COMPLIANCE AND DISPUTE SETTLEMENT UNDER THE TRANSBOUNDARY ATMOSPHERIC POLLUTION REGIMES

SUKANDA HUSIN

I. Introduction

Theoretically, a law will be complied with by the regulated community only if it fulfills the sense of justice. However, if the law is not based on justice, it will abolish oneself or be abolished by the regulated community.[1] The same notion applies to international environmental agreements (IEAs). It is indeed more appropriate to apply this notion to IEAs rather than to national laws because in the IEAs, for the purpose of fulfilling the sense of the justice, the parties as regulated nations take a part in formulating the agreements and give their consent to be bound as stipulated in Article 11 of the Vienna Convention on the Law of Treaties 1969.[2] Thus, EIAs, to some degree, reflect the interests of the negotiating states.[3] Based on principle of *pacta sunt servanda*, once an agreement is ratified, there will be no more room to say that they do not conform to a states' interest.[4] Accordingly, a state's action to disobey its obligations under ratified international agreements is considered as a breach of international law.[5]

The main objective of any international convention is to create a peaceful and harmonious condition in which regulated community resides. With regard to IEAs, the objective is to prevent international community from the threats or detrimental impacts of economic development, such as environmental degradation and pollution.[6]

In light of this, the debate on whether or not a state must comply with IEAs becomes irrelevant because IEAs reflect the interests the parties. Be that, a state ratifying IEAs must, comply with its obligations[7] because state's compliance is determinant factor of effective implementation of the IEAs.[8] However, in reality it does not always happen.[9] Lack of executive agency of international law has always become one of the reasons of how difficult it is to implement international law so as to achieve state compliance.[10] However, it is not insurmountable. Many IEAs have employed various compliance and dispute settlement mechanisms, ranging from traditional inter-governmental adjudication, supranational adjudication, and managerial models, which can monitor, assist and force the states to implement the EIAs. Application of each model should be deeply assessed especially in current situation where states prefer non-confrontational and non-binding

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[1] John Rawls, *A Theory of Justice*, the Belknap Press of Harvard University Press, Cambridge, Massachusetts: 1971, p. 3-4. See also Ronald Dworkin, *Taking Rights Seriously*, Harvard University Press, Cambridge Massachusetts: 1977, p. 207-208.

[2] Text in Ian Brownlie, *Basic Documents in International Law*, 4th Ed., Oxford University Press, Oxford: 1995, p. 388. Every treaty or international convention is formed by a series of process, notably, negotiations, signature and ratification. Signature and ratification traditionally constitutes a state's consent to be bound by the international convention. Without ratification, a state is not bound to the convention. See James Leslie Brierly, *The Basis of Obligation in International Law*, Oxford University Press, Oxford: 1958, p. 9-18; Michael Akehurst, *A Modern Introduction to International Law*, 5th Ed., George Allen & Unwin (Publishers) Ltd., London: 1984, p. 123; Gerhard Von Glahn, *Law Among Nations: An Introduction to Public International Law*, Collier Macmillan Publishers, New York: 1986, p. 16; and Tim Hillier, Sourcebook on Public International Law, Cavendish Publishing Limited, London: 1998, p. 131-137.

[3] Oran R. Young, *International Governance: Protecting the Environment in a Stateless Society*, Cornell University Press, Ithaca, N.Y.: 1994, p. 24. According to A. Chayes and A. H. Chayes, modern treaty making can be seen as creative enterprise through which the parties not only weight the benefits and burdens of commitment but also explore, redefine, and sometimes discover their interest. See A. Chayes and A. H. Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements*, Harvard University Press, Cambridge, Massachusetts: 1995, p.4-5.

[4] This notion is accepted by many international lawyers, for example Edith Brown Weiss says, "International law governs relations between independent States. The rules of law binding upon States therefore emanate from their *own free will* as expresses in conventions or by usages generally accepted as expressing principles of law and established in order to regulate the relations between these co-existing independent communities or with a view to the achievement of common aims." [Emphasis added]; See Edith Brown Weiss, "The Emerging Structure of International Environmental Law," in Norman J. Vig and Regina S. Axelrod, Eds., *The Global Environment: Institutions, Law, and Policy*, Congressional Quarterly Inc., Washington, D.C.: 1999, p. 98.

[5] Under Article 60 of the Vienna Convention on the Law of Treaties, the breach of treaty shall render the injured state to get remedy. In addition it may cause the suspension of treaty. See the Text in Ian Brownlie, *loc. cit.*; See also Patricia W. Birnie and Allan E. Boyle, *International Law and the Environment*, Clarendon Press, Oxford: 1992, p. 153; Tim Hillier, *op. cit.*, p. 321; Hugh M. Kindred, et. al., *International Law: Chiefly as Interpreted and Applied in Canada*, 4th Ed., Emond Montgomery Publications Limited, Canada: 1987, p. 540; D.J. Harries, *Cases and Materials on International Law*, 5th Ed., Sweet & Maxwell Limited, London: 1998, p. 484.

[6] For example, the LRTAP Convention is meant to protect the contracting states from the adverse impacts of acid rain, resulting from the release emissions of sulphur dioxide and nitrogen oxides from industrial activities. Another example is UNFCCC, which is designed to protect global climatic systems from detrimental impacts of greenhouse gases.

[7] In the words of A. Chayes and A. H. Chayes, "in increasingly complex and independent world, the negotiation, adoption and implementation of international agreements are major elements of the foreighn policy activity of every state". See Abraham Chayes and Antonia Handler Chayes, *supra*, Note 3, p.1.

[8] According to Birnie and Boyle, international environmental law deriving from a convention will be useless if the convention does not incorporate effective means for ensuring enforcement, compliance, and the settlement of disputes. See Patricia W. Birnie and Alan E. Boyle, *supra* Note 5, p. 136.

[9] Giselle Vigneron, "Compliance and International Environmental Agreements: A Case Study of the 1995 United Nation Straddling Fish Stocks Agreement," 10 *Georgetown International Environmental Law Review* 581 , 1998, p. 581.

[10] Speaking about compliance, one must be very careful not to confuse it with *implementation*, *effectiveness* and *enforcement*. Compliance is defined as the extent to which the state's behavior conforms to the obligations set forth in the treaty. Implementation refers to the steps to render treaty has national effects, such as legislative,

compliance mechanisms to coercive ones.[11]

Practically speaking, compliance to international agreement protecting the global environment requires a state's sacrifice, viz., in the form of extra spending or decrease in economic growth rate. Under the Kyoto Protocol the contracting parties are obliged to reduce emissions to a certain level. This obligation requires the parties to install cleaner technology, which renders the parties to spend extra money. Implementation of this obligation might also slow down the parties' economic development. Conversely, non-compliance renders a state to gain profit but causes economic loss on the others. Therefore, non-compliance might trigger a dispute.[12]

organitational and practical actions. Effectiveness means that the treaty's goals are achieved. The methods employed to force states to implement and also to comply with treaty's obligations refer to enforcement. See Michael Faure and Jurgen Lefevere, "Compliance with International Environmental Agreements," in Norman J. Vig and Regina S. Axelrod, Eds., *The Global Environment: Institutions, Law, and Policy*, Congressional Quarterly Inc., Washington, D.C.: 1999, p. 138-139 and Dinah Shelton, "Law, Non-Law and the Problem of 'Soft Law'," in Dinah Shelton, Ed., *Commitmrnt and Compliance: The Role of Non-Binding Norms in the International Legal System*, Oxford University Press, Oxford: 2000, p.5.

[11] To devise and incorporate coercive enforcement measures into a treaty so as to give it "teeth" is considered incorrect and a waste of time. Moreover, the imposition of coercive sanctions such as economic measures are costly and the result is very slow and not conducive to changing behavior. See A. Chayes and A. H. Chayes, *supra*, Note 3, p. 2; Patricia W. Birnie and Alan E. Boyle, *op. cit.*, p. 160-179; See also John H. Knox, "A New Approach to Compliance With International Environmental Law: The Submissions Procedure of the NAFTA Environmental Commission," (2001) 28 *Ecology Law Quarterly* 1, p. 25.

[12] Philippe Sands, *Principles of International Environmental Law*, Vol. I: Frameworks, Standards and Implementation, Manchester University Press, Manchester: 1995, p. 141.

Article 33 of the UN Charter provides a dispute resolution mechanism, ranging from the employment of less formal and amicable ways such as negotiations, conciliations to more formal mechanisms such as inquiries fact-findings, mediations, and arbitrations as well as the use of judicial mechanism through ICJ.

This Article describes compliance and dispute settlement mechanisms under the transboundary atmospheric pollution regimes. It will first elaborates schools of compliance to render an understanding why a state complies with its obligations and what factors influence compliance. This elaboration is followed by the description of compliance in practice. Finally, it explores dispute settlement mechanisms.

II. Schools of Compliance

Schools of compliance are remarkably important for those who study states' compliance to IEAs because the schools mainly describe the reasons of states to comply with international agreements. There appear three schools of compliance, notably pragmatists, realists and institutionalists,[13] which see state motivations to comply in different approaches. Pragmatists convince that the states comply with IEAs because compliance is pragmatically efficient in international relations;[14] Realists believe that the states comply with IEAs only when it is in their interest to do so, while institutionalists argue that IEAs themselves

[13] Ronald B. Mitchell, "Compliance Theory: An Overview," in James Cameron Jacob Werksman and Peter Roderick, Eds., *Improving Compliance With International Environmental Law*, Earthscan Publications Ltd., London: 1996, p. 3. See also A. Chayes and A. H. Chayes, *supra*, Note 3, p. 4-9.

[14] Ronald B. Mitchell, *ibid.*, p. 4; A. Chayes and A. H. Chayes, *ibid.*, p. 4.

as norms help shape state behavior in a manner which conforms to international obligations.[15]

Pragmatists see that the relationship of treaties to state's behavior originates from a pragmatic reason. The government of a state usually spends considerable amount of time and money in drafting and redrafting IEAs. This is done with a belief that a better law can remedy bad behavior.[16] The costs spent can only be paid off by a state compliance, regarded as a normal organizational presumption.[17] If IEAs did not have a legally binding impact on future behavior, states would not spend so much time and resources. Indeed, when states enter an agreement, they anticipate that they will be held responsible for complying with the agreed provisions. Realists argue that states' pursuit and use of power constitutes a primary determinant factor of the states' behavior.[18] As such, international law does not have a significant impact on state's behavior to honor or breach its treaty obligations.[19] From this perspective, IEAs do not render states to comply with agreements. However, when there is an exercise of power or leadership of a dominant country (power-based approach), the states might

[15] Gissele Vigneron, *supra*, Note 8, p. 592.

[16] Ronald B. Mitchell, *supra*, Note 13.

[17] *Ibid.*; See also A. Chayes and A. H. Chayes, *supra*, Note 3, p. 4.

[18] According to Faure and Lefevere, this theort is closely connected to the principle of sovereignty in which the states are free to act in accordance with their interests. Be that, the states will only comply with the IEAs if the treaties reflect and codify their interests. See Michael Faure and Jurgen Lefere, " Compliance with International Environmental Agreements," in Norman J. Vig and Regina S. Axelrod, Eds., *The Global Environment: Institutions, Law and Policy*, Congressional Quarterly Inc., Washington, D.C.: 1999, p. 140.

[19] Ronald B. Mitchell, *supra*, Note 13.

comply with a treaty.[20]

Realists argue that treaties and compliance are merely coincidental: treaties reflect and codify pre-existing interests of the most powerful states.[21] The arguments are partly correct, especially in the view that the treaties reflect the pre-existing interests of developed country. However, such pre-existing interests of developed countries in relation to the protection of the environment may be different from those in economic field. With regard to the environmental protection, it is more appropriate to say that it is the interest of scientists, especially environmentalists, in developed countries.[22] It is also prejudice to argue that if the incentives disappear, the developing nations will then breach their treaty obligations. It must be borne in mind, once developing nations set forth laws to comply with IEAs, they cannot easily revoke them because the citizens, environmentalist and NGO'S in the countries will put a strong pressure on the

[20] Peter M. Haas, "Choosing to Comply: Theorizing from International Relations and Comparative Politics," in Dinah Shelton, Ed., *Commitment and Compliance: The Role of Non;Binding Norms in the International Legal System*, Oxford University Press, London: 2000, p. 51.

[21] Ronald B. Mitchell, *supra*, Note 13. See also A. Chayes and A. H. Chayes, *supra*, Note 3, p. 3-4; Gissele Vigneron, *supra*, Note 8, p. 592; Benedict Kingsbury, " The Concept of Compliance As A Function of Competing Conceptions of International Law," in Edith Brown Weiss, Ed., *International Compliance with Nonbinding Accords*, the American Society of International Law, Washington, D.C.: 1997, p. 53; and Michael Faure and Jurgen Lefevere, *supra* Note 18, p. 140.

[22] For example, the need to control the ozone-depleting substances was sparked by the study of two US scientists, Molina and Rowland. This study made the government of the United States as well as international community aware of the need for an international agreement coping with the matter.

governments especially in a situation where the environmental awareness and the concept of civil society are rapidly growing.

In contrast, institutionalists view that there is acausal relationship between treaties and compliance. In their judgment, treaties determine collective behavior at the international level.[23] Treaties are recognized as legally binding instruments. The legal obligations embedded in the treaties must, therefore, be presumably complied with by the state members.[24] The institutionalists view that states comply with their legal obligations out of a sense of the law's legitimacy.

III. Factors influencing Compliance

A quite number of reasons have been used by the states to join the IEAs. Many countries enter an agreement because it is in their interests; some others join the agreement to show leadership in addressing a problem, some join the agreement because others do so; and some others enter an agreement because of domestic and other pressures. The approach to induce compliance cannot only depend upon coercive mechanism, notably sanctions. This mechanism should be accompanied by two other mechanisms, viz., incentives and sunshine approach.[25]

1. Sanctions

Under the traditional system of International Law, method to induce states' compliance is coercive measures[26] In the field of the environmental law, common sanctions used to punish non-compliance are trade measures, withdrawal of privileges under the IEAs, withdrawal from being a party to IEAs and counter measures.[27]

However, the coercive measures are considered inappropriate because in many occasion the states' non-compliance stems from an incapacity than bad faith.[28] There are three reasons to justify that view. Firstly, the insertion of coercive measures in IEAs is considered an easy way to seek treaties with "teeth" so as to induce compliance. However, it is a wrong analogy.[29] Such analogy is appropriate to apply in national law. With regard to IEAs, the creation of coercive measures is useless. Secondly, the constraints of imposing sanctions rest in their costs and legitimacy. The economic sanctions are high not only for the states against which they are directed but also for the sanctioning states. Besides, the impact of economic sanctions tends to be slow and not conducive to changing behavior.[30] Finally, the use of trade measures may lift the problems of consistency with the GATTs as incorporated in the new WTO. As we are all aware that the WTO prohibits imports quotas and requires the same treatment to all exporting countries.[31]

2. Incentives

Over population, poor economy, lack of knowledge, technology and human resources faced by developing nations contribute to environmental degradation. Thus, expecting the third world countries' participation global environmental issues should take all the said factors into considerations in drafting IEAs.

One of the factors that discourage developing nations to join IEAs is that they do not have qualified human resources that understand the scientific issues of the international obligations and translate them into national laws. Therefore, training programs, such as Training for the Trainers (TOT) and seminars must be made available to courage the participation and compliance of developing nations.[32]

Many IEAs establish financial assistance provisions to help parties, especially developing countries, in complying with treaty obligations. For example, the 1990 Amendment of Montreal Protocol has established a special fund to assist developing countries to comply with the obligations. Similarly, the UNFCCC has provided for the establishment of a special fund joined with the Global Environmental Facility.

Provisions concerning transfer of knowledge and technology are other important clause that IEAs must provide to lure developing states' compliance.[33] Obligations to report data concerning consumption and production of Ozone-Depleting Substances (ODS) reflects a need of knowledge and technology transfer.[34]

Reduction of the ODS would not be complied by developing nations in absence of transferring ODS substitutes which is in the hands of industries in developed countries. The industries would object to hand over the formula of substitutes due to corporate secret. Therefore, the transfer of knowledge should be granted to encourage the compliance.

3. Sunshine Approach

A newest strategy to lure compliance in IEAs is *sunshine approach*, which encourage compliance by bringing parties' behavior into the open for appropriate scrutiny.[35] The approach relies on reports, review procedures, NGOs' participations.[36]

a. Reports

Reporting plays a remarkably essential role in compliance because it provides information about the policies and activities undertaken by parties to implement the treaty.[37] Thus, it will enable

[23] Peter M. Haas, *supra* Note 20, p. 52-53.
[24] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 8.
[25] *Ibid.*, p. 298.
[26] Commonly, there have been an array of sanctions that can be used for inducing compliance with the treaty obligations. These include military, economic, membership and unilateral sanctions. See A. Chayes and A. H. Chayes, *supra*, Note 3, p. 34-108.
[27] Edith Brown Weiss, supra Note 26, p. 298-299; Philippe Sands, "Compliance with International Environmental Obligations: Existing International Legal Arrangements," in James Cameron Jacob Werksman and Peter Roderick, Eds., *Improving Compliance with International Environmental Law*, Earthscan Publications Ltd., London: 1996, p. 56-57.
[28] Alexandre Kiss and Dinah Shelton, *International Environmental Law*, Second Edition,Transnational Publishers Inc., Aedsley, New York: 2000, p. 588-589. See also Gissele Vigneron, *supra*, Note 8, p. 613.
[29] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 2.
[30] *Ibid.*; See also Roger Fisher, *Improving Compliance with International Law*, University Press of Virginia, Charlottesville: 1981, p. 59-63.
[31] Edith Brown Weiss, supra Note 26, p. 299.
[32] Edith Brown Weiss, *supra* Note 26, p. 301-302.
[33] More informations concerning how important it is to fulfill the needs of developing countries to persuade them to participate in the Ozone Convention and the Montreal Protocol can be read in Elizabeth R. DeSombre, "The Experience of the Montreal Protocol: Particularly Remarkable and Remarkably Particular," (2000/2001) 19 *Journal of Environmental Law* 49.
[34] Edward A. Parson, "Protecting the Ozone Layer," in Peter M. Haas, Robert O. Keohane and Marc A. Levy, *Institutions for Earth: Sources of Effective International Environmental Protection*, Second Printing, Massachusett Institute of Technology Press, Cambridge, Massachusetts: 1994, p..55.
[35] Harold K. Jacobson and Edith Brown Weiss, "A Framework for Analysis," in Edith Brown Weiss and Harold K. Jacobson, Eds., *Engaging Countries: Strengthening Compliance with International Environmental Accords*, 1998, p. 543. See also John H. Knox *supra* Note 11, p. 23.
[36] Edith Brown Weiss, *supra* Note 26, p. 299. See also Gissele Vigneron, *supra*, Note 8, p. 603-613.
[37] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 154. See also Alexandre Kiss and Dinah Shelton, *supra* Note 30, p. 589.

states to police one another to make sure that the state parties are in compliance. Most IEAs, within the past twenty years provide for reporting requirements to form the basis of the review mechanisms for non-compliance[38] and so do the IEAs dealing with atmospheric pollution.

The objective of reporting is to gather all needed information regarding the policies, strategies and activities undertaken by the parties to implement IEAs for the purpose of evaluating compliance and regime efficacy.[39] Reporting thus can be a kind of early warning system for non-compliance problems. It identifies parties that deficits in domestic capability and similar barriers to compliance. It turns up problems of ambiguity and interpretation.[40]

The advantage of reporting requirements is the direct involvement of the national bureaucracies in the treaty regime. Reporting requirements render domestic officialdom to begin translating the treaty obligations into the daily work of administration and to define the level of commitment to it.[41]

Most EIAs in the first instant rely on self-reporting rather than on an independent reporter provided by a treaty secretariat because of two reasons. Firstly, It is due to the sensitivity of issues of sovereignty. Many states perceive that their sovereignty is breached when the data concerning the implementation are collected by external data collectors. Therefore, they may refuse to enter a treaty if the self-reporting requirement is not implicitly protected. Secondly, the drafters of IEAs seem to have gotten the message that transparency is the key to compliance. Therefore, the reporting requirement must be included almost *pro forma* in many agreements.[42]

The widespread use of self-reporting is not without constraints. The problem is mainly on the reliability of the information reported. The principal issue is the accuracy of the report and the failure to report.[43] This issue is inevitably related to the cumbersome provision of reporting requirements. Therefore, the reporting requirements especially about specification of needed data should be standardized.[44]

Another constraint is related financial and technical capability of the parties. Most developing nations have limited financial, bureaucratic, and scientific resources and trained personnel. As consequence, they are often unable to submit adequately and timely. It is recommended that the failure to be dealt with the assistance to remedy the incapacity of the states.[45] In addition, a serious impediment of self-reporting lies in lack of tough follow-up measures. If a state does not comply with reporting obligations, there will be no sanctions that can be imposed against the state.

The last is a constraint in relation to the states' control over the report process. The monitored states are often unable or unwilling to report on time, in full or with unfavorable information. It is suggested that independent experts and private parties be involved in data collection or appraisal.[46] The Montreal Protocol in this context could be said as a pioneer in introducing the involvement of third party.[47]

b. Review Procedures

In achieving transparency between the parties to IEAs, the report should be made opened and subject to review.[48] One most important thing to be taken into consideration in reviewing states' reports to detect non-compliance is that the review should be carried out in a non-adversarial manner or in a conciliatory nature because the review process is designed to find out why non-compliance happens and what solutions can be offered rather than to blame the states for non-compliance.[49]

A common method of review procedures in most IEAs is that the reports must be sent to a technical body, normally the secretariat of the treaty. The secretariat collates the information into a consolidated report, which shall be submitted for discussions at the MoP.[50] The discussions are usually directed to give recommendations and feedbacks. Therefore, the review mechanism can become a tool to promote compliance rather than to punish the non-compliance.

c. NGOs' Participation

The participations of NGOs in reporting, monitoring and review processes have important role in inducing states' compliance with substantive obligations. NGOs can function as an external technical expert that makes a judgment on the validity of the data reported, monitors the states implementation and pinpoints the states' violations or non-compliance.[51]

The relevancy of NGOs' participation in IEAs rests in actual situation of self-reporting, which is often spotty: governments distort their information, lie and simply fail to report at all. This is sometimes the result of a lack of capacity as much as lack of good faith effort.[52] The participation of NGOs can assist the incapacity of the governments, especially of developing nations, because some NGOs have well-qualified personnel to do the job.

In order that the role of NGOs can be maximized, they should be provided with access to environmental information at a domestic level. Such access has been legalized in a series of IEAs.[53] For

[38] Edith Brown Weiss, *supra* Note 26, p. 299. See also Alexandre Kiss and Dinah Shelton, *supra* Note 30, p. 589; and Gissele Vigneron, *supra*, Note 8, p. 603-604.

[39] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 154. See also Gissele Vigneron, *supra*, Note 8, p. 605 and Kamen Sachariew, "Promoting Compliance with International Environmental Legal Standards: Reflections on Monitoring and Reporting Mechanisms," (1992) 2 *Yearbook of International Environmental Law* 31, p. 41; and Philippe Sands, "Compliance with International Environmental Obligations: Existing Legal Arrangements," in James Cameron Jacob Werksman and Peter Roderick, *supra* Note 29, p. 54-55.

[40] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 155. See also Edith Brown Weiss, *supra* Note 26, p. 299.

[41] A. Chayes and A. H. Chayes, *ibid*, p. 154

[42] A. Chayes and A. H. Chayes, *ibid*.

[43] For example, response to the reporting obligation in the 1987 Montreal Protocol shows a low level of reporting. Out of 78 parties required to report baseline data, only 47 reported completed data as of June 1991 and half of the failures were attributable to developing countries. See Gissele Vigneron, *supra*, Note 8, p. 605; A. Chayes and A. H. Chayes, *supra*, Note 3. See also John H. Knox, *supra* Note 11, p. 28.

[44] Edith Brown Weiss, *supra* Note 26, p. 299. See also Kamen Sachariew, *supra* Note 42, p. 44.

[45] Michael Faure and Jurgen Lefevere, *supra* Note 18, p. 152.

[46] John H. Knox, *ibid*, p. 28. See also Alexandre Kiss and Dinah Shelton, *supra* Note 38, p. 591; and Michael Faure and Jurgen Lefevere, *ibid*, p. 147.

[47] Patrick Szell, "Compliance Regimes for Multilateral Environmental Agreements: A Progress Report," (1997) 27:4 *Environmental Policy and Law* 304, p. 304.

[48] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 174.

[49] Gunther Handl, "Compliance Control Mechanisms and International Environmental Obligations," (1997) 5 *Tulane Journal of International and Comparative Law* 29, p. 42. See also Gissele Vigneron, *supra*, Note 8, p. 607.

[50] Kamen Sachariew, *supra* Note 42, p. 47. See also Gissele Vigneron, *supra*, Note 8, p. 607.

[51] Kamen Sachariew, *supra* Note 42, p. 48. See also Edith Brown Weiss, *supra* Note 26, p. 301.

[52] Kal Raustiala, "The 'Participatory Revolution' in International Environmental Law," (1997) 21 *Harvard Environmental Law Review* 537, p. 561.

[53] A comprehensive study on revolution of NGOs participation in international environmental law, either in the pro-

example, under the CITES, NGOs are asked to monitor the national country reports of imports and exports of listed species.[54]

IV. Compliance Under the Transboundary Atmospheric Pollution Regimes

As described in the previous section that to induce states' compliance with IEAs, there are three strategies that should be used, notably the inclusion of sanctions, incentive, and sunshine approach in every IEA. This section examines those strategies in transboundary atmospheric treaty regimes.

1. LRTAP Convention and Its Protocols

Unlike the Ozone Regime, the LRTAP Convention and its Protocols do not have any provision stipulating sanctions as means to induce states' compliance with substantive obligations. The way the LRTAP Convention and its Protocols to encourage compliance merely depends upon report requirements and review process. With regard to reporting requirements, the Helsinki Protocol sets out two kinds of report requirements. Firstly, the parties are obliged to report annually to the Executive Body their level of annual emissions, and their calculation basis.[55] Secondly, the Parties must report to the Body national Programs, Policies and Strategies, serving as a means of reducing emissions or their transboundary fluxes at the latest by 1993.[56] The similar requirements also appear in the Sofia Protocol,[57] and the 1994 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Further Reduction of Sulphur Emissions.[58]

Regarding the review process, the 1994 Protocol establishes an Implementation Committee, empowered to review the implementation of the Protocol and compliance by the parties with their obligations.[59] The report of the Committee is submitted for a review by the parties at sessions of the Executive Body.[60]

2. Ozone Convention, Montreal Protocol and Its Amendments

For its nature as a framework convention, it is not surprising that provisions regarding sanctions to induce compliance are nowhere found in the Convention. Such provisions appear in the Montreal Protocol. However, the sanctions provided therein are not ideal and comprehensive. The Protocol establishes only trade sanctions It seems that the Protocol ignores other sanctions such as withdrawal of privileges, withdrawal from being a party and counter measures.

The former is more emphasized on encouraging non-parties to join the Protocol rather than inducing Parties' compliance. For example, the Montreal Protocol prohibits state parties to import controlled substances in Group II of Annex B from non-state parties, commencing one year after the protocol's entry into force.[61] Only the latter has courage impact on member states to comply with the substantive obligations.[62] The formulation of such sanctions may be influenced by the Montreal Protocol Non-Compliance regime which embraces the principle of *bona fides*.[63]

With regard to incentives, a second strategy to induce compliance, the Montreal Protocol can be characterized as the first treaty under which the parties have undertaken to provide significant financial assistance to defray the incremental costs of compliance for developing countries.[64]

The financial assistance provisions as a means to induce states' compliance are named Multilateral Fund (MLF), which can be utilized for financial and technical cooperation, including transfer of technology.[65] The MLF can be used to defray the agreed incremental costs[66] of compliance on a grant and concessional basis.[67]

The financial and technical assistance provisions might be attractive to many developing nations to join the Montreal Protocol. However, it is not significantly effective to encourage compliance because the conditionality relationship between the MLF and member states' compliance remains surprisingly weak despites effort to strengthen it.[68] The Executive Committee has never formally raised non-compliance problems regarding fund operations.[69] Thus it cannot be expected as a stick to force states' compliance.

Regarding sunshine approach; reporting requirements, review process and the role of NGO, the Ozone Regime is also incomplete. It has no provisions on the role of NGOs in reporting and review process. The NGOs are only given role in the Protocol Non-Compliance Procedure as discussed in the following section.

Despite good reporting requirements and excellent support from internal institution, compliance with reporting has been problematic. For example, response to the reporting obligation in the Montreal Protocol shows a low level of reporting. Out of 78 parties required to report baseline data, only 47 reported completed data as of June 1991[70] and half of the failures were attributable to developing countries.[71]

3. UNFCCC and Kyoto Protocol

Both the UNFCCC and the Kyoto Protocol do not establish coercive sanctions in dealing with non-compliance. Efforts to induce parties' compliance are more emphasized on the use of incentives and sunshine approach, which is preferred because incentives and sunshine

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cesses of drafting treaties, treaty implementation, including repoting and monitoring, and environmental adjudication can be read in Kal Rustiala, *Ibid*. See Kamen Sachariew, *supra* Note 42, p. 48; Edith Brown Weiss, *supra* Note 26, p. 301.ing treaties, treaty implementation, includ

[54] Gunther Handl, *supra* Note 70, p. 43. See also Kamen Sachariew, *supra* Note 42, p. 48; Edith Brown Weiss, *supra* Note 26, p. 301.

[55] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or their Tranboundary Fluxes by at least 30 per cent (Helsinki, 8 July 1985), Aticle 4.

[56] *Ibid*., Article 6.

[57] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (Sofia, 31 October 1988), Article 8.

[58] Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Further Reduction of Sulphur Emissions (Oslo, 14 June 1994).

[59] *Ibid*., Article 7.

[60] *Ibid*., Article 8.

[61] The Montreal Protocol on Substance that Deplete the Ozone Layer, Article 4 (1 *bis*).

[62] *Ibid*., See Article 4 A.

[63] O. Yoshida, *The International Regal Regime for the Protection of the Stratospheric Ozone Layer: International Law, International Regimes and Sustainable Development*, Kluwer Law International, the Hague, the Netherlands: 2001, p. 186.

[64] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 15.

[65] The Montreal Protocol, See Article 10.

[66] The incremental costs must be in accordance with Indicative List of Categories of Incremental Cost, which was decided in the 1990 London Meeting.

[67] *Ibid*., 10 (3) (a).

[68] D. G. Victor, *The Early Operation and Effectiveness of the Montreal Protocol's Non-Compliance Procedure*, IIASA, Ausria: 1996, p. 17.

[69] *Ibid*, Note 91, p. 264.

[70] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 158.

[71] Gissele Vigneron, *supra*, Note 8, p. 605.

approach will not interfere with their sovereignty and jeopardize their relations. As we all know that one of the common approach to induce compliance is "stick and carrot" approach. The stick in the form of sanctions should be available in any treaty. We cannot just simply assume that the non-compliance is only caused by *bona fides*. We should anticipate the non-compliance caused by bad faith with sanctions which will encourage the parties to comply with their substantive obligations. Carrot in the form of incentives is absolutely necessary for inducing compliance. However, the carrot should be provided only if for example, the parties have complied with initial commitments. If the incentives are provided in the first instance or without any prior requirements, they will unlikely encourage compliance. With regard to incentives, the Kyoto Protocol provides three kinds of financial assistance provisions. Firstly, the Protocol avails financial resources for incremental costs of implementation of developing countries' commitments. Secondly, the Protocol avails financial resources, including transfer of technology to meet the costs incurred by developing countries to advance implementation of their commitments. Finally, the Protocol allows the Annex I and II Parties provide developing countries financial resources through bilateral, regional and multilateral channels.[72]

The UNFCCC employs the sunshine approach to encourage the parties to comply with their obligations. The reporting system under the Kyoto Protocol will be closely linked with one existing under the UNFCCC. Under the Kyoto Protocol, the Annex I countries are obliged to report supplementary information in their communication. The data, which are not only on GHG emissions and sinks but also on land-use change and forestry, must be annually submitted for validity.[73]

V. Dispute Settlement

Modeled by Article 33 of the United Nations Charter,[74] all treaties dealing with transboundary atmospheric pollution[75] contain standard international dispute settlement provisions with possibilities for the development of additional mechanism. The transboundary atmospheric pollution treaties provide for conciliation, arbitration, and recourse to the ICJ as a means of settling disputes among Parties.[76]

All transboundary atmospheric pollution treaties emphasize on the use of diplomatic means to settle disputes.[77] Should the state parties fail to resolve their dispute by negotiations, the treaties allow the parties to resolve their dispute by conciliation,[78] which constitues an option among all other non-judicial means.[79]

Conciliation would probably meet with greater acceptance by Parties because it offers more choice over the selection of judges. In addition the parties to a dispute still hold their control over the dispute because the outcome of conciliation is a proposal on how to settle the dispute. Conciliation also offers the advantage of speed and flexibility.[80]

Arbitration may also be widely accepted by parties because it offers great flexibility and states' choice of the composition of tribunals the choice of applicable law, the rules of procedure, the seat of tribunal, and the litigation calendar.[81] However, arbitration is potential to experience at least two hurdles. Firstly, arbitration is more money-consuming than judicial settlement. Secondly, it presents many of inadequacies typical of jurisdictional settlement.[82]

The transboundary atmospheric pollution allows the Parties to recourse to the International Court of Justice (ICJ) as a means of settling disputes among them. However, traditional adjudication is considered inappropriate to promote compliance with IEAs establishing comprehensive regulatory regimes to avoid or minimize future environmental harm. It is generally argued that international adjudication is not only "costly, contentious, cumbersome, and slow – the usual defects of litigation" but that it also has "the additional unattractive features of raising the political visibility of the problem and failing to be the subject to party control."[83]

Primary reliance on these traditional dispute settlement mechanisms is believed to do little to give teeth to the dispute settlement process for several reasons. First, submission to the ICJ is voluntary. Second, *locus standi* before the ICJ is restricted to State entities and therefore inadequate to address disputes involving non-State entities. Third, proceedings before the ICJ might be too adversarial to preserve the smooth functioning of an international investment relations scheme. Since dispute settlement mechanisms under the transboundary atmospheric treaties have various hurdles, many suggest using supranational adjudication[84]

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[72] Kyoto Protocol, Article 11 (2) and (3).

[73] See Sebastian Oberthur and Herman E. Ott, *The Kyoto Protocol: International Climate Policy for the 21st Century*, Springer, Berlin: 1999, p. 209.

[74] Article 33 of the United Nations Charter says "[i]f any dispute arises between two or more of the Contracting Parties concerning the interpretation or application of this convention, those Contracting Parties shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their own choice."

[75] See Article 13 of LRTAP Convention; Article 8 of Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at least 30 per cent; Article 12 of Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes, Article 9 of Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions or Their Transboundary Fluxes by at least 30 per cent; Article 11 of the Vienna Convention for the Protection of Ozone Layer; Article 14 of UNFCCC; and Article 19 of the Kyoto Protocol.

[76] See Jacob Werksman, "Designing a Compliance System for the UN Framework Convention on Climate Change," in James Cameron Jacob Werksman and Peter Roderick, Eds., *Improving Compliance with International Environmental Law*, Earthscan Publications Ltd., London: 1996, p. 85-112.

[77] For example, Article 13 of the LRTAP and Article 11 of the Ozone Convention.

[78] See Article 9 (5) of the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions (Oslo, 14 June 1994). See also Article 11 (4) of the Ozone Convention, and See also Article 14 (5) of the UNFCCC.

[79] Cesare P.R. Romano, *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Approach*, Kluwer Law International, the Hague: 2000, p. 61.

[80] Peggy Rogers Kalas and Alexia Herwig, "Dispute Resolution Under the Kyoto Protocol," (2000) 27 Ecology Law Quarterly 53, p. 65.

[81] *Ibid*. See also Cesare P.R. Romano, op. cit., p. 103.

[82] *Ibid*.

[83] John H . Knox, *supra* Note 11, p. 8-9. See also O. Yoshida, *supra* Note 75, p. 173.

[84] Laurence R. Helfer and Anne-Marie Slaughter define supranational adjudication as "adjudication by a tribunal that was established by a group of states or the entire international community and that excercises jurisdiction over cases directly involving private parties – whether between a private party and a foreign government, aprivate party and her own government, private parties themselves, or, in the criminal context, a private party and a prosecutor's office." See Laurence R. Helfer and Anne-Marie Slaughter, "Toward a Theory of Effective Supranational Adjudication," (1997) 107 *The Yale Law Journal* 273, p. 289.

as a supplement to the existing mechanisms. Supranational adjudication is defined as international adjudication which involves non-state parties such as private persons and non-governmental organizations as litigants. This model enables the private parties litigating directly against state governments or against each others.[85]

Since individuals may appear as legal persons on the international plane,[86] activists and scholars have suggested that supranational adjudication be adopted by international environmental law. In addition, the scholars contend that limiting access to international adjudication to states is fundamentally unfair because according to a theory of basic justice, the private parties should be able to pursue a claim against the states for the environmental damage that they suffer.[87]

Another important logic of adopting supranational adjudication is the fact that there is no single state is immune of breaching substantive obligations. States, which are recalcitrant to comply, are normally reluctant to bring environmental claims to adjudication because they fear that their failure to comply will be adjudicated by other states. This phenomenon can be minimized by adopting supranational adjudication provisions in international environmental treaties.[88]

However, the supranational adjudication experiences several defects like those of traditional adjudication, such as high cost, contentious jurisdiction and slow process. Moreover, supranational adjudication is presumably as confrontational as traditional adjudication and even more outside state control.[89] It is for those reasons that other scholars suggest to employ a managerial model in dealing with international environmental dispute. The model is non-confrontational and non-binding mechanism which seeks to lure states to comply by monitoring their actions, building their capacity and resolving their disputes informally.[90]

All transboundary atmospheric pollution treaties have inserted the managerial model. The treaties tend to be dependent upon provisions of monitoring, transfer of technology, financial assistance and technical assistance to lure states' compliance. Even more, the treaties employ a comprehensive non-compliance procedure (NCP) for the same purpose.

The adoption of NCP does not mean to substitute the traditional dispute settlement, the NCP merely provides an additional procedure for resolving differences about interpretation and application of the agreement in an amicable way.[91] In comparison to judicial settlement of disputes, NCP is non-confrontational settlement of disputes which makes it preferable. It involves no sanctions and accentuates on amicable solutions through informal persuasion and mobilization of shame generated multilaterally (multilateralism). In addition, NCP offers flexibility, simplicity, and rapidity which are not found in judicial settlement of disputes.[92]

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[85] *Ibid.*, p. 277.

[86] Ian Brownlie, *Principles of Public International Law*, 5th Edition, Oxford University Press, Oxford: 1998, p. 585.

[87] John H. Knox, *supra* note 11, p. 13.

[88] *Ibid.*, p, 25.

[89] *Ibid.*, p. 10.

[90] A. Chayes and A. H. Chayes, *supra*, Note 3, p. 25.

[91] Martti Koskenniemi, "Breach of Treaty or Non-Compliance? Reflections on the Enforcement of the Montreal Protocol," (1992) *Yearbook of International Environmental Law* 123, p. 132.

[92] O. Yoshida, *supra* Note 75, p. 176-177.

One thing should be borne in mind that non-compliance which can fall under the competency of NCP is the one that results from *bona fide* efforts.[93] Thus, the non-compliance originating from *non-bona fide* efforts is beyond the competency of the Montreal NCP. It should be dealt with other dispute settlement mechanisms.

The non-compliance procedure under the UNFCCC and the Kyoto Protocol is not as well developed as the Montreal Protocol. However, as a general pattern, the UNFCCC provides that the COP/MOP is to consider the establishment of a multilateral consultative process (MCP) for resolving matters concerning the implementation of the Parties' obligations.[94]

The dispute settlement provisions of the Kyoto Protocol work in tandem with the UNFCCC and establish expert review teams that report to the COP/MOP and are coordinated by the Secretariat. The expert review teams prepare a thorough and comprehensive technical assessment of all aspects of implementation. They are responsible for reviewing of each party's annual inventory, as well as national.[95] The expert review teams are empowered to assess implementation of the Parties' commitments and to identify potential problems. However, their potential role in resolving disputes has not been determined.

VI. Conclusion

The approach to induce compliance under the transboundary atmospheric pollution regimes is advancing. The approach does not only depend upon coercive mechanism, notably sanctions but also other mechanisms, viz., incentives and sunshine approach.

The transboundary atmospheric pollution regimes allow the Parties to recourse to the International Court of Justice (ICJ) as a means of settling disputes among them. However, traditional adjudication is considered inappropriate to promote compliance with IEAs establishing comprehensive regulatory regimes to avoid or minimize future environmental harm. It is generally argued that international adjudication is not only "costly, contentious, cumbersome, and slow – the usual defects of litigation" but that it also has "the additional unattractive features of raising the political visibility of the problem and failing to be the subject to party control. Since dispute settlement mechanisms under the transboundary atmospheric treaties have various hurdles, many suggest using supranational adjudication as a supplement to the existing mechanisms. Supranational adjudication is defined as international adjudication which involves non-state parties such as private persons and non-governmental organizations as litigants. This model enables the private parties litigating directly against state governments or against each others.

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[93] See Annex II (4) of the Montreal Protocol.

[94] Article 13 of UNFCCC.

[95] *Ibid.*, Article 7 (1) and (2) and Article 8 (3).

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