bring the case into the Singaporean court, evidence from the ground is needed to go alongside the satellite data on hotspots. Until now the application of Singaporean unilateral sanctions is still limited. However, non-governmental networks have been formed not only to draw unofficial maps of Indonesian land concession but also to collect evidence from the ground to support the sanction mechanisms including social boycotts and the Singaporean law on transboundary haze pollution.

A similar feature of the two cases is the role of CSOs in developing ASEAN environmental policy to tackle transnational environmental issues. CSOs can only take part in ASEAN meetings to support the regional policy implementation process. This reflects the nature of the ASEAN forum, which actually serves states' interests. Although NGOs in the wildlife case can participate in the open session, they can actually offer their ideas and supply their resources to ASEAN-WEN. This is similar to the GEC, in that only NGOs that can take part in ASEAN meetings receive approval from ASEAN states to implement the project on peatlands. However, despite these NGOs finding little opportunity to have direct influence on the development of regional environmental policy, they can find alternative options and strategies to support conservation policy at other and across levels. Since the environmental issues are very complex and until now there has been no silver bullet to dealing with them effectively, their attempts through collective activities help form connections between and among actors. By applying the network analysis method, policy networks are constructed to identify connections among key actors who work through political channels to improve the quality of the environment by supporting particular environmental policies.

In short, comparing the two cases of transnational issues leads to three main factors that explain why the wildlife protection regime is more advanced than the haze case. These three different factors are the different kinds of the problem for international cooperation (which results in the different degree of politics in finding the mutual consensus in settling the problem), the existence of sanction mechanisms, and the establishment of the transgovernmental network as a regional mechanism to

improve operations and support the enforcement of CITES. The limitation of state cooperation to deal with the haze issue leads to the formation of non-government networks outside ASEAN. Although the non-government network has limited access to the ASEAN negotiation process, it still has a crucial role in functional operations with its attempt to improve the effectiveness of the regional regime. While both cases are similar, as regional deterrence and enforcement mechanisms still need to be improved, non-government networks outside the formal regional framework are compared to find how governance activities can contribute to filling those governance gaps when the political channels for stakeholders are limited by inter-state conflicts of interest in dealing with the issue. The following section reveals how these non-government networks contribute to the regional environmental governance. Applying the network analysis method, the next section presents the macro-structure of the networks, which illustrates how actors are connected with the aim to govern their respective issues.

6.2 Comparison of the cases through the macro-structure of network

According to Underdal (2004), three critical factors determining the effectiveness of regimes are the nature of the problem, the characteristics of the groups and the properties of regime (Underdal, 2004: 40–41). While the previous section presented the different achievement of international regimes deriving from the nature of the problem and the attributes of each regime, this section compares the macro-structures of networks with an aim to find out the key characteristics of the groups in forms of network which determine the effectiveness of those regimes. This section constructs the macro-structure of the networks which govern transnational issues. The network actors are connected through links which are defined by information and resource sharing. The first part of this section presents the basic similarity of the cases, which is that both networks play a crucial role in implementing environmental projects and supporting the monitoring system for increasing the effectiveness of regimes in deterrence and enforcement. The second part of this section, however, focuses on the influential role of the network, which can be comparatively analysed from the links between subgroups of the macro-structures of networks and the

connections between CSOs and states/IGOs at different levels. The third part of this section compares the macro-structure of networks and the role of key network actors to explain why the network in one case can have a better impact on the improvement of the regime. Further, this part also explains how the components of networks reflect the feature of good governance (communication, coordination and participation) and can better bring about the effectiveness of regime and environmental governance. This section, overall, applies the network approach to comparatively analyse the structure of policy networks to identify the features of policy networks which can better influence on environmental policy, actions and outcomes.

The first part of this section applies the method of network analysis in constructing the structure of networks in governing environmental issues in each case study. Within an environmental issue, an overall network, hereafter called a macro-structure of networks, is composed of subgroups of actors. Subgroups in the macro-structure of the network are consisted of nodes (states, IGOs and CSOs) which intentionally link to act collectively for achieving particular goals. The macro-structure of the network reveals how actors are connected to others in governing the issue, even though actors do not realize it. It also presents unintentional and uncoordinated links among subgroups which have supported different policy but whose works have an impact on the effectiveness of regimes. According to Sikkink, where networks are unintentional and uncoordinated the network's effects are stressed, rather than the effectiveness, since networks could have influence but not necessarily be effective in the sense of meeting specific goals. In contrast, where specific goals are collectively designed, the effectiveness could be measured by changes in the direction of the network goals (Sikkink, 2009: 235). The effects of networks in making regimes function better and the effectiveness of networks in achieving particular goals of regimes serve as a means to reveal the role of networks in developing environmental governance in the region.

The network analysis method is applied in this part to see the connections among actors who collectively work to close governance gaps and to improve the effectiveness of regimes. Since poor deterrence, enforcement and implementation

are the similarities of the two cases, the links between actors are drawn from activities representing the sharing of information and resources between them. The macro-structures of networks are used to compare and explain the role of policy networks. In the first part of this section, the links among all actors identified by the activities of policy networks in supporting and implementing the monitoring system reveal the functional role of networks. The network perspective illustrates governance activities that actually happen at all and across levels to manage transnational environmental issues. In the second part of this section, the influential role of policy networks at different levels is examined from two aspects: connections among subgroups within the macro-structure of networks and connections between CSOs, IGOs and state actors at different levels.

6.2.1 Functional role of networks in sustaining the environment

Functional activities are efforts initiated by network actors who are linked by sharing resources with the goal of improving the effectiveness of regime. In closing governance gaps, network actors have individually and collectively taken on the role of monitoring as well as implementing projects for achieving the regime's goal. Information and resource sharing through forums and associations has formed subgroups of macro-structural networks. These subgroups may function differently; however, they work complementarily to govern the transnational issue.

Networking among actors in improving the function of regime in governing the transnational issues is drawn from information and resource sharing. Network actors are connected to improve the functions of regimes. Two operational activities which create links among them are aimed at developing the monitoring system and supporting policy implementation.

The first and important foundation of the links among network actors is information sharing for improving governance gaps in deterrence and law enforcement mechanisms. Networks of CSOs in the two cases share similarities in playing this crucial role by using the information to improve and strengthen the monitoring mechanisms. Information is collected by local and national NGOs, then given to other network actors for further action to close governance gaps. In the wildlife case, where

the regime is more effective and supported by the sanction mechanism, information gathering by CSOs can be submitted to CITES for updating the species population as well as for imposing sanctions on states if it is proven that the state has not made enough efforts to stop the illegal wildlife trade at the national level. Information shared by networks of CSOs is useful for the CITES committee as it is another source of information to compare with data reported by states. Although there is no sanction mechanism in the haze case, the non-government network has developed a punishment mechanism to control such agribusinesses as palm oil and pulp and paper. Unofficial maps drawn by networks of local NGOs, and concession maps given by businesses that are members of RSPO are crucial data to be used temporarily, while the regional monitoring system cannot be used because of the absence of authoritative maps from Indonesia. Further, another important role of local and national NGOs is to search for strong evidence to bring wrongdoers to court. Unofficial maps, a satellite monitoring system and strong evidence are components to support mechanisms – which include financial penalties applied by Singapore’s law and consumer boycotts – for punishing businesses proven to use fires to clear land.

The second kind of link which can be found among network actors is the allocation of resources for implementing projects and activities which directly aim to fulfil particular objectives of the regimes. The two cases are similar as there are CSOs individually involved in the networks supporting operations of state agencies as well as working with local communities and NGOs at the operational level. In the haze case where the main area of concern is located in Indonesia, WRI Indonesia (as an affiliate with WRI) and GEC work on projects with other local CSOs and communities to implement the restoration of degraded forests and to conserve peatland, respectively. In the wildlife case, there are many CSO actors taking part in states’ implementing activities. CSOs can work closely with state agencies both through transgovernmental networks and non-government networks across Southeast Asian countries. As a partner of ASEAN-WEN, Freeland and TRAFFIC Southeast Asia have a crucial role in providing resources to increase regional capacity in combating the illegal wildlife trade by organizing training workshops for state agencies for better implementation and enforcement. Workshops also help to improve coordination among state agencies to develop networking among actors who have similar

responsibilities in operations. Further, national and local environmental NGOs in Thailand, Vietnam, Malaysia and Indonesia collectively and individually work with governmental agencies in operations for better implementing and enforcing laws.

These two kinds of link are used in drawing the macro-structure of policy networks in governing the haze issue (as illustrated in Figure 6-1) and the wildlife trade issue (as presented in Figure 6-2) in the region. The first kind of link for better monitoring is mostly based on information and communication among actors within networks, while the second kind of link reveals resource allocation for better implementation from actors who are providers to others who are receivers. Two cases present the importance role of CSO actors in first working individually to connect with state authorities at different levels for the better implementation of the regime, and second in collectively monitoring states' and the businesses' action in complying with the existing international agreement through non-government networks. Even though CSOs seem to work individually in supporting states' implementation and enforcement, their functional work at local and national levels also support the monitoring role of networks. While CSOs are working on the ground to improve better implementation with other actors, some kinds of information are gathered and then fed into the network for monitoring. Their experiences, new observational data and best practices, for example, are reported to the public, their affiliate organizations and/or other network actors. In the wildlife case, to gather information such as the population of rare species it is necessary for NGOs to get permission from the state to access conservation areas, especially national parks. In that case, some conservation NGOs can find opportunities to work with government agencies in the environmental department, where financial and human resources in patrol operations are insufficient. They can have access to the areas to fulfil their organizational task in updating the wildlife situation. Similar to the haze case, GEC has a crucial role in implementing ASEAN peatland management projects in selected pilot countries. Lesson learned from different sites are shared among state agencies and communities involved in projects. Working in different peat areas across Southeast Asia, GEC can provide suggestions to the RSPO for monitoring palm oil business on peatlands. In this aspect, NGOs can individually play a complementary role to increase the effectiveness of operational activities; also, they can gather key

information on the ground to support collective monitoring activities and circulate this to other network actors.

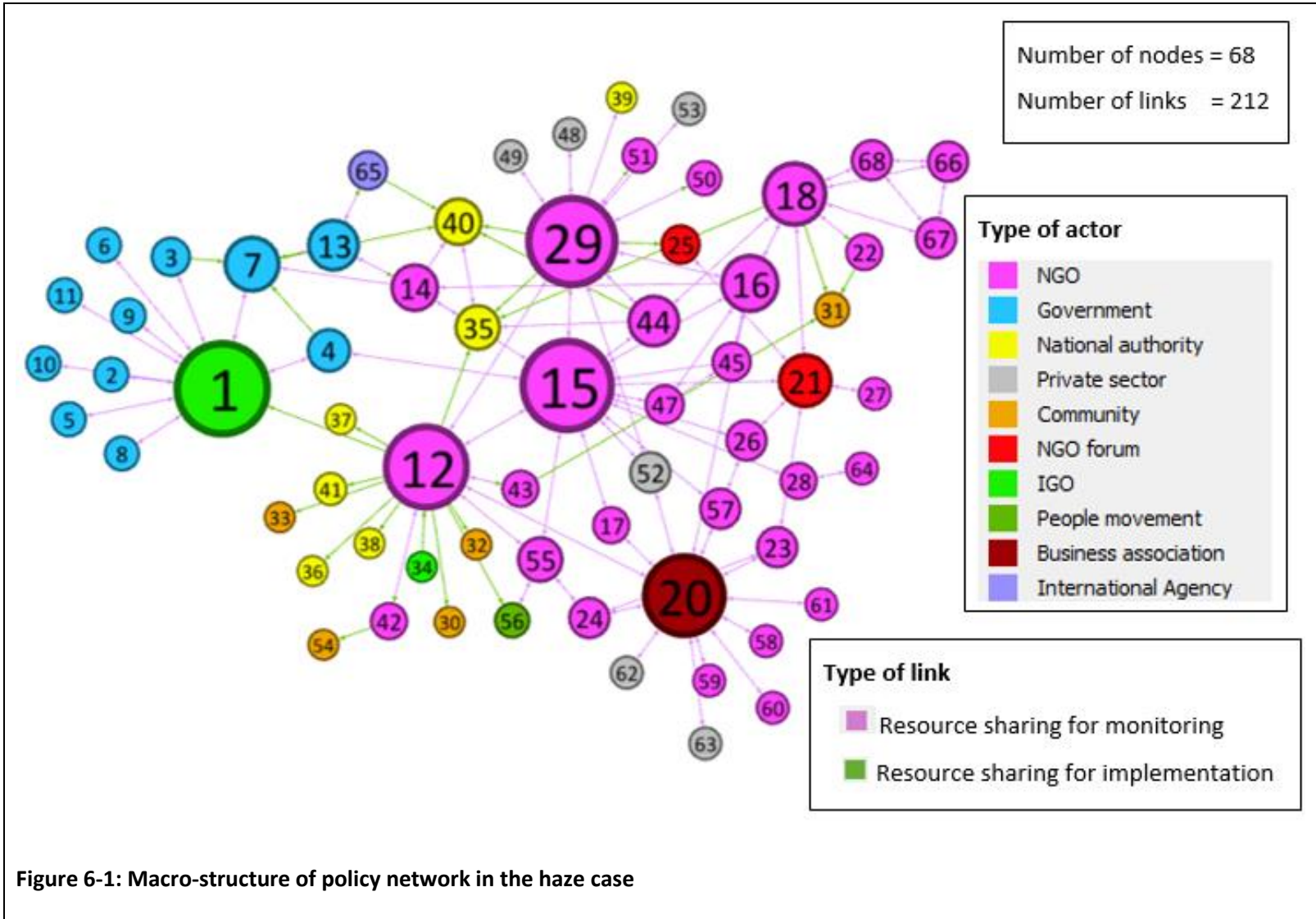


Figure 6-1: Macro-structure of policy network in the haze case

Table 6-1: ID of actors in the haze case

ID	Label
1	ASEAN Haze Coordinating Centre
2	Thailand
3	Malaysia
4	Singapore
5	Cambodia
6	Philippines
7	Indonesia
8	Brunei
9	Vietnam
10	Laos
11	Myanmar
12	GEC
13	Norway
14	CIFOR
15	SIIA
16	WRI
17	SEC
18	Greenpeace Indonesia
20	RSPO
21	Eye on the Forest
22	Forest hero
23	WWF Indonesia
24	WWF International
25	Jikalahari (Forest Rescue Network Riau)
26	WALHI Riau
27	KKI WARSI
28	Malaysia NGOs
29	WRI Indonesia
30	Malaysia
31	Indonesia
32	Philippine
33	Vietnam
34	EU
35	Indonesian government agencies
36	Malaysian government agencies

ID	Label
37	Thai government agencies
38	Vietnam government agencies
39	Singapore government agencies
40	Indonesia's National REDD agencies
41	Myanmar government agencies
42	FREDA Myanmar
43	Yayasan Mitra Insani (Pekanbaru)
44	Greenpeace Southeast Asia
45	GFW Fires
47	Conservation International
48	APP
49	APRIL
50	Sampan (Kalimantan)
51	Portal Hutan Riau
52	Wilma
53	Google
54	Myanmar
55	WWF Singapore
56	PM Haze
57	SAWIT Watch
58	Borneo Orangutan Survival Foundation
59	Yayasan SETARA Jambi
60	LINKS (Lingkar Komunitas Sawit)
61	Kantor perwakilan SNV di Indonesia
62	Palm Oil Processors&Traders
63	Indonesian Consumer Goods Manufactures
64	EIA
65	Norad
66	FWI
67	ICEL
68	HAKA

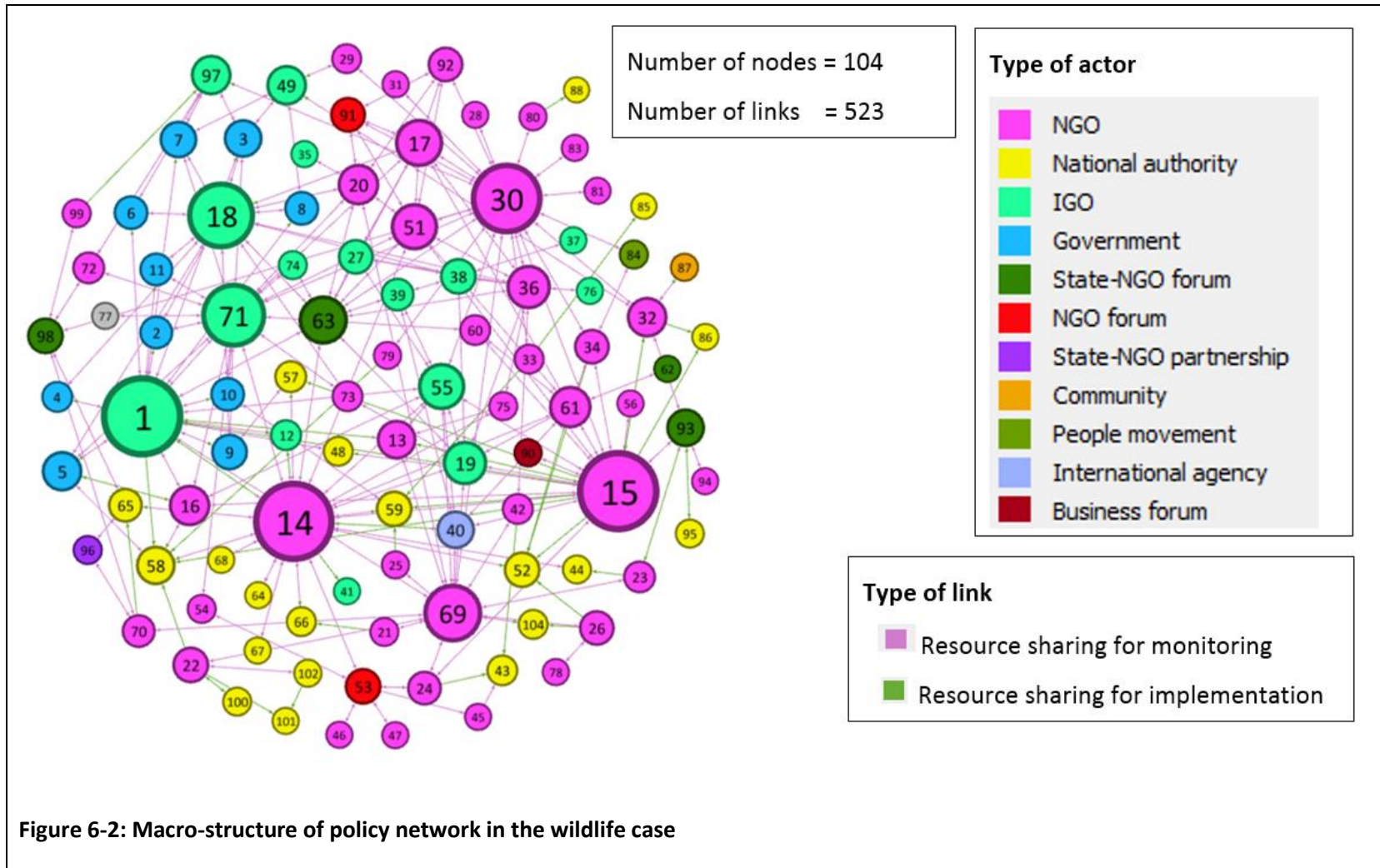


Table 6-2: ID of actors in the wildlife case

ID	Label
1	ASEAN-WEN PCU
2	Thailand
3	Malaysia
4	Singapore
5	Cambodia
6	Philippines
7	Indonesia
8	Brunei
9	Vietnam
10	Laos
11	Myanmar
12	ASEANAPOL
13	TRACE
14	FREELAND
15	TRAFFIC SEA
16	Wildlife Alliance
17	TRAFFIC International
18	CITES
19	INTERPOL
20	WCS International
21	WCS Myanmar
22	WCS Cambodia
23	WCS Malaysia
24	WCS Vietnam
25	WCS Laos
26	WCS Thailand
27	WCO
28	WWF Philippines
29	WWF Indonesia
30	WWF International
31	WWF Mekong
32	WWF Malaysia
33	WWF Laos
34	WWF Thailand
35	UN
36	EIA
37	WTO
38	ICCWC
39	UNODC
40	USAID-ARREST
41	AIPA
42	ENV Vietnam
43	Vietnam police
44	Malaysian government agencies
45	VACNE
46	PanNature
47	Asia Turtle
48	Custom
49	HOB
51	IUCN
52	Thai governmental agencies

ID	Label
53	Vietnamese Conservation Coalition
54	WSPA
55	UNODC SEA
56	Save Vietnam's Wildlife
57	Vietnam authority
58	Cambodia authority
59	Laos authority
60	Wild Aids
61	Wild Encounter Thailand
62	Global Tiger Forum
63	ARPEC
64	Singapore
65	Indonesia
66	Myanmar
67	Philippine
68	Brunei
69	WCS Asia
70	WCS Indonesia
71	GTI
72	Conservation International
73	IFAW
74	World Bank
75	WFFT
76	UNEP Green Custom Initiative
77	GEF
78	SNF
79	WWF Cambodia
80	WWF Vietnam
81	WWF Myanmar
82	WWF Singapore
84	Avaaz
85	DoFI
86	Department of Wildlife and National Park
87	Communities
88	Vietnamese Forest Rangers
89	Vietnam Business Forum
91	Shark Advocates International
92	Shark Trust
93	MYCAT
94	MNS
95	DWNP
96	Wildlife Crimes Unit
97	CTI
98	MPAG
99	TNC
100	US Fish and Wildlife Service
101	MoE Ranger
102	US Forestry Service
104	DNP

6.2.2 Influential role of networks in supporting the environmental conservation policy

The foundation links among network actors through information and resource sharing can be also applied for analysing the influential role of networks in developing environmental policy at both the international and national levels. Information sharing indicates communication activities among actors in working in a collective way to achieve particular goal. In both cases, the ultimate goal in terms of problem-solving is clearly articulated for both states and CSOs actors involved in governing the transnational environmental issues. However, what make networks in the two cases distinct in their ability to shift the policy into a more conservation-related focus are the agreement on the means to achieve the end among subgroups of network and the existence of information sharing links that CSOs involved in policy networks can connect to states and intergovernmental organizations.

In the wildlife case, network actors work in the same direction in operations that support the conservation of endangered wildlife species and attempt to stop the illegal trade chain and demand. One good example for explaining this is the consensus among NGOs that considers that a moderate policy that includes minor exceptions allowing the trade in endangered wildlife parts cannot effectively end the trafficking problems. With this collectively strong position, NGOs strictly monitor and continuously search for errant cases to prove their presumption. They systemically report and update their findings to other network actors. Further, since the CITES Secretariat is formally open for NGOs to submit their suggestions, effective monitoring network of NGOs linked with the CITES Secretariat can have a crucial influence on changing conservation policy at the international level.

In contrast, the non-government network in the haze case has actors/subgroups that do not see eye to eye on the approach to preventing the recurrence of haze. One good example is the disconnected links between WALHI and other NGOs such as Greenpeace and CIFOR who support forest conservation and the REDD programme. Although WALHI supports a moratorium to reduce forest degradation, the NGO is against carbon trading as the programme neither aims to reduce the demand for raw materials such as crude palm oil and mining products nor actually reduces the release

of gas to the atmosphere (Surya, 2012). It is true that there is no silver bullet to stop the haze, however several approaches can also reflect the difficulty in finding a mutual and practical means accepted by most network actors.

The subgroups of actors within a macro-structure network present different approaches for how the problem should be effectively managed. More subgroups of non-government networks are present in the haze case. A policy choice to conserve only forests may not be articulated easily as lots of Indonesian people are dependent on forests. In addition, forests are sources of economic development. They provide revenue and income for the governments and create jobs for the poor when the land is granted for agricultural concession. Since the haze case is more complicated and the ways to solve the issue affect people's way of life, the private sector and the national development policy, each organization prefers to support the environmental policy that goes along with its prioritized organizational goal.

At the national level, NGOs which support local and community rights insist that forests are best saved by the community and indigenous people. Led by WALHI, a network of several environmental and social NGOs across Indonesia supports this forest governance approach. It opposes the leading role of the government even in the moratorium policy because of its experience that some governments tend to include monoculture plantations as forests (Surya, 2012). However, WRI Indonesia, Greenpeace Southeast Asia and CIFOR have different perspectives in dealing with the deforestation problem. They support the president's moratorium by working with Indonesian national REDD agencies to implement projects to achieve emission reduction goals (Participant K, 2015; Participant M, 2015). Further, in conserving the forest, Greenpeace Indonesia and Forest Hero are working together to deliver a strong low-carbon economy by ensuring that states and companies implement zero-deforestation policies (Participant K, 2015; Forest Heroes, 2017). Similarly, GEC also works with communities on peatland conservation. The sustainable management of peatlands and forests is the organization's goal for preventing fires on peat soils. Moreover, the private sector, especially RSPO, proposes a sustainable management approach as a compromise in conserving forests and peatland, as well as imposing social responsibility on businesses. Monitoring by NGOs working locally and the

application of high-resolution pictures from satellites mean that agricultural businesses have to prevent fires occurring on their lands and cannot clear their land by using fires. Otherwise, they can be boycotted by consumers, lose their certificates or be brought to court in Singapore.

Moreover, in the haze case, different approaches towards solving the problem bring about disagreement among network actors who support the interests of different stakeholders. Subgroups of non-government networks in the haze case prefer different policies, spanning better land management policy, forest conservation policy (supporting the president's moratorium or people's forest governance) and sustainable management policy (which is the compromised approach on balancing the need for development and the necessary to conserve the environment). However, the stated policy choices do not completely support the goal of each subgroup involved in the non-government network; when the haze starts, a blame game occurs among businesses and local people. In the absence of an authoritative map to precisely prove who lit the fires on overlapping lands, trust between stakeholders is hard to develop. This also results in fewer links between different subgroups with different approaches to managing the issue. It is also very difficult for those network actors to collectively and influentially mobilize a particular policy, whether sustainable development or environmental policy, towards the Indonesian government. Furthermore, since there is currently no mutually accepted mechanism for what sustainable development actually is and how to collectively measure the situation, the role of the network in influencing particular policy through an effective monitoring mechanism on state compliance and implementation is very limited. This is a key difference between the haze case with the wildlife one.

On the other hand, CSO actors in the wildlife protection network work in the similar direction with less conflict to fulfil the goal of CITES in conserving endangered wildlife species. At the regional level, transnational NGOs such as Freeland and TRAFFIC are crucial partners of ASEAN-WEN in supporting resources through the ASEAN PCU for better law enforcement. Their specialities in information and resource sharing are allocated to governmental agencies at different levels. Through the ASEAN-WEN meeting, two organizations discuss and share responsibility based on their

organization's expertise and on what training programmes and workshops they can offer to state members. The effectiveness of combating the illegal wildlife trade and the conservation of endangered wildlife species comes together to fulfil the CITES goal in sustainable trade in wildlife.

The influential role of the non-government network in the haze case is limited not only by different approaches and policies which the subgroups view in dealing with the problem, but also by there being few direct links between the ASEAN Haze Coordinating Centre and CSOs, which allows the CSOs to share their informative data to Indonesia and ASEAN for improving measurement and developing regional environmental policy. Two CSOs that have the closest connections to the ASEAN haze are GEC and SIIA. While GEC works closely with ASEAN, it mainly focuses on implementing peat conservation projects across Southeast Asia. It does not have any links with Indonesian NGOs for actively urging the Indonesian government to develop policy supporting conservation peatlands and forests. Further, although GEC and Greenpeace similarly supporting forest conservation policy, they apply different means to deal with the issue. While GEC emphasizes implementing regional projects, Greenpeace bolsters the zero-deforestation policy through campaigns. They does not have any direct functional links to each other. On the other hand, SIIA, which seems to be the coordinator of the non-government network in managing the haze pollution, has few formal and direct connections to the ASEAN Haze Coordinating Centre. And, according to Participant I (2015), there seems to be no increasing opportunity for CSOs to engage in the regional policy development process. Even though information sharing temporarily backing up the regional monitoring system can currently partly apply to some groups of stakeholders at the regional level to support the objective of the ASEAN Haze Agreement, the influential role of network actors in moving environmental policy towards more conservation methods is still very limited owing to the absence of a communication channel between network actors and the Haze Centre at the regional level.

At the national level, national NGOs in the haze case do not have much of a role in developing policy on the environment, either. They instead work similarly on implementing policy rather than initiating it. Aside from the ASEAN regional

framework on the haze issue, the Indonesian government has cooperated in the UNFCCC on global cooperation. To reduce greenhouse gases, environmental NGOs play an important role in supporting the Indonesian government as an implementer and facilitator of the clean development mechanism (CDM) and the REDD project. Even though the CDM and the REDD project have the similar aim of decreasing emissions of greenhouse gases to the environment, they have different focused objectives. The function of CDM aims to manage pollution released in cities and urban zones, while the purpose of the REDD is to decrease the air pollution caused by deforestation and the unsustainable use of lands and forests. As a result, environmental NGOs facilitating the CDM are centred on Java and their activities are mostly focused on the energy and waste sectors (Ministry of Environment, 2010: 117). Therefore, despite working within the same global framework, different groups of national NGOs are monitoring to achieve different objectives. However, their distinct similarity is their critical role in implementation, but not in formally engaging the government in improving the environmental policy.

6.2.3 The components of networks and their effects on international regimes

While the macro-structure of networks can reveal the functional activities and the networks' channels of communication to influence state and IGO actors to develop environmental policy, this part applies the network tools to analyse and compare the structure and components of the networks across the cases to show the attributes of the network that potentially have significant impacts on the effectiveness of regimes.

While both networks are obviously similar in improving the function of regimes, especially in monitoring activities, they are very different in their influence on the effectiveness of regimes. The non-government network and transgovernmental networks which support the goal of CITES are playing a much more critical role in governing the issues at different levels across the region. In the haze case, although there is a non-government network for supporting the regional monitoring system through RSPO, SIIA and WRI, the effect of the network can only work to monitor the private businesses who voluntarily agree to support the sustainable practices. Further, without clear and concrete evidence backed up by satellite images and other

evidence on the ground gathered by Indonesian authorities or local NGOs, it is very difficult to impose legitimate boycotts or other punishments on errant parties. This difference in the network effects between the two cases reveals the importance of states' responsibility and involvement in settling an effective formal mechanism for monitoring. Although the ASEAN Haze Agreement has addressed what states should do to monitor the situation, the agreement has not proposed any system to monitor the commitment of the parties to comply with the agreement. Regional cooperation on haze, therefore, is very vague in the sense that it proposes what states should do to monitor the occurrence of the fires, prevent them by conserving peatlands and mitigate the situation when the fires occur. However, no precise prioritized policy is set. There is no clarity on the direction from states to protect the environment. The agreement gives a chance for the parties to interpret how to voluntarily support the agreement.

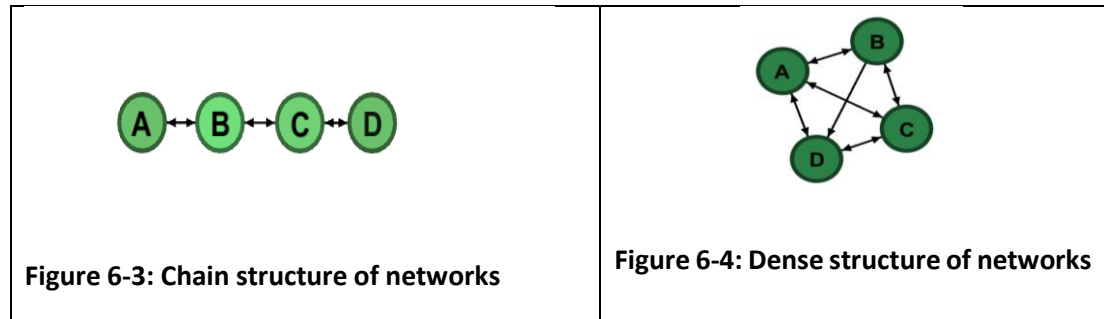
The effect of networks to support the effectiveness of regime is highly related to the quality of regimes. Miyazaki (2011) observes that networks can create capacity to monitor an issue by gathering data, implementing projects related to support international framework, strengthening ties among network actors and identifying measures to deal with the problem (Miyazaki, 2011: 59). Networks in both cases have capacity to monitor the issue, however their effects on regimes are different. Data gathering by CSOs in the haze case can be useful for improving monitoring capacity only if the information is accepted by the states involved, especially Indonesia and Singapore, to impose punishments on wrongdoers, which is currently limited only to transnational companies. On the other hand, data collection by CSOs in different locations is circulated to be used as a critical source for monitoring states' compliance in taking action against guilty parties. In addition, while both cases present the role of network actors in implementing projects to fulfil the objectives of the regimes, GEC is the only network actor that can play this role for managing the peatlands better to support the ASEAN framework on haze. In contrast, there are many NGOs taking part in ASEAN-WEN to support works to fulfil the CITES regime by strengthening the governmental authorities' capacity in enforcement and implementation. Furthermore, as CITES is very clear that it expects states to take responsible for their commitment on the sustainable exploitation of wildlife, network actors in the wildlife

case have much more ability to develop measures for dealing with the issue by using their information to suggest that the CITES committee make change on CITES's Appendices I-III. However, as the Haze Agreement does not require progress in establishing such a monitoring system among the parties or any prioritized measures to seriously tackle the haze, the network is lacking a legitimate and referred guideline which can help to identify mutual measures to collectively solve the issue. The relationship between the network effects and the effectiveness of the regime shows that it is not only the attributes of regimes that relate to the capacity of the networks. The more that states are clear on which principle they want to achieve, the better the network can act collectively and complementarily to support the effectiveness of the regime. On the other hand, as negotiation among states in the haze issue is still carrying on and there have been no concrete measures to compromise the necessity for development and the need to sustain the environment, subgroups of network work in their own way. It is clear that their works have an effect on the regime. However, their works might not present the effectiveness of the network owing to the absence of the mutually agreed goals among the subgroups, as well as the lack of inter-state clarity on how sustainability should be defined and monitored.

The functionality of the networks can be measured through the structure and the components of the network. According to Sikkink (2009), even though a network may have multiple motivations, the main purpose of the network can always be identified. To measure the effectiveness of the network, it is necessary to interpret the structure with the main purpose of the network. Al Qaeda's chain structure of networks (illustrated in Figure 6-3) is considered more effective than the dense one (shown in Figure 6-4) because it requires secrecy; the dense network is more effective than the thin one⁸ if the network seeks for cooperation (Sikkink, 2009: 230, 237). Since the main purpose of the networks in both cases is to end transnational environmental

⁸ A dense network refers to a network which presents the number of connections among actors. Each actor in the network has several links connected to others. In contrast, a thin network refers to few connections among network actors. For example, although two networks have the same number of actors, different numbers of links among actors result in different degrees of network density. The network which has smaller number of links among actors is considered the thinner network than the network which possesses a higher number of connections among actors.

issues and they serve the basic function of monitoring, the structure in the wildlife case, which obtains more ties among network actors between and across subgroups, is likely to be more effective than the haze structure.



The effectiveness of the network can be also examined from the expected role and capability of network actors in particular positions. According to Hafner-Burton et al. (2009), the network analysis offers an alternative view of power and a new basis for international influence in international relations. Since the network analysis concept emphasizes the association of nodes rather than the attributes of nodes, the position of nodes in relation to others provides network power, which can be defined in three different ways: the power of access, the brokerage power and the power of exit option (Hafner-Burton et al., 2009). Therefore, from the macro-structure of the network, particular nodes can obtain additional power from its position, aside from actors' attributes and resources. The actors' positions also plays a particular and expected role in the network (Hafner-Burton et al., 2009: 571). Investigating the role of actors locating in key positions such as centres, cut-points and marginalized nodes would help analyse the ability of the macro-structure of the network and its potential impact on regimes.

The number of subgroups, the links among the centrality of each subgroup, and the role of the centrality of the macro-structure of network can be used to compare the effectiveness of the network. A subgroup is composed of like-minded actors working closely together. A centrality of each subgroup refers to a node with a high number of ties. The subgroups can present different means, purposes or divisions of tasks among network actors. To assess the effectiveness of the networks, a number of subgroups are considered together with the existing of degree of links between the

centrality of each subgroup. An information network that has a bridge (a line which if removed would disconnect the a subgroups from others) seems to be more vulnerable to disruption than networks with many redundant paths (Knoke and Yang, 2008: 49). At the international level, subgroups of the network in the haze can be noticed easier than wildlife ones because there are few ties connected among the centralities of each subgroup. It is obvious that the ASEAN haze case has only direct links with the GEC but lacks a direct link between RSPO and SIIA. On the other hand, the subgroups in the wildlife case are not obvious because there are several paths connected among centralities.

Moreover, another point to show that the network in the wildlife case is more effective than the haze one is the ability to accommodate their resources among centralities – Freeland and TRAFFIC Southeast Asia through ASEAN-WEN PCU – as well as the division of tasks among CSOs in separately working with different state agencies at different levels of governance. Considering the limited resources in implementing environmental laws for states, NGOs working at the national level recognize other NGOs that are responsible for particular departments and protected areas. Information across areas can be requested and transmitted directly among organizations. On the other hand, even though the subgroups in the haze case seem to work in a complementary way to improve the monitoring system, their works gain less impact owing to the redundant task of presenting their maps. While the subgroups working on the ground present who actually holds the land, the RSPO collects the concession maps submitted by private sectors. The question of the overlapped land is not resolved as those two subgroups do not have any direct links to share this information. In addition, SIIA, which should be expected to be the coordinator of the macro-structure network – as it possesses the highest degree of centrality – cannot play its role as it does not have an associated link with the RSPO. Currently, the maps on hotspots can be viewed from ASEAN Haze online, SIIA’s Haze Tracker, WRI’s GFW Fires and EoF’s map. Therefore, in comparing the effectiveness of the networks in using the information for improving the functionality of the monitoring system, the macro-structure of the wildlife network reveals better connections between actors as well as the role of the coordinator of the network in providing, communicating and organizing resources and information.

Exploring the macro-structure network, one distinct factor which potentially makes the haze case and the wildlife one deliver different achievements is the role of regime's centre: the Haze Centre and the ASEAN-WEN PCU. Despite the haze pollution broadly causing a serious negative impact on people and neighbouring countries, the Haze Centre functions only to facilitate the forum for inter-state discussion, which results in sluggish and minimal changes depending on Indonesia's willingness. One failure of the Haze Centre is that it neither has a role in gathering the necessary and transparent information requested from affected states nor takes any updated information provided by non-state actors into the inter-state agenda. Further, comparing the ASEAN haze media released after an annual meeting, the reports are almost the same. The centre does not have the ability to accelerate inter-state negotiation, set policy priority or be an information hub for any stakeholders. As the ASEAN Haze Coordinating Centre works only for inter-state cooperation at the international level, its role in dealing with transboundary issues is highly limited by the ASEAN principle of non-interference. Since the centre does not function as a significant actor in compromising the needs of affected states and people, the ASEAN Haze Coordinating Centre is not a real functional coordination centre for governing the haze issue once we consider it from the macro-structure of the network. Instead, at the international level, SIIA plays a significant coordination role. As SIIA works with several kinds of actors at different levels, useful information, ongoing activities and attempts to deal with the haze pollution are stored, updated and accessible from SIIA Haze Tracker. There are several forums and workshops held annually to exchange and discuss plans to manage the issue in the future. Representatives from the governmental agencies of ASEAN countries, the private sector and other CSOs are invited to SIIA's organized forum.

In contrast, ASEAN-WEN PCU plays a better role in coordinating the network at the regional level. The PCU acts as the coordinator for the state-CSO forum to strengthen law enforcement. The network works at the operational level, whose collaborations are guided by CITES. The transnational issue on the illegal wildlife trade is transnationally governed by collaboration among governmental agencies and NGOs at different levels. In addition, the ASEAN-WEN annual meeting serves as a forum to discuss the existing resources which Freeland and TRAFFIC Southeast Asia can

allocate for improving collaborative activities among partners to strengthen enforcing operations. The ties among highly centralized nodes (ASEAN PCU, Freeland and TRAFFIC) are obviously connected. Each centrality works with different agencies, who are responsible for different operational tasks. This presents the ability of the network actors to share their resources and expertise and work with different agencies to make the best use of existing resource and to avoid redundancy. At the global level, it is clear that the coordinator is CITES. The distinction between the Haze Centre and the CITES Secretariat is very clear-cut, not only in terms of the political channel for CSOs to participate in the monitoring activities but also in the transparency on the basic information accessible and circulated to the public on the progress that is being made. Although the CITES agreement is far more developed than the ASEAN Haze Agreement, the different nature of the two regimes in their relations to CSO actors proves the importance of openness as a critical factor which makes the two regimes very different in the effectiveness. The macro-structure network in the wildlife case presents the effectiveness of the networks in relation to regimes as the network is open to transnational actors to share their information and resources at the international level, coordinated by the CITES Secretariat and the ASEAN-WEN PCU. Therefore, openness to transnational actors is the most important factor causing the two network cases to deliver different effects on their regimes.

The macro-structures of the networks in the two cases similarly present the importance of transnational actors who serve as centralities of subgroups in the network. In the haze case, about which inter-state cooperation cannot do much, non-state actors apply several approaches to deal with the cause of the issue. Transnational actors coordinate individual and marginalized nodes with other network actors. Thus, information derived from the marginalized nodes (communities and local NGOs) and resources allocated by international actors could be met for better implementation at the local and community levels as well as monitoring at the international level. Information and evidence on the ground to punish businesses which apply unsustainable practice on the ground are transnationally supported by NGOs, while governance mechanisms such as consumer power and the Singaporean law on haze can be imposed on wrongdoers. Even though it is difficult to prosecute them legitimately, it can at least send a warning message

to businesses. The structure of the network shows the flow of resources and information sharing among actors whose attempts together help to reduce the haze problem. Therefore, despite the sluggish development of inter-state cooperation in governing the issue, CSO actors work individually and collectively to create their own mechanisms to protect and bypass the environment. Looking through the network lens, it reveals environmental governance activities which are not limited to state cooperation. Governance happens at almost all levels, even though it is not presented in formal or authoritative forms implemented by states or international institutions.

Comparing the network components of the two cases is not only helpful in explaining which factors make one network more successful than the other in supporting the international regime; it also confirms that the structure which presents the features of good governance (communication, coordination and participation) can better improve regimes through better process. The networks in both cases attempt to improve the function of regimes through monitoring activities, in which the effectiveness of monitoring depends significantly on the communication among actors in circulating information, the participation of actors working in different levels for better transparency, and the function of the coordinated centre in finding a common goal in acting collectively and managing resources among network actors. The macro-structure of the wildlife network possesses better features of governance than the haze case, which can be noted from the number of actors who can participate in operations at different levels of governance, the role of centralities that are well connected with an ability to divide tasks based on the network's expertise, and the connection among CSOs and the regime in supporting the other's source of data. These not only help the centre of the regime to assess the wildlife situation; the information sharing links recognized by CITES also support transparency and they make the sanction mechanism of the regime more legitimate. Further, the transnational network, the ASEAN-WEN, in which the NGOs are the key actors in supporting resources and expertise as well as strengthening states' capacities across the region, becomes a good model of transgovernmental enforcement network for other regions. In contrast, although the non-government network has an effect on governing the private sector, the macro-structure of the network reveals less

opportunity for the network actors to support the ASEAN Haze Coordinating Centre to improve the ineffective function of the regional monitoring mechanism. In addition, ties between NGOs and governmental agencies are quite limited when compared to those in the wildlife case. The major role of the centrality of the macro-structure of the network, SIIA, is annually organizing a regional conference on the haze which all stakeholders are invited to exchange and present ideas, experience and updated situations. However, the forum of the network has not yet advanced in collectively managing their resources.

The macro-structure of the wildlife case can better response to the nature of environmental issues. Although the overall attempt of the network is to conserve endangered wildlife species by preventing their over-exploitation through international trade regulation as well as by tackling the illegal wildlife trade by species, NGOs at different levels can operate with states and/or IGOs ranging from protecting the wildlife on the ground to strengthening governmental agencies' capacity to stop transnational crimes at international ports and monitoring the overall situations of wildlife around the globe. The operations to end the transnational illegal wildlife trade are shared by non-state actors, and the success of those operations does not only depend on states' burden in implementing the agreement. On the other hand, haze pollution, which is by its nature a transboundary problem, does not have any functional inter-state mechanisms to deal with it effectively. Further, the ties between transnational actors and state actors across levels of governance are very limited. Most CSOs can partially work on implementing projects at the community level. While there are several attempts initiated by the network of NGOs across levels to work collectively to improve the monitoring system to make better law enforcement, the Indonesian government is not likely to involve those actors into the process of improving land management at the national level or take the evidence collected by network actors on the ground to act seriously against the culprits. The nature of the transnational problem requires the flow of information to serve the better management of the issue. Comparing the two cases points out the importance of the coordinated ties between non-state and state actors across levels of governance in managing the transnational issues.

To summarize, although both cases reveal the effects of networks on the functionality of the regimes, some different characteristics of networks can help to explain why the network governing the wildlife conservation issue is more successful than the other. Firstly, there are more ties connecting network actors. These links are not only among the same kinds of actors; state and NGO actors are connected to work together at different levels. Secondly, the close ties between the regime's centrality and CSO centralities reflect collaborations among different kinds of actors in sharing expertise to improve the effectiveness of the regime. The final characteristic is the attributes of the regime itself, which not only allow CSOs participation but also identify legitimate points of reference for the network to initiate activities and measures to support the regime. These characteristics of the macro-structure of networks in the wildlife case illustrate the role of policy networks in improving the policy process through better information, coordination and participation.

6.3 The role of the policy networks towards international cooperation on the environment

By comparing the two case studies, there are similarities and differences which can be used to clarify how the nature of environmental governance in Southeast Asia should be understood. This part firstly points out the similarities of states' challenges and difficulties at the national level and within the ASEAN framework in advancing environmental policy and law over development. This illustrates why the development of environmental policy and law by individual national governments and ASEAN takes place slowly. While ASEAN cooperation may not be able to deal with transnational environmental issues, the second aim of this part proposes that regional environmental governance should be analysed not only from the regional level but also from functional activities at different levels and across levels. This is where actual governance happens to serve networks' purposes and results in the improvement of the effectiveness of regimes. Applying the network approach by emphasizing resource sharing reveals how non-state actors have currently worked to solve environmental issues through several means including finding an opportunity to work with governmental agencies at the national and community levels. This

seems to be a normal phenomenon in developing countries. To discover the circumstances that make the network in one case more successful than in the other in delivering environmental outcomes, the final point analyses the key differences between the two cases, especially the existence of the global regime, which allows and legitimizes non-state actors to take part in inter-state cooperation activities.

6.3.1 The state's view on the environment and the nature of ASEAN cooperation on the environmental issues

The first similarity derived from the comparison of two cases is states' inactive response to environmental issues. This states' position is obvious especially when observing the development of international cooperation on the environment as well as the motivations of states in formulating policy and enforcing the law on environmental conservation at the national level. As most ASEAN countries are developing countries, governments focus on economic development rather than conservation of the environment. Economic development is the first priority for governments; environmental issues come to states' attention when they cause negative effects on the economy.

There are reasons why it can be difficult for environmental issues and environmental policy to gain strong support from politicians at the national level and governments at the inter-state forum. Firstly, compared to economic development policy, environmental policy does not provide much incentive to gain support from politicians and ordinary people at the national level. In developing countries, where economic development is a critical condition for people's quality of life, it is difficult to argue that the environmental issue is more important than the development one. For example, in the haze case, to prevent the occurrence of the haze, the government must conserve forests and peatlands. This policy could decrease Indonesia's economic growth and incomes from issuing concessions to agricultural business. In the wildlife case, the policy to allocate forests for protected wild animals cannot be articulated easily without considering the local people living there. Environmental policy does not make politicians popular with voters, but economic development does. In addition, not only does environmental policy have difficulty gaining attention from politicians and the public; sometimes governmental agencies and politicians are

also involved in business. The haze case makes this more obvious: the palm oil business has a close relationship with politicians, while in the wildlife case corruption makes some authorities lax in investigation. As a result, in the haze case, when the Indonesian president proposed the moratorium policy, he faced various challenges from supporters of economic development.

Secondly, as states have to compromise the needs of various interest groups, it is hard for the government to push forward environmental policy and law in an extreme way such as totally banning burning practices in the haze case and prohibiting the trade of ivory, since changes to traditional practices like using fires for land clearing and to cultural beliefs like consuming wildlife for medicine takes time. A compromise approach would help people gradually adjust and conform to more environmental rules. However, this approach often results in policy failures since culprits attempt to benefit from legal loopholes. For instance, the practice of burning under particular exceptions, such as controlled burning in the haze case, or breeding and farming rare species for consumption purposes, in the wildlife case, allows the practice to continue. The haze case can better present the state's problem of implementation. Clearing land without using fires comes with higher costs, so this policy is not practical for small farmers. To impose the zero-burning policy strictly regardless of traditional practice and individuals could lead to the question of legitimacy. Another example, which both cases share, is the conservation policy to support protected areas. For both cases, conserving land by reserving wildlife habitats or the biodiversity balance in the peat soils cannot be addressed by the government, even though preserving forests or creating protected areas is the best way to prevent environmental degradation. This is because the rights of indigenous people who live in the forest should also be in the government's consideration. Therefore, considering these examples, even though it is clear what should be done to effectively tackle the cause of the issue, in reality the government cannot make a sudden change in environmental policy and law since it also has to accommodate the needs of various interest groups. Considering this factor together with people's huge support for politicians who back development policy, there is relatively little incentive for the government to shift the policy from pro-development to pro-conservation. The

absence of political will in encouraging policy to tackle environmental issues could be partially explained by these reasons.

For the reasons stated above, it is not surprising that resources allocated to governmental agencies to implement environmental policy and activities to deal with the issues are insufficient. Despite the lack of resources for operations, positive signals such as the establishment of a special governmental body or a department for better coordination with national enforcement agencies on overlapping responsibilities for managing environmental issues are hardly set out by governments.

At the international level, environmental issues come second to economic development. The issues were brought into the ASEAN forum when they threatened members' economic development. ASEAN cooperation on environmental issues is not based on members' needs to protect the environment but the environment issues are international because they affect the economic development of member countries. In the haze case, the Indonesia–Singapore tension persists since Indonesia is not likely to trade her economic development for a forest conservation policy. While Singapore has requested several times that Indonesia follow ASEAN guidelines to tackle the issue, Indonesia has made little progress to fulfil the objectives of the ASEAN Haze Agreement. For example, although Indonesia has been urged to prevent the haze by conserving and restoring peatlands, in most incidences Indonesia has chosen to spend huge budgets on firefighting, especially after the government had been politically criticized by people and countries when the fires were less likely to be controllable.

In the wildlife case, even though ASEAN-WEN was created to fulfil the objectives of CITES, it also aims to avoid the members getting trade sanctions if they fail to detect shipments of illegal trade of wildlife. If the trade sanction is imposed, the business related to the legal wildlife trade will also be banned. This harms the national economy as many countries in the region are rich in biodiversity and the wildlife trade is an important source of national income. Apart from the goals for increasing the effectiveness of law enforcement, states also use the ASEAN-WEN forum to discuss their mutual interest deriving from collectively updating the CITES appendices before

proposing them to the CITES committee. That updating information is also included the intention of states to downgrade or remove some wild species such as crocodiles from the list. According to a national environmental official, fewer restrictions on exporting wildlife products internationally means more revenues for the state, and CITES is about the politics of interests in the wildlife trade. From this example, international cooperation on CITES among ASEAN countries is improved. However, this is not for environmental conservation but for economic gain, through the increasing of international exports of wildlife. Wildlife species are seen as a kind of national commodity which brings about economic development rather than a part of the biodiversity in ecosystems that should be protected from human over-exploitation.

Based on ASEAN's position, cooperation on transnational environmental issues in both cases is not driven by states' intention to sustain the environment but on the national interests in economic development. While ASEAN cooperation in the haze case is driven by the needs of Indonesia to develop her economy and the cost to Singapore when the haze comes each year, ASEAN-WEN cooperation is driven by economic disadvantage from trade sanctions. These driving forces also demonstrate why the environmental issues, which are always last on any agenda, can gain more concern and attention from states. Since the CITES regime is more progressive and it is legitimately supported by a sanction mechanism, regimes' development in terms of policy and laws can be seen more obviously at the national and operational levels.

The state's consideration and exploitation of the environment and the underlying driving forces on those environmental issues can be used to explain why the progress of environmental policy and law within ASEAN cooperation on the two environmental issues has developed differently. In the haze case, under the ASEAN principles of non-interference, aside from Indonesia and her affected neighbouring countries other members are not involved. The progress of cooperation depends on the negotiation and consent of Indonesia in balancing her economic development and the conservation of the forests and peatlands. On the other hand, to avoid trade sanctions from CITES, each country has to report its progress on the national action plan and related laws to the CITES; further, national authorities have to improve their

capacity for monitoring and enforcing the environmental law on the wildlife trade. As the objective that ASEAN-WEN was set is better coordination among ASEAN member countries for the control of the illegal wildlife trade at international transit points, the more active and collective reaction from ASEAN countries at the regional level has resulted in more successful regional operations in seizures and the formulation of better environmental policy at the national level.

Although the two cases reflect the different progress of international regimes on the development of environmental policy, ASEAN as a regional organization has instead taken an insignificant role in moving forward the regional policy on the environment. In the haze case, the issue has been taken into the ASEAN forum since 1990s, however the forum seems to have little influence on Indonesia to adopt and develop environmental policy to prevent seasonal fires. The conversation in the forum has been about what Singapore has asked Indonesia to do and Indonesia's excuses for her failure to deliver on those requests. The progress of the cooperation may constrain Indonesia's development and the government may lose political popularity. Moreover, it may cause conflict among different interest groups within the country. In contrast, apart from political and diplomatic tensions from neighbouring countries, failing to comply with the ASEAN agreement costs nothing for Indonesia since ASEAN's principle of non-interference and the absence of sanction mechanism in the ASEAN Haze Agreement allow its members to act voluntarily. Even though recently there have been several projects to support the Indonesian president's moratorium policy, this policy shift was not an ASEAN initiative. Instead, it was the deal on Indonesia's carbon trading scheme with other developed countries under the REDD programme that motivated the Indonesian government to formulate and implement the environmental policy to conserve forests and peatlands.

Similarly, in the wildlife case, there is scant regional environmental policy on the protection of endangered wildlife species initiated by the ASEAN-WEN forum. According to Participant G (2015), ASEAN-WEN does not need to create regional policy because that policy is every country's responsible for CITES. States, especially those of CITES's primary and secondary concern, need to develop their environmental policy to reach the CITES criteria. Otherwise, trade sanctions will be

imposed and affect every department and section related to the wildlife trade. Therefore, the forum focused on operations to fulfil the CITES obligations (by improving ASEAN's national agencies' capacity, communication and coordination) rather than collectively developed environmental policy on protecting endangered wildlife species.

In short, the state's perception and ASEAN cooperation on the environment in the two cases are the reasons behind the slow pace of the regional response in terms of policy to the transnational environmental issues. ASEAN, as a regional organization, does not serve as a forum for developing regional environmental policy to tackle the issues seriously. On the contrary, the ASEAN meetings are for discussing the state's interests in the wildlife case, and the endless negotiation without satisfactory solution for affected countries in the haze case. However, this does not mean that ASEAN cooperation on the environmental issues is meaningless. ASEAN cooperation has initiated and established mutual goals for managing them, even though the issues cannot currently be solved successfully. Within the context of developing countries, whose governments have to give priority to economic development, there is less possibility for them to shift their development policy to focus more on environmental protection. Since the development of policy to protect the environment seems less attractive for governments and the ASEAN forum, to understand how policy can be shifted in a more conservation-focused way would necessarily consider from the activities of non-state actors who could be a key factor in slowing down or adjusting the balance of states' policies, which is currently dominated by development over the environment.

6.3.2 The role of CSOs and their networks in developing environmental policy and governance

The second observation derived from comparing the two cases is the active role of environmental NGOs in urging governments to shift from a development policy to an environmental policy. Although the two cases are different in terms of the advance of policy and law on the environment, most NGOs encourage states to formulate a tougher policy aimed to protect the environment. In both cases, sustainable policy to balance the needs of economic development and the awareness of limitation of the

environment is referred to by non-state actors involving in dealing with transnational issues. In the wildlife case, in which illegal practices and sustainable exploitation of wildlife are more clearly defined, the network of NGOs with connections to CITES at the global level can act better nationally to observe and advocate the development of environmental policy. For example, WWF-Thailand worked closely with governmental agencies to draft the CITES national ivory action plan to better controlling the trade in ivory. In addition, NGOs are generally taking a leading role in objecting to the government's development plans such as dam and road construction threatening the forests and wildlife species. With the clear common goal in protecting the wildlife species guided by the CITES agreement, environmental NGOs have applied different approaches to slow down development policy and/or push forward environmental policy. Their different strategies range from the extreme (such as protesting development policy, supporting the total ban of the wildlife trade) to the moderate (such as working closely with the government to gradually close the national legal loopholes).

Similarly, in the haze case, non-state actors involved in non-government networks act to support particular environmental policies to decrease the degradation of the environment caused by development policy. Even though the policy to ban the slash-and-burn method completely is currently problematic and states are in the process of negotiation, network actors in different subgroups of the macro-structural network support pro-environmental policies ranging from a zero-burning policy for agricultural businesses to a moratorium policy for reducing the use of land in fire-prone areas and a reforestation policy to restore degraded peatlands. As the haze case is more complicated than the wildlife case owing to its inclusion of the question of different groups' interests, poor land use management, poverty and the absence of a global regime (with a sanction mechanism) guiding states on what practice is legal or illegal, the balance of development and environmental policy to deal with the haze issue is vague and based highly on actors' interpretations. Disagreement – over the extent to which the environment should outweigh people's need for development – sometimes causes conflicts among subgroups; however, these actors who support sustainable development policy and environmental policy are necessary to decelerate the development force by proposing that government take time to

reconsider the more seriously negative impacts derived from economically oriented development.

6.3.3 The role of non-government networks in connecting to the global regime

Since the development of environmental policy at the national and regional level gains meagre attention from governments in developing countries, CSOs have to make considerable efforts and techniques to raise the importance of their issues if their goal is to make changes in terms of policy. This brings about two significant and related roles of networks. The third observation from comparing the networks is that their role in advancing environmental policy can be more successful through global regime since ASEAN cooperation on the environment rarely offers a political channel for networks to engage in the policy development process. Even though the wildlife case seems to have more channels for the network to shape policy at the national level, this can be done through the CITES forum. If there is a global regime with an effective sanction mechanism similar to the CITES agreement to support the sustainable exploitation of peatlands, this could increase the role of the non-government networks in the haze case to support, pressure or monitor states in their formulation of national policy to comply with such a regime. Ongsiriwittaya (2015) notes that raising the importance of environmental issues in the region through ASEAN bodies is hard to achieve since ASEAN gives more priority to regional security and political issues like the South China Sea. The haze issue, which should be the most important environmental agenda for ASEAN, cannot be cooperated on successfully. In the illegal wildlife trade issue, the development of environmental policy is hard to achieve since ASEAN has a principle of non-interference in domestic affairs. More importantly, since the development of policy is based on the principle of consensus, the development of environmental policy in the ASEAN forum is possible but minimal owing to each ASEAN country having its own environmental problems. For example, in the ASEAN SOMTC (the ASEAN Senior Officials Meeting on Transnational Crime), environmental crime was proposed to be included as an additional category of transnational crime. However, when the meeting discussed in detail what environmental crime should be included, certain environmental issues such as

electronic waste were rejected by some countries that were facing the issues domestically. Therefore, the ASEAN forum is not attractive for NGOs compared to other regional organization bodies on environmental issues as the shift of policy requires a lot of energy and time. Therefore, in advocating policy at the international level, WWF will choose to engage with more constructive international bodies that can bring about expected outcomes with less time and resources being consumed (Ongsiriwittaya, 2015).

The context of developing countries makes the development of environmental policy difficult to achieve, and the shift of environmental policy rarely happens suddenly and obviously by states. Therefore, the functional role of policy networks should receive more attention to better understand how the environment in the region is sustained. Networks' functional activities to improve the effectiveness of regimes would be a crucial factor in tipping the balance between the overwhelming need for development and environmental conservation. More importantly, network perspectives can better illustrate how transnational environmental issues in the region are actually managed through the connections of different kinds of actor across levels of governance. Since ASEAN does not significantly influence its members to comply with what they have agreed on environmental issues, environmental governance does not often result from the ASEAN forum at the regional level. On the other hand, the connections between network actors initiate and operate lots of activities to fulfil the objectives of those international agreements. Therefore, focusing only on high-level inter-state governance on the progress of environmental policy and law may reflect only a partial understanding of environmental governance in the region since inter-state cooperation cannot do much as their negotiation is highly dominated by economic development. This also results in the ineffectiveness of regimes in responding to environmental issues. However, underlying the failure of inter-state cooperation in safeguarding the environment, networks are crucial components that function to govern transnational issues.

While networks can do little to shape environmental policy, they are significant, as in the fourth observation, in sustaining and improving the quality of environmental regimes through functional activities. The network actors in the two cases act

similarly in bypassing the objectives of state agreement through functional governance activities. Transnational environmental governance happens significantly by collaboration among network actors at different levels and across levels. The links between NGOs and governmental agencies mostly at the national level and also across levels are obvious since their works complementary to each other. Their works obviously emphasize practical policy implementation and enforcement rather than accelerating the formulation of environmental policy. This is because of the limited political opportunity for them to participate at the national and/or ASEAN level in general.

While the existing environmental regimes contain governance gaps – including several loopholes and insufficient resource allocation for environmental department and law enforcement agencies – primary role of the network actors is to minimize those gaps and bolster the implementation of environmental policy through projects and activities. Even though these activities may not cause a dramatic change to regional and national policy on the environment, they attempt to slow down the harsh pressure on the environment deriving from the development priority set by governments.

6.3.4 The role of policy networks in sustaining regional environmental governance

The network analysis method reveals complementary functional relationships between state and non-state actors in governing transnational environmental issues at different levels, even though non-state actors' political opportunities to shape policy at ASEAN meetings is limited in both cases. These non-state actors play a complementary role supporting states to achieve the objectives of international regimes. Firstly, NGOs are key actors in the process of implementing regional projects guided by regimes. At the regional level, it can be observed that, while ASEAN meetings are forums for members to cooperate and negotiate on environmental issues, implementation of what they have agreed depends on individual states. Apart from regular ASEAN meetings, joint projects or activities to fulfil objectives of the cooperation funded by ASEAN are rarely found. In the haze case, the approval from Indonesia to accept Malaysian and Singaporean assistance and to extend the MOU

to prevent future fires was not easily achieved. This is similar in the ASEAN-WEN forum, where the budget for strengthening the network's capacity to function better has been problematic. The implementation of projects to achieve the objectives of ASEAN cooperation on transnational environmental issues has been highly reliant on funds from international agencies as well as financial and technical resources from NGOs. Therefore, even though NGOs cannot gain direct access in the ASEAN dialogues, especially in the environmental policy development process, they regularly carry on and concretely implement regional projects by working with communities, authorities and other NGOs at the local level.

Secondly, at the national and community levels, NGOs regularly work to support governmental agencies, especially in the areas where policy choices have been clearly made by states. In the illegal wildlife trafficking issue, which is less conflict-ridden than the haze, NGOs individually and collectively work with national government agencies to promote wildlife protection activities and strengthen law enforcement operations. For example, NGOs in Vietnam and Thailand present similar functions in supporting governmental agencies. Normally, they work as partners of authorities from different departments. In addition, they can work collectively to promote public campaigns to protect the wildlife as a task complementary to reducing people's wildlife consumption and raising people's awareness of the importance of endangered species. However, they can act together in protesting against national policy that severely harms the environment. In the haze case, where the president's moratorium policy is in conflict with the national development policy, NGOs and the environment research centre have entered fire-prone areas then worked with local governments and communities to implement reforestation and peat restoration projects. Even though the problem of land management persists, local NGOs act as key actors to support better law enforcement by handing strong evidence to the courts. Further, they are active in following up the implementation of environmental policy and sending alerts to their network members and the public to keep an eye on contradictory practice on land use policy, for example the issuing of concessions licences for palm oil businesses by local authorities or the Ministry of Agriculture despite the president's moratorium policy. In this aspect, although the watchdog role of NGOs seems opposed to the government's development policy, it can be

considered a complementary role for supporting the forest and peat conservation policy led by the president's initiative and the Indonesian Ministry of Environment and Forest.

Thirdly, to achieve the objectives of international regimes, NGOs, which are the centres of the network's subgroups, work transnationally with states and non-state actors at different levels. They have a critical role in linking information hierarchically and horizontally: the objectives from the top and the results after implementing policy from the bottom; sending requests and suggestions to the leaders from the bottom; and sharing of best practices and experience to network actors. In addition, these transnational NGOs are linked by governmental agencies, local NGOs and communities by participating in projects. Even though these different kinds of actors may have different prioritized needs, transnational NGOs can pool their collective concerns and invite them to work together to carrying out the project relevant to their issues.

These activities show that the network perspective is a better approach for understanding the actual process of environmental governance in the region. By comparing the two cases, it is revealed that there has been little progress in what ASEAN can do through regional cooperation on the environment. As governments of developing countries, their interactions are dominated by concerns of national economic development, even though the forum should be for finding collective solutions for effectively dealing with environmental issues. Therefore, apart from regular ASEAN meetings to agree on environmental policy – which always minimizes substance to gain all members' consent – environmental governance is underdeveloped at the ASEAN level. By investigating what non-state actors had done, which has a significant impact in pursuing the objectives of international agreements, it is apparent that these activities constitute the macro-structure of networks, which includes different kinds of actors contributing to the common ultimate goal of dealing with the issues, even though they may apply different means. Therefore, comparing the two cases indicates the similar role of networks in functioning to improve the effectiveness of environmental regimes. NGOs at different levels are linked by information and resource sharing for improving the monitoring system to deal with

deviations from agreed practices. The networks also link with national governmental authorities, local government and communities to implement projects to directly fulfil the objectives of the regimes.

6.4 Conclusion

This chapter applies a comparative method and network perspectives to answer the research questions. In the first section, the cases are compared through the structural framework developed in Chapter 3. It is found that despite the cases being ongoing environmental problems and CSOs being involved in managing them, there are fewer political channels for CSOs to work with the ASEAN forum in the haze case. This distinct difference results from the differences in the nature of the international cooperation problem. This condition sets different international political contexts and determines political opportunities for CSOs to support states/IGOs on information sharing and regional monitoring mechanism. Comparing the effectiveness of regimes and policy networks in two cases, the wildlife case is more effective, and different kinds of policy networks are revealed. This section, therefore, presents the nature of the international problem, the kinds of policy networks and the maturity of international regimes as key differences for explaining why environmental cooperation in the wildlife case is more successful than for the haze.

The second section examines the macro-structure of networks and uses the network analysis method to investigate the relationships between the macro-structure of networks and its impacts on the effectiveness of regimes. There are three parts in this section. The first part emphasizes the functional roles of policy networks that support particular environmental policy through information and resource sharing activities. Policy networks in both cases play a crucial role in improving monitoring systems and implementing environmental projects to achieve the objectives of international agreements. Supporting the monitoring system helps to strengthen law enforcement and deterrence. However, since the ASEAN Haze Coordinating Centre does not accept information sharing from non-government networks, the networks' attempt can only and partially control some groups of transnational business such as palm oil plantations which have company assets in Singapore. Therefore, in improving the effectiveness of regimes, policy networks in the wildlife case that are

recognized by ASEAN can have more impacts on the effectiveness of regimes. Even though policy networks in both cases have different political opportunities to work with ASEAN, their works intentionally contribute to improving the effectiveness of the regimes. Actual environmental governance in managing the transnational environmental issues can be presented through the connections of actors linked by functional activities at different levels and across levels.

The second part of the second section analyses why there is more development of environmental policy in the wildlife case than for the haze. The number of subgroups and the number of links between state and non-state actors are investigated to analyse the influential role of policy networks in shaping environmental policy at different levels. From the macro-structure of networks, subgroups in the haze case are more noticeable than in the wildlife case. The more the subgroups are clearly seen, the more signals on conflicts and disagreement among them can be assumed. Therefore, even though there is a common goal of ending the problem in terms of problem-solving, disagreement on approaches to manage the problem can lessen their influential efforts in shaping policy. Compared to the wildlife case, network actors are closely linked and it is harder to identify the subgroups. Information and resources are complementarily shared among network actors. Although they bolster different policy, they do not work contradictorily. This makes policy networks in the wildlife case more influential in shaping environmental policy than those in the haze case. Observing the number of information sharing links between CSOs and IGOs and/or state actors at different levels and across levels, there are many more links in the wildlife case. NGOs in the wildlife case can also connect to other international forums, apart from ASEAN-WEN PCU. Therefore, NGOs in the wildlife case have more capacity to expand their concerns to other political channels outside the ASEAN forum. While the capacity of non-government networks to advance regional environmental policy is constrained in both case, the networks of NGOs in the wildlife case can work transnationally to monitor states' compliance with CITES by reporting the progress of environmental law development at the national level to the CITES Secretariat. With the sanction mechanism, the adjustment of policy to protect the environment in the wildlife case is more obvious than in the haze case. This section, therefore, identifies the less obvious of the subgroups, the more connections

between CSOs and IGOs/states and the existence of alternative political channels for NGOs as factors that lead to a more influential role of policy networks in moving environmental policy at different levels in the region.

The third part of this section applies the network analysis method to examine the internal attributes of the macro-structure of networks in the two cases. Comparing the structure of networks in the two cases reveals that the better structure of networks, including more ties among centralities, more ties among network actors and more links among different kinds of network actors, makes networks in the wildlife case operate more effectively than in the haze case. Regimes' monitoring systems can be better improved by policy networks whose structure possesses better coordination in sharing responsibility, better communication among network actors and better participation through collaborative work among different kinds of actors. This part also examines the connections among actors in particular positions: the regime coordinating centres and their existing links to other network centralities. It is shown that the regime coordinating centre in the wildlife case, which is more open to transnational actors, makes better progress for state cooperation in managing the transnational issues. In contrast, the regime coordinating centre in the haze case has very limited links to CSOs and it does not have links to the SIIA, the centrality of the macro-structure of the networks. The links between centralities and the regime's coordinating centre not only imply the openness of regimes to transnational actors but also confirm the importance of transnational CSOs and the openness of inter-state cooperation as factors that potentially lead to better effectiveness of regimes and the environmental outcomes once CSOs can engage with states and IGOs in form of networks.

The final section discusses the similarities and differences of the two cases to point out some features of environmental governance and to emphasize the role of policy networks to shape international cooperation on the environment in the region. There are four key observations that can be taken from comparing the case studies. The first observation is the similarity of states and ASEAN in generally responding to the environmental problems sluggishly. The environmental issues are not appealing for politicians and they are always last on the agenda, with less priority than other issues.

Also, political will in raising the importance of the environment is absent. Insufficient resource allocation for managing environmental issues is obvious at the national level and ASEAN cooperation. The only way to raise the importance of the environmental issues is to relate it to other issues such as the economy and people's health in the haze case or economic sanctions from CITES and transnational crimes and terrorists in the wildlife case. Although in the wildlife case ASEAN-WEN achieves more for ASEAN cooperation to fulfil CITES obligations through better implementation and law enforcement, ASEAN coordinating centres in both cases do not play a significant role in formulating, strengthening and/or moving forward regional environmental policy in a more conservation-focused way. National and regional policy focuses pretty much on economic development. In states' economic-oriented circumstances, the second observation that can be seen commonly in both cases is the active role of CSOs, which attempt to slow down the natural degradation resulting from unsustainable economic development. CSOs and their networks apply several approaches to support sustainable development and environmental protection policies.

The third part of this section notes the different progress in terms of policy shift. Policy networks in the wildlife case have more opportunity to transnationally engage with CITES as well as work complementarily with environmental departments at the national level. While the ASEAN forum is less open and less attractive to CSOs owing to the consensus system, NGOs in the wildlife case can have many more channels to communicate and operate in other international forums. The better structure of networks and their connections to work with the CITES Secretariat in the wildlife case provides network actors with more opportunities to play a role in shaping environmental policy at the national level. However, since instant changes in terms of policy in developing countries can rarely happen, the focus should be on the functional activities of policy networks. The connections among various kinds of actors in complementary operations to support existing regional and national environmental policy reveal actual governance activities. These activities bolster and contribute to the better achievement of international environmental agreements. Regimes can function better once states and IGOs provide a political channel to CSOs who are part of policy networks. Policy networks, discussed in the fourth part of this

section, therefore, sustain regional environmental governance by having crucial roles in providing resources for regional and national project implementation, complementarily working to support environmental and enforcement agencies for better law enforcement, and coordinating and improving communication among state and non-state actors across levels.

Chapter 7 Conclusion

7.1 Summary of the thesis

ASEAN cooperation on transnational environmental issues has always been judged a failure and ineffective owing to the recurrence of the problem. Previous studies have identified several factors explaining why states and regional IGOs have not been able to solve the issues effectively. This thesis does not refute those analyses; however, it explores current governance activities confronting those issues with an aim of identifying an alternative approach for strengthening environmental governance in the region. Since environmental issues in Southeast Asia are complicated, ongoing and unlikely to be solved in a short time, this research assesses the effectiveness of regimes in terms of process rather than product. Since network governance is considered a kind of global governance mechanism that potentially affects international outcomes in areas that are not priorities for states, the network approach has been applied to compare two case studies to confirm whether policy networks are factors which can lead to a better international policy process. This study observes the influential role of policy networks in different stages of the international policy process to find out the circumstances in which policy networks can facilitate inter-state cooperation on transnational environmental issues in the region. To answer the main research question, four subquestions are developed to examine factors which are later considered in the comparative analysis chapter. These subquestions are:

1. What are the components (kinds of actor, number of ties, subgroups and central nodes) of policy networks?
2. How do policy networks operate to improve the effectiveness of international regimes?
3. To what extent can non-state actors in policy networks engage in the ASEAN policy development process?
4. What are the significant roles of policy networks in governing the transnational environmental issues in the region?

The issues of transboundary haze and transnational illegal wildlife trade are selected to answer these research questions. Two methods – which are together called comparative network analysis – are applied to find an explanation for relationships between the policy networks and the effectiveness of regimes. Firstly, a structural framework for comparative study is constructed as a guideline to examine different stages of the international policy process, where policy networks can potentially play a role in improving the effectiveness of regimes. Secondly, the network analysis method is applied to identify actors (states, IGOs and CSOs) involved in the policy networks. Connections among network actors are identified by information and resource sharing activities which support specific policies to achieve the ultimate goal of international regimes. The network analysis method is used to compare the macro-structure networks of the two cases. This allows us to analyse the attributes of network actors, the number of ties among actors, and the role of the coordination centre. These components of the policy network indicate the effectiveness of network, which can be considered a critical factor contributing to the effectiveness of regimes.

In the transboundary haze issue, the policy network comprises groups of non-government networks. The members of the subgroups are tied by information and resource sharing to monitor and implement a particular policy which they agree to be the best means to end the haze problem. These policies include zero-deforestation, conservation of the peatlands and forest, and sustainable management and development. Since these policies provide benefits and costs to different interest groups, they constrain cooperative efforts among groups in the policy network. The complicated nature of this international cooperation problem does not only result in limited political opportunity for policy networks to engage in the ASEAN meetings on haze; ASEAN ignores information on maps gathered by the policy network to make the regional monitoring system function temporarily. Therefore, even though the policy network attempts to improve the effectiveness of the haze regime by improving the monitoring system – which can lead to better deterrence and law enforcement – the network's role in directly influencing or improving ASEAN cooperation on haze is very limited. However, subgroups of policy network are significantly taking two functional roles in governing the haze issue in

the region. Firstly, the network attempts to support the establishment of sanction mechanisms. On-the-ground evidence, satellite data and map information are sent to Singapore and the RSPO Secretariat to deter companies from using the slash-and-burn method. Their second role is in implementing regional projects, for example ASEAN peatland management in the haze case and capacity building for ASEAN governmental agencies in the wildlife case, to achieve the objectives of the policy. While ASEAN cooperation does not respond to the issue sufficiently, the policy network, which includes the subgroups of non-government network, can have an effect on the development of the regime. More importantly, policy networks operate to enhance environmental governance on the haze issue in the region.

In the case of the transnational illegal wildlife trade and trafficking, the policy network comprises the transgovernmental network (ASEAN-WEN) and non-government networks. Freeland and TRAFFIC – key transnational NGOs and central nodes of non-government networks – are included in ASEAN-WEN to strengthen the capacity of the network. As a member of the transgovernmental network, Freeland and TRAFFIC play a crucial role in establishing the ASEAN-WEN PCU, organizing workshops to coordinate governmental agencies better, and increasing the capacity of governmental agencies in operations. These activities can noticeably improve the effectiveness of ASEAN cooperation for better implementation of CITES. Improvement of ASEAN cooperation in tackling the illegal trade in wildlife can be perceived from the increased number of seizures. In addition, transnational NGOs in ASEAN-WEN have identified their key task by sharing their responsibilities based on each organization's expertise to support government agencies. On the other hand, as a member of the non-government network, Freeland and TRAFFIC also take a coordinating role as they possess a number of ties with central nodes of subgroups whose concerns are based on wildlife species. Freeland and TRAFFIC also monitor states' compliance with the CITES regime. They work together to monitor and implement projects on wildlife conservation. Information from different areas are collected and circulated among network actors. Importantly, this information can be submitted to the CITES Secretariat. However, although Freeland and TRAFFIC are partners of ASEAN-WEN, they barely have a role in shaping regional policy in the policymaking process. The forum is reserved only for state actors. At the regional

level, ASEAN-WEN's close session makes states work closer; however, the decisions made in the meeting do not always develop environmental policy to conserve wildlife. This is because they are based closely on the national interest and the perspective of seeing wildlife as a kind of national commodity. Therefore, instead of shifting individual states' environmental policy through ASEAN, transnational NGOs in non-government networks choose to work with CITES since the forum gives a political channel for them to support the global monitoring system on the trade in wildlife. Despite NGOs in the region having different organizational mandates, they rarely work against each other. They can actively work together to oppose development projects which can cause immense harm to the environment. Apart from NGOs' cooperative efforts in the form of network, NGOs are individually key actors in wildlife and forest conservation by working with people, communities, government agencies and intergovernmental organizations.

By comparing the two cases, it is clear that the CITES regime is more effective than the anti-haze regime. Policy networks can be a crucial factor supporting the regimes' effectiveness. Examining the components of the network (the number of network actors, the number of ties, the ability of the network's coordinator and centrality) helps to explain why the regime governing the illegal trade in wildlife functions more effectively. Policy networks in the two cases are similar in taking functional roles through operations to strengthen the regime's monitoring system and better implementation to fulfil the objectives of international agreements. However, the non-government networks in the two cases are different in their ability to push target states to develop environmental policy and mechanisms. Although in both cases non-government networks cannot shape environmental policy through the ASEAN framework, transnational NGOs in the wildlife case can find alternative political opportunities by engaging with other IGOs at the international level and with states at the national level. More political opportunities in the wildlife case can be observed from the distinct numbers of ties between CSOs and IGOs. The nature of the cooperation problem and the quality of regimes are key factors underlying different political opportunity structures for CSOs in each case to connect with states and IGOs. The nature of the international problem in the haze case contains high degrees of conflict, not only between Indonesia and affected states but also among subgroups

of policy networks whose concerns relate to the interests of different groups of stakeholders. Political opportunities for non-governmental actors is very limited. Apart from GEC, which implements the ASEAN peatland management project, other key transnational NGOs that are central nodes of subgroups of networks are disconnected from the ASEAN Haze Coordinating Centre. On the other hand, the wildlife issue is the inter-state operational problem in controlling the wildlife exploitation. The key central nodes of non-government networks can link with the CITES Secretariat, IGOs and states. Therefore, in the wildlife case, as central nodes of non-government networks, Freeland and TRAFFIC take dual roles in supporting ASEAN countries for better implementation of law enforcement, and in influencing the improvement of individual states' environmental policy by providing information on compliance and the progress of implementation to the CITES Secretariat. With the CITES economic sanction mechanisms and a political opportunity for non-government networks to strengthen the monitoring system, the non-government networks can play an influential role in shifting policy in a more conservation-focused way. Comparing the two cases reveals particular features of the state, non-state actors and ASEAN's coordinating centre in governing transnational environmental issues in Southeast Asia as set out below.

1. ASEAN member countries will not take any serious action on an environmental issue unless the issue causes negative effects to their national interests, especially on the economy. International agreements in both cases were signed by relevant parties, with various incentives based on their national interests. Indonesia signed the ASEAN agreement on haze because the agreement neither assigned any obligations nor imposed sanctions on parties. The agreement, on the contrary, confirmed the principle of sovereignty; in particular, any assistances must get approval from the requesting or receiving party. In the wildlife case, states signed CITES as a requirement to engage in the legal international trade on wildlife with other parties, even though the agreement came with obligations and sanction mechanisms. The interest-based orientation of ASEAN states is obvious in both cases. In the haze case, ASEAN countries which do not suffer the negative externalities from the smoke exclude themselves from the issues, even though they are parties to the agreement. The progress of the regime depends on Indonesia's willingness to

improve her development policy and land management system, while Singapore and Malaysia, which suffer from the issue annually, cannot do much more than blaming and offering assistance to Indonesia. Similarly, in the wildlife case, ASEAN countries are more active in responding to the illegal wildlife trade issue once they are threatened by the CITES Secretariat with economic sanctions if they continue to fail to control illegal trade and trafficking.

2. As a regional organization, ASEAN cannot play a significant role in accelerating inter-state cooperation on environmental issues. The ASEAN coordinating centre in each case does not take an effective role in gathering the necessary information from member countries. Based on the ASEAN principles of non-interference, consultation and members' voluntary rather than mandatory international responsibilities and obligations, the coordination centre does not have any authority to obtain data or records since the members do not have an obligation to provide them. Furthermore, the ASEAN forum is very state-centric and serves only for the interests of its members, which prioritize economic development. Although some NGOs can engage in ASEAN-WEN, they cannot have an influential role to shift regional policy in a pro-environmental direction. Therefore, this leads to the conclusion that ASEAN is not a suitable platform for advocating environmental policy since the forum is highly dominated by the state and the coordinating centre does not have sufficient ability to advance the needs of different stakeholders involved in the environmental issues.

3. Non-state actors, especially NGOs, are in both cases taking a critical and functional role in sustaining the quality of the environment and in supporting environmental policy in the region at different levels and across levels of governance. At the national and community levels, NGOs normally do projects advocating the environment to the public, working as a watchdog on governments' policies that harm the environment, and collaborating with government authorities to implement environmental programmes and/or strengthen the effectiveness of law enforcement. Furthermore, the network approach proposes the significant role of network actors – who work at different levels but are transnationally connected to each other – in strengthening the international regime by improving the functioning of the regime's monitoring system. Even though these non-state actors cannot have a political opportunity to

develop regional environmental policy, they still have a crucial direct role in implementing conservation policy and supporting pro-conservation policy in the region.

By comparing the two cases, the power relationships between ASEAN states and non-state actors in governing the issues can be noted. States are the most powerful actors and they decide who can be engaged in the international policy process. Observing the connections between states and non-state actors, it is found that NGOs can complementarily work with the state when mutual objectives can be identified. Within these relations, NGOs which take a compromising, non-aggressive and constructive approach are allowed to supply their resources, knowledge and expertise to states. In this aspect, even though the NGOs at the national level want to achieve a more extreme goal in conserving the environment, they have to trade their ambition for better political opportunities to develop trust and work closely with the government.

7.2 Summary of the findings

The findings can be summarized as follows.

1. What are the components (kinds of actor, number of ties, subgroups, and central nodes) of policy networks?

Policy networks are groups of actors linked by resource and information sharing with a particular aim to support an environmental policy. Applying the network analysis method reveals the macro-structure of the network in each case, which presents kinds of actor, ties among them, subgroups and the central node. Focusing on the connections between IGOs and NGOs, this thesis classifies policy networks into two categories: the non-government network (the majority of network actors are non-state actors with few links to states and/or IGOs) and the transgovernmental network (network actors are a mixture of states, IGOs and NGOs, with several links between IGOs and CSOs). The components of the policy networks in each case are set out below.

In the haze case, key policy network actors are states, IGOs (the ASEAN Haze Coordinating Centre), NGOs and the private sector. While many links among actors can be identified, it is obvious that there is only a direct link between GEC (an NGO) and the ASEAN Haze Coordinating Centre (an IGO) at the international level. The subgroups, which are mostly non-governmental, can be easily noticed from the macro-structure of the networks. However, the central nodes of each subgroup do not connect directly with each other. Although the ASEAN Haze Coordinating Centre is the centre for ASEAN cooperation in managing the issue, it is not the centrality of the macro-structure of the network.

On the other hand, in the wildlife case, actors governing the transnational illegal wildlife trade issues include states, IGOs and NGOs. There are a number of links among IGOs and NGOs at the international and transnational levels. Furthermore, there are many ties between governments and NGOs at the national and community levels. Considerable ties linking different kinds of actor in the networks make it less easy to identify the subgroups within the macro-structure of the networks. However, at the regional level, the key nodes responsible for sharing tasks to achieve the goal of the regime can be clearly seen. Considering the macro-structure of the networks, ASEAN-WEN – as a centre for ASEAN cooperation in tackling the illegal wildlife trade issue – is well connected with Freeland and TRAFFIC, which are key central nodes of the macro-structure network at the international level.

2. How do policy networks operate to improve the effectiveness of international regimes?

Policy networks in both cases share similar functions to improve the effectiveness of international regimes. The first function is developing regional monitoring system, which is a foundation for better deterrence and enforcement. The second is strengthening regional policy and project implementation. Information, knowledge, best practice and resources are allocated to environmental governmental departments and communities to increase the capacity of those actors in on-the-ground operations.

In the haze case, actors in the subgroups work at different levels but are connected by transnational NGOs. While the absence of an Indonesian official authoritative map weakens the deterrence and enforcement mechanism to punish wrongdoers, subgroups of policy networks have revealed their own maps – which have been developed through their collaboration among organizations – in the public domain. Even taken together with the Singapore law on transboundary haze and the certificate system of the RSPO, this network's deterrence mechanism can only control the business sector's use of fires to clear land. In addition, transnational NGOs and local NGOs which support the president's moratorium also work in a form of network to implement peat and forest conservation projects; at the same time, they also keep an eye on the national development policy, which allows business concession licences and affects the protected forests. However, there are few links between the ASEAN haze coordinating centre and key transnational CSOs. The maps and satellite information gathering by those actors are not approved and used by ASEAN. Therefore, the effectiveness of regime in the haze case cannot be significantly improved.

In the wildlife case, transnational NGOs are included in the transnational networks. With the aim of enhancing law enforcement in ASEAN countries, transnational NGOs are crucial in the establishment of the ASEAN-WEN coordinating centre, sharing resources and expertise to state agencies, and organizing workshops for better state coordination and communication. Furthermore, NGOs and IGOs are linked through forums dedicated to concerns on particular endangered wildlife species. Transnational NGOs work closely and complementarily with state actors, environmental departments and enforcement agencies in different ASEAN countries. This constructs connections between different kinds of actors at different levels and across levels. Information gathered from these cooperative operations is shared among network actors. Furthermore, key transnational NGOs involved in ASEAN-WEN have shared responsibilities, according to each organization's expertise, to support government agencies. Furthermore, some of them are linked to CITES. Therefore, they are a source of data for supporting the monitoring system in CITES; at the same time, they work to strengthen policy implementation enforcement for ASEAN-WEN and individual ASEAN countries.

3. To what extent can non-state actors in policy networks engage in the ASEAN policy development process?

While key transnational NGOs in the haze case have limited opportunity to engage with the ASEAN Haze Coordinating Centre and the ASEAN forum, those in the wildlife case can formally participate in the ASEAN-WEN open session. However, both cases show a similar aspect, that they can engage better in the process of policy implementation at the national level rather than at other stages of the policy process. Although both cases present policy networks' attempts to develop monitoring systems for better deterrence and enforcement, the improvement of the regime at this stage happens only in the wildlife case, where links among IGOs and transnational NGOs are obvious. The role of non-government networks in shifting environmental policy through the ASEAN forum is limited.

4. What are the significant roles of policy networks in governing transnational environmental issues in the region?

To answer this question, this thesis focuses on the similar functions of policy networks in strengthening regional monitoring mechanisms and ensuring the implementation of projects to sustain the environment and achieve the goals addressed in international agreements. Functional tasks are basic but significant for protecting the environment in the region from over-exploitation. Even though the environmental problems continue, policy networks are a kind of governance mechanism operating to enhance the effectiveness of regimes. The improvement of policy monitoring and implementation through collective action in both cases supports better environmental outcomes in the region.

Main research question: under what circumstances can policy networks facilitate inter-state cooperation on transnational environmental issues in the region?

Although both cases present the functional role of policy networks to regional environmental governance, their influence in shifting the development of policy and law on the environment are different. Applying the comparative network analysis method, two contextual conditions determining the effects of policy networks in facilitating inter-state cooperation are the nature of the international cooperation

problem and the attributes of the regimes. Examining information sharing links between CSOs and state and between CSOs and IGOs reveals different political opportunities for central nodes of non-government networks to supply information to improve regimes' monitoring systems. The relationships between the problems of international cooperation and the attributes of regimes towards the influential role of policy networks in improving the effectiveness of international regimes can be clarified as follows.

The nature of the international cooperation problem and the attributes of regimes offer policy networks different political opportunities to engage with the ASEAN coordinating centres. The more conflict that exists in those inter-state forums, the less opportunity there is for CSOs to connect to ASEAN. The unsettled issue between states, which relates closely to their national interests in the haze case, excludes CSOs from the ASEAN forum. Despite CSOs working closely with stakeholders and being able to feed in information to improve the ASEAN monitoring system, they are not connected to the ASEAN Haze Coordinating Centre. On the other hand, the wildlife case presents states' operational problems and ASEAN countries agree to cooperate for better implementation. Mutual interests and incentives for cooperation are clear since better coordination and cooperation among them also protect individual ASEAN countries from receiving economic sanctions – which can be considered additional costs – if they fail to carry out their obligations in CITES. As the issue contains less conflict among parties and stakeholders, a political opportunity is available for NGOs to connect and work complementarily with the ASEAN-WEN PCU.

The attributes of regimes also result in a political opportunity for non-state actors. Key attributes of regimes include the ability of the regimes' coordinating centres to provide a political channel of communication to central nodes of non-government networks and in imposing sanctions on parties. Clear differences between the haze case and the wildlife case are not only the ties between CSOs and ASEAN coordinating centres; central nodes of non-government networks in the wildlife case can also link to the CITES Secretariat – the centre of the global regime acting independently of member parties and possessing a sanction mechanism. The CITES Secretariat has connections with key central nodes of non-government networks,

transgovernmental networks and states to sustainably manage wildlife conservation and exploitation. To legitimate the sanction mechanism if the punishment is needed to push a state into adjusting its laws, field information from third parties is necessary. The transnational NGOs in non-government networks can supply that information to the CITES Secretariat. On the other hand, the ASEAN Haze Coordinating Centre rarely coordinates with other non-state actors, focusing on ASEAN members. Since the ASEAN Haze Coordinating Centre cannot work independently of states' interests and the development of the regime is still based on states' responsibilities and voluntary action, without any sanction mechanism from another global regime to push states to respond to the issue enthusiastically, it is difficult to improve the effectiveness of the regime in the near future.

The nature of the international cooperation problem and the attributes of regimes are equally important and cannot be analysed separately to determine the political opportunity structure for policy networks in facilitating international environmental cooperation. However, while the nature of the problem is difficult to change, more attention should be given to the ability of the regime's centre to provide political opportunity for policy networks. What is missing in the haze case is a global mechanism with an effective sanction mechanism; a global regime supported by sanctions is present in the wildlife case. The existing global regime with a sanction mechanism creates more political opportunities as alternative options for non-state actors in policy networks to engage. Examining the attributes of the macro-structure of networks in the wildlife case, and the higher number of ties between NGOs and IGOs, reveals more political space for the central nodes of non-governmental actors to strengthen the regimes governing the illegal wildlife trade in the region. If there were a global regime with an effective sanction mechanism, similar to the CITES Secretariat, the policy networks would be able to facilitate inter-state cooperation on haze through other more potential international forums outside ASEAN. In addition, with the economic sanction mechanism it could supply a different context of the problem of international cooperation as states would have to consider the additional cost of non-compliance to what they agreed.

Since there are different political opportunities for policy networks to support inter-state cooperation, the answers to the question of whether policy networks can improve inter-state cooperation are various. In the haze case, ASEAN cooperation cannot be improved and non-government networks have to work only with affected states to set up temporary monitoring mechanisms to govern the plantation companies. Even though the non-government networks attempt to fulfil the intention of the ASEAN Haze Agreement, their information cannot be used to improve the ASEAN monitoring system. However, despite policy networks being unable to significantly facilitate ASEAN cooperation, their activities and attempts contribute positive impacts to environmental governance in the region. In the wildlife case, policy networks can facilitate ASEAN cooperation on tackling the illegal wildlife trade through the improvement of communication, participation and communication among different kinds of actors, resulting in better implementation by ASEAN of CITES and better environmental outcomes in the region. Transnational NGOs in policy networks are a critical factor that functions to support ASEAN cooperation and individual ASEAN member countries, and to monitor these actors in their compliance with CITES. With better political opportunities to connect with CITES, non-government networks can take a more influential role in shifting national environmental policy to balance development policy. In short, despite different opportunities for policy networks to facilitate regional environmental cooperation, policy networks in both cases do contribute to better environmental outcomes in the region.

7.3 Implications of research findings

The comparative network analysis approach confirms the similar role of policy networks in sustaining the quality of the environment and in attempting to close the governance gaps in the areas where states and ASEAN have failed to do so. However, their ability to facilitate international cooperation on transnational environmental issues is different owing to different political opportunities, which can be observed from the connections between the regimes' coordinating centres and the key central nodes of non-governmental networks. Implications of these findings come in the form of policy suggestions and alternatives for better environmental outcomes.

Transnational environmental governance in the region can be better achieved in these ways.

1. Environmental issues need global regimes or international laws which clearly articulate what are legitimate practices in the sustainable exploitation of the natural resources and the environment. The wildlife case shows that, even though protecting biodiversity in wildlife is very challenging, the CITES agreement sets a clear definition in the categories and procedures in the wildlife trade, with separated but adjustable lists in the appendices of endangered wildlife species that are annually reviewed. In the haze case, part of the problem is the absence of clarity on what sustainable development is. There is no scientific system, method or indicator to assess the balance of it. Therefore, even though different groups attempt to solve the issues, the various interpretations based on the groups' interests can hinder cooperative efforts among them.

2. Sanction mechanisms, even from other global environmental regimes or set by ASEAN in the future, are necessary for improving the quality of ASEAN cooperation on the haze issue. This is because presently ASEAN does not have capacity to accelerate or ensure that the parties take responsibility for environmental damage which causes harm to their people and neighbouring countries. The effective sanction mechanism is more legitimate when third parties are included and acts as another informative source supporting the policy monitoring system before sanctions are imposed on any non-compliant party. Therefore, this offers a political opportunity for the policy network to connect with the regime's centre. Sanctions will increase the cost for states to take more serious action to tackle the issue. Incentives based on economic gains from trade, as in the wildlife case, may be necessary to get states to sign up to a more restrictive agreement.

3. Since policy networks are important for sustaining environmental governance and to potentially enhance the effectiveness of international regimes through the improvement of the international policy process, making a connection to key central nodes of non-government networks is an available and practical option for IGOs. The ASEAN Haze Coordinating Centre may enhance the effectiveness of regimes by connecting to and/or investing in capacity with those key CSOs. These crucial actors

– especially central nodes of subgroups or the centrality of the macro-structure of the networks – can be identified in the macro-structure of networks in each case study. These nodes, which currently have a significant role in carrying and sustaining the environmental policy, can also have a potentially crucial role in improving the regimes if their information, knowledge, expertise and resources are accepted by IGOs. Moreover, applying the network analysis method helps to confirm key actors and powers related to their position in the macro-structure of networks. Some of these actors may not recognize that they are in a position to coordinate the flow of information, or have an influential and potential role in negotiating or bargaining the needs and objectives of different subgroups. It was shown in the wildlife case that the connections among subgroups is related to the better functioning of the networks, so an ability of the centrality of the macro-structure of networks to connect to every central node of the subgroups and seek a better compromised approach would improve the quality of regional governance in the region.

7.4 Original contribution to the literature

This thesis makes an important contribution to knowledge and understanding in the literature on ASEAN cooperation and environmental governance in Southeast Asia, where the application of the network perspective is rather new and very limited. Although the concept of international cooperation in neo-liberal institutionalism proposes regimes as a tool to facilitate international cooperation and shape international outcomes (Young, 1989; Krasner, 1983; Keohane, 2005; Stein, 2008), the nature of international cooperation problems resulted in the ineffectiveness of regimes without promising the means to improve them, especially when states do not have an incentive to cooperate (Mitchell, 2010: 116). Existing studies focus on the failure of states and ASEAN in ending transnational issues in terms of problem-solving (Litta, 2012; Nguitragool, 2011; Aggarwal and Chow, 2010; Elliott, 2003; Elliott, 2004). However, regarding difficulties in collectively dealing with environmental problems, this thesis assesses the effectiveness of regimes in terms of process. On the other hand, many studies emphasize governance activities at the national and community levels run by NGOs and non-state actors as counterforces reacting to and pressuring those failures (Pas-Ong and Lebel, 2000). These two

perspectives have separated state and non-state actors, although their mutual goals in terms of problem-solving can be identified. Two hybrid forms of governance which can be applied to examine the relationships between different kinds of actors are the concept of orchestration and the concept of networks. Even though the concept of orchestration was applied to reveal a hybrid form of global governance, the concept focuses on the influential role of individual IGOs in enlisting private and NGO actors with support to collaborate with target states (Abbott et al., 2012; Hale and Roger, 2014; Bäckstrand and Kuyper, 2017; Lister et al., 2015). The concept of orchestration is practical for IGOs with substantial resources, but ASEAN does not currently demonstrate this feature of IGOs. This thesis found that the network perspective is more practical for application to the Southeast Asian context.

Although there are studies about networks in the Southeast Asian literature on international cooperation, they are applied in various areas including political economic relations (Katzenstein, 1996; Dent, 2003), sustainable energy and resource exploitation (Karki et al., 2005; Poocharoen and Sovacool, 2012) and human rights (Crouch, 2013). Although there is a body of network literature on the environment, networked regionalism is absent owing to the vertical mode of governance covering up the horizontal ones (Elliott, 2011). However, by applying the network analysis method this thesis reveals policy networks governing transnational environmental issues in the region. Linked by information and resource sharing, CSOs can engage with states and IGOs to support a particular regional environmental policy. The network approach allows us to examine the role of CSOs in complementarily working with states and IGOs. This thesis therefore supports Chong's (2011) notion that CSOs in Southeast Asia can also play a possible and crucial role in the areas where the market and the state cannot provide public services to their people.

Applying the network analysis method in the two case studies contributes to understandings and debates on environmental governance, international cooperation on the environment among ASEAN countries, and the concept of the network as a hybrid mode of governance in Southeast Asia as follows.

Firstly, through the network perspective, international environmental governance on transnational environmental issues cannot be sufficiently understood only by

examining inter-state cooperation on the issue. In both cases, even though the environmental issues are addressed at the ASEAN forum, the forum does not prioritize environmental issues. This results in several governance gaps which non-state actors, especially NGOs, attempt to fill in. Non-state actors who act individually and/or collectively take functional roles in supporting the intention of the international agreement. The non-governmental network and NGOs in the transnational network in the cases close governance gaps by providing information to enhance the function of regimes' monitoring system and directly implement projects to achieve particular environmental policies. This highlights the crucial role of non-state actors in their efforts to have cooperative operations with state actors and ASEAN. Moreover, the network approach provides a tool to explore operational horizontal and vertical activities of actors involved in dealing with the issues. Non-state actors in non-governmental networks are working at different levels and across levels of governance to slow down the environmental degradation derived from the need for economic development as well as to sustain the quality of the environment.

Secondly, while there are several and different kinds of actors involved in governing transnational environmental issues, the network analysis method helps to identify the crucial role of transnational environmental NGOs through the information sharing links. The links among actors are drawn from existing empirical evidence such as projects and/or organizations' referrals to each other. The higher the number of ties, the more important the actor in coordinating information among the members of the network and connected with the centralities of other subgroups. Therefore, apart from the IGOs and states, transnational NGOs are taking an important role in governing environmental issues through developing the monitoring system and the environmental policy in the region.

Thirdly, the connections between different kinds of actors present the existence of cooperative relationships among state and non-state actors who work complementarily at different levels of governance to achieve their mutual goals. Therefore, governing transnational environmental issues in the case studies exemplify that relations between state and non-state actors do not always appear in confronting and conflicting positions. Some NGOs apply a non-aggressive and

constructive approach to work with governmental agencies. Thus the network perspective gives another aspect to broaden understandings of environmental governance from cooperative attempts among state and non-state actors in addition to activities managed by states or non-state actors. Therefore, as observed in the case studies, transnational issues in the region are governed by actors involved in key categories: inter-state cooperation (ASEAN), state and non-state cooperation, and non-state governance activities. The network approach creates the structure of connections among these actors in different categories to reveal how and to what extent these actors can connect to each other in governing transnational environmental issues in the region. The network perspective, in this way, broadens our understanding on environmental governance.

7.5 The research limitations

Some points which this research cannot reveal and can limit the study are as follows. The first limitation is related to the network method. As the links are defined by information and resource sharing, this means that the conflictual relationships among actors cannot be revealed. Therefore, while the well-defined ties are strong in providing empirical evidence on the existing cooperative relations between two actors, the method is limited in presenting the counter link. Therefore, agriculture businesses which are against environmental protection policies or are acting unlawfully – businesses that the network actors attempt to monitor – cannot appear on the network graph. In addition, since the network method reveals actors operating at different levels and across levels, this research cannot analyse all actors in the network equally in detail; rather, it selects for analysis some organizations in key positions, not those located marginally.

The second category of this study limitation is on language barriers. In Southeast Asia, national languages are used officially in governmental documents, laws, news or even websites. Therefore, accessing some of these primary documents written in their national language is part of this research's constraints. Language barriers are the real challenge for me as a researcher, for potential informants and for forming networks across countries. As a researcher, I can access only data collected from documents and participants in English and Thai. Considering the diversity of languages used

across the region, this factor potentially blocks the network's formation, development and expansion since the networks are fundamentally based on the flow of communication among actors.

7.6 Prospects for future research

Since the application of network analysis in the study of environmental governance in Southeast Asia is quite new, more studies on other environmental issues outside ASEAN or in different context may be useful to test the validity of this approach. The studies may include further investigation of how key position actors in networks strategically manage to negotiate different approaches to achieve their ultimate common goal, to reduce the tension among subgroups and to share tasks within the network. While the ASEAN Haze Coordinating Centre is not yet fully functioning, the effectiveness of the Singaporean unilateral sanction mechanism to punish agricultural companies causing fires in Indonesia should be extensively investigated in the next few years. The connections between the Singaporean government and the transnational NGOs which link to groups of Indonesian NGOs and communities may be empirical evidence to prove the role of policy network.

The development of land use management in Indonesia and the establishment of the ASEAN Haze Centre are the two advances which should be noted in the near future if these can improve the haze issue in the region. Recently, ASEAN has agreed on the settlement of the Haze Centre, which is expected to be located in Indonesia. According to the Haze Agreement, the centre functions as a coordinating centre for parties, donors and experts from organizations. Therefore, the centre is expected to have more authority in coordinating information, assistance, funds and resources from different kinds of non-state actors. Therefore, if the centre can provide a link with the governance network, this would be a point for observing whether the haze regime would be improved by these non-state actors.

Although ASEAN-WEN has succeeded in improving the implementation of the CITES agreement, it was merged with the ASEAN Expert Group on CITES in March 2016 to restructure on a new 10-year action plan to combat wildlife crime (ASEAN Secretariat, 2016). This is a means to solve a technical problem, which can be considered a

drawback of cooperation in the form of the network. Since the network is not a legal entity, fundraising as well as direct support from sponsors cannot be done directly through a formal process. The transformation of ASEAN-WEN and AEG-CITES as a regional mechanism to deal with the transnational illegal wildlife trade issue should be investigated alongside the changes in the ASEAN regime in managing the issue, especially whether ASEAN-WEN is terminated or strengthened. The observation of the role of the policy network in the wildlife case would be more obvious by comparing the case across time.

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