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Transformation for Better Living Environment in Urban Region: Application of the Principle of Transboundary Liability and the Montreal Protocol Experiences

Perubahan untuk Kehidupan yang Lebih Baik di Kawasan Bandar: Aplikasi Prinsip Liabiliti Rentas Sempadan dan Pengalaman Protokol Montreal

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ABSTRAK

Prinsip undang-undang alam sekitar antarabangsa mengenai liabiliti rentas sempadan memainkan satu peranan penting dalam mengubah persekitaran daerah bandar ke arah yang lebih baik. Penggunaan prinsip undang-undang alam sekitar antarabangsa mengenai liabiliti rentas sempadan di kawasan bandar bagi mewujudkan persekitaran kehidupan yang lebih baik adalah sebagai maklum balas terhadap ketidakelakan setiap individu melindungi haknya untuk mendiami persekitaran bandar yang tidak tercemar. Artikel ini meneliti penggunaan undang-undang alam sekitar antarabangsa mengenai liabiliti rentas sempadan dalam mengubah persekitaran kehidupan daerah bandar agar menjadi lebih baik dengan mengenal pasti tindakan-tindakan dan kes-kes yang berkaitan dengan habitat manusia dan perlindungan alam sekitar dalam kawasan bandar. Artikel ini juga mengenal pasti hubungan antara prinsip undang-undang alam sekitar antarabangsa mengenai liabiliti rentas sempadan dan Deklarasi Rio sebagai satu cara untuk mengubah persekitaran kehidupan kawasan bandar. Peluang untuk meningkatkan pertumbuhan prinsip liabiliti rentas sempadan dalam melindungi habitat manusia dan persekitaran di kawasan bandar, melalui pengamalan kerajaan, ekoran dua bencana persekitaran rentas sempadan, iaitu "Sandoz Spill" dan "Chernobyl Explosion," telah hilang disebabkan keputusan negara yang menjadi mangsa untuk tidak mengambil tindakan undang-undang antarabangsa terhadap pihak yang menyebabkan pencemaran alam sekitar di kawasan bandarnya, walaupun negara tersebut mempunyai hak untuk berbuat demikian. Sokongan yang diberi oleh negara-negara seluruh dunia kepada Deraf Artikel Suruhanjaya Undang-Undang Antarabangsa mengenai Non-Navigational Uses of International Watercourses Law, 1994 dan Deklarasi Rio, 1992 dengan jelas menunjukkan penerimaan dan pertumbuhan prinsip-prinsip liabiliti rentas sempadan dalam melindungi habitat manusia dan persekitaran terutama sekali di kawasan bandar. Penemuan awal menunjukkan bahawa pengaruh pendekatan kepentingan dalam governans alam sekitar antarabangsa merupakan satu aspek penting untuk menggalakkan dan membujuk negara-negara dunia supaya menyertai Protokol Montreal bertujuan melindungi persekitaran global dengan mengambil kira prinsip liabiliti rentas sempadan supaya dapat mengawal pencemaran di dunia terutama sekali di kawasan bandar. Tindakan-tindakan ini bertujuan untuk memastikan transformasi ke arah persekitaran kehidupan bandar yang lebih baik.

Kata kunci: Liabiliti rentas sempadan, undang-undang antarabangsa, wilayah bandar

ABSTRACT

The international environmental law principle on transboundary liability plays an important role in transforming better living environment in urban region. The use of the international environmental law principle on transboundary liability in urban region for better living environment is largely in response to the inevitability of every individual to protect his/her rights on living environment in urban region from being polluted. This article examines the use of the international environmental law principle on transboundary liability in transforming better living environment in urban region by identifying actions and cases which deal with human habitat and environmental protection in urban region. This article also identifies the relation between the international environmental law principle on transboundary liability and Rio Declaration as a means to transform better living environment in urban region. The opportunity to enhance the growth of this principle of transboundary liability in protecting human habitat and environment in urban region, through state practices, following the two-transboundary environmental disasters "Sandoz Spill" and "Chernobyl Explosion," were lost due to the decision by the injured states not to take international legal actions for causing environmental pollution to their urban regions, even though the injured states have their right to do so. The support made by the states

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around the globe on the International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law, 1994 and the Rio Declaration, 1992 clearly reflected the acceptance and the growth of this principle of transboundary liability in protecting human habitat and environment especially in urban region. Finally, the preliminary findings indicate that the influence of interest approach in the international environmental governance is an important aspect to promote and persuade states around the globe to participate in the Montreal Protocol for the purpose to protect global environment by taking into consideration the principle of transboundary liability in order to control world emissions of pollution especially in urban region. These actions are to ensure the transformation for better living environment in urban region.

Keywords: Transboundary liability; international environmental law; urban region

INTRODUCTION

The international environmental law principle on transboundary liability plays an important role in transforming better living environment in urban region. The use of the international environmental law principle on transboundary liability in urban region for better living environment is largely in response to the inevitability of every individual to protect his/ her rights on living environment in urban region from being polluted. Urban region growth is the phenomena that have increasingly received international policy makers' attention since the trend and urbanisation pattern have big implication on pollution, including transboundary pollution. Therefore, urban region demands careful developmental planning policy. Without proper planning; the urban region will not be able to fulfill its residents' needs. As a result, this will ruin the urban region's society's quality of life.

THE TRANSBOUNDARY LIABILITY PRINCIPLE

The Rio Declaration has also laid down essential obligations and responsibilities, which contribute to the growth and development of environmental management and law in accordance with the concept of sustainable development and the protection of the environment and for better living environment which include the urban region (Jamaluddin 2001; Muhammad Rizal 2002). One of the essential obligations is on the subject, which emphasises that all states in the world are required to ensure that they do not cause environmental harm to other states. This obligation has been mentioned under Principle 2 of the Rio Declaration, which states that:

"States have, in accordance with the Charter of the United Nations and the principles of the international law, the sovereign right to exploit their own resources pursuant to their environment and development policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

The above-mentioned obligation is clearly a sign of recognition of the transboundary liability principle (Sands 1995). The transboundary liability principle is based on the legal maxim of *sic utere tuo, et alienum non laedas* which means "one should use his own property in such a manner as not to injure another" (Norsulfa 1997). This transboundary liability principle has been applied in the case of United States v Canada [1941] 3 RIAA 1905, famous as the Trail Smelter Case. In this case, the transboundary liability principle was subsequently based upon and further clarified by the Arbitral Tribunal (Hughes 1992).

The fact of the case: At a place called Trail in Canada, which is situated about 10 miles from the border between United States of America (USA) and Canada the Canadian Consolidated Mining and Smelting Company had run activities that concerned smelting zinc and lead. These activities had caused the emission of fumes in the surrounding urban region. These fumes contained sulfur dioxide that had contributed to the damage to the land in the territory of the United States of America. In 1931, the United States of America – Canada International Joint Commission, which was formed under the Boundary Waters Treaty, 1909, had made decision and required Canada to pay USA the amount of US$ 350,000.00 as compensation. After that, the above-mentioned smelting company continued to run the operations and activities as usual. USA had made complaints on further damage suffered. Only in the year 1935, the USA and Canada agreed to form an arbitral tribunal on the above-mentioned matter. Later, both countries signed a convention, where both countries referred the above-mentioned dispute to the Arbitral Tribunal (Muhammad Rizal & Jamaluddin 2002). The Arbitral Tribunal held that:

"…under the…international law…no state has the right to use or allow to use of her territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."

Therefore, the Arbitral Tribunal gave the decision in favour of the USA. The above-mentioned smelter company was mandatory required to make sure that the company activities would not cause fumes into the territory of the USA. The above-mentioned decision had established the development of the transboundary liability principle. The transboundary liability principle had been re-affirmed by the following international cases:

1. New Zealand v France; [1974] ICJ 457 (the Nuclear Tests Case)
2. Australia v France; ICJ 253 [1974] (the Nuclear Tests Case)
3. Spain v France; [1957] 24 I.L.R. 101, (the Lac Lanoux Case)
4. United Kingdom v Albania; [1949] ICJ 4 (the Corfu Channel Case)

Based on the above discussion of the above-said cases, it is clear that the transboundary liability principle has promoted two important obligations and responsibilities. These obligations and responsibilities are laid down in Table 1.

TABLE 1. Obligations and Responsibilities According to the Transboundary Liability Principle

➢ state responsibility to ensure sustainable development for better living environment; and
➢ international co-operation and good neighbourliness for better living environment.

Source: Modification from Sands (1995, 2003)

STATE RESPONSIBILITY TO ENSURE SUSTAINABLE DEVELOPMENT FOR BETTER LIVING ENVIRONMENT

The international law does not allow states in the world to run operations and activities within their jurisdiction without taking care of the environment (Wolf & White 1995; Muhammad Rizal & Jamaluddin 2002). This is also for better living environment especially in urban region, where there is heavy development. International law also requires all states around the globe to take adequate and reasonable measures to regulate and control sources of serious environmental pollution especially in urban region and maintain the sustainable development within their jurisdiction. This has been supported and reflected in awards and decisions in arbitral tribunals and also in international courts of justice (Birnie & Boyle 1994; Muhammad Rizal & Jamaluddin 2002).

In reference to the Trail Smelter Case, it is one example of heavy development in urban region. According to the Trail Smelter Case, the Arbitral Tribunal indicated that "no state has the right to use or allow to use of her territory in such a manner as to cause injury by fumes in or to the territory of another the properties or persons, present or future therein," which clearly show that it is all states' responsibility to prevent, reduce and control environmental pollution in that region and maintain sustainable development within their jurisdiction. In addition, the Corfu Channel Case support similar obligation, where the International Court of Justice had concluded "every state's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other states …present or future" (Harris 1991; Birnie & Boyle 1994).

Moreover, in the case of Spain v France (1957) 24 I.L.R. 101, well known as Lac Lanoux Case, where in this case is concerned about the proposed diversion of the international river by France. The Arbitral Tribunal certified that a state has an obligation not to exercise its rights to the extent of ignoring the rights of other state (Harris 1991). The Arbitral Tribunal further explained:

"France is entitled to exercise her rights; she cannot ignore the Spanish interest. Spain is entitled to demand that her rights be respected and that her interests be taken into consideration."

This obligation is not only being supported by awards and decisions in arbitral tribunals and also in international courts of justice, which was discussed above, but is also being affirmed virtually by global treaties and United Nation General Assemblies. Examples for the global treaties (Table 2), support the obligation on the matter, state responsibility to ensure sustainable development for better living environment especially on urban region.

On the other hand, the examples of the United Nation General Assemblies (Table 3), support the obligation on the matter, state responsibility is to ensure sustainable development for better living environment especially in urban region.

TABLE 2. Examples of the Global Treaties, which Support the Obligation on the Matter State Responsibility to Ensure Sustainable Development and Better Living Environment

➢ Basel Protocol on Liability and Compensation for Damage resulting from Transboundary Movements of Hazardous Wastes and Their Disposal, Basel (1999)
➢ Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground Level Ozone, Gothenburg (1999)
➢ Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, London (1999)
➢ Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal (2000)
➢ Stockholm Convention on Persistent Organic Pollutants, Stockholm (2001)

Source: Modification from Sands (1995, 2003)

TABLE 3. Examples of the United Nations General Assemblies, which Support the Obligation on the Matter State Responsibility to Ensure Sustainable Development and Better Living Environment

- United Nation Assembly (Resolution 1629), 1961 – "… to avoid harmful biological consequences of other states, by increasing levels of radioactive fallout"
- United Nation Assembly (Resolution 2849), 1972 – "… to avoid producing harmful effects on other countries;" and
- United Nation Assembly (Resolution 3281), 1974 - "States to ensure not to cause environmental damage to other state or beyond national limit;"

Source: Modification from Muhammad Rizal & Jamaluddin (2002)

INTERNATIONAL CO-OPERATION AND GOOD NEIGHBOURLINESS FOR BETTER LIVING ENVIRONMENT

The obligation of "international co-operation and good neighbourliness" has been laid down based on Article 75 of the United Nations Charter in connection with commercial, social and economic subjects, which has been defined into the development and application of rules promoting international environmental protection co-operation for the environmental and atmospheric protection (Sands 1995). Therefore, there are many international environmental treaties, other international acts, international agreements and international declarations, which reflect the international co-operation and good neighbourliness for the environmental and better living environment especially on urban region that are derived from the transboundary liability principle (Birnie & Boyle 1994), such as shown in Table 4.

TABLE 4. Examples of the International Instruments, which Reflect the International Co-Operation and Good Neighbourliness for the Environmental and Better Living Environment that Derived from the Transboundary Liability Principle

- 1972 the Stockholm Declaration;
- 1992 the Industrial Accident Convention;
- 1992 the Rio Declaration.

Source: Modification from Sands (1995, 2003)

As for the Rio Declaration, the Declaration has clearly shown an attempt to ensure international co-operation and good neigbourliness on the matter to protect environment against pollution in order to achieve sustainable development (Ball & Bell 1995). The above-mentioned objective is set out in the Principle 27 of the Rio Declaration, which provides that

"States and people shall co-operate in good faith and in spirit of partnership in the fulfillment of the principles embodied in this Declaration and in further development of international law in the field of sustainable development."

According to Sands (1995) this obligation has been accepted in reality of all international agreements on environmental and atmospheric matters of bilateral, regional applications and global instruments. The examples of the bilateral and regional applications: (a) Article 12(2) London Convention 1933 and (b) Article 2(1) Alpine Convention 1991 (Muhammad Rizal & Jamaluddin 2002). On the other hand, the global instruments' examples are as follows: (a) Article 2(2) Vienna Convention 1985 and (b) Article 5 Biodiversity Convention 1992 (Muhammad Rizal & Jamaluddin 2002).

The obligation may be in the manner of specific provisions under a treaty such as Article 4(1) (e) Climate Change Convention 1992 and Article 14 Lome Convention 1989; or in the manner of general provisions, which is in connection with the implementation of the treaty's objectives such as Article XVI (1) African Conservation Convention 1968 and Article 5 Biodiversity Convention 1992 (Muhammad Rizal & Jamaluddin 2002).

In the dispute over the Gabcikovo Dam, for example, the proposed diversion of the Danube River, where the dispute was between Hungary and Slovakia. In this dispute, clearly, the obligation of international co-operation and good neighbourliness has been the central issue (Sands 1995; Muhammad Rizal & Jamaluddin 2002). Here, Hungary laid down claim against Slovakia on the ground that Slovakia implement principles affecting transboundary resources, which are inconsistent with the obligation of international co-operation and good neighbourliness (Sands 1995; Muhammad Rizal & Jamaluddin 2002).

The above-mentioned dispute clearly indicate that the States practice this obligation of international co-operation and good neighbourliness to protect environment against environmental harm and to maintain sustainable development. This means that the principle also apply to issues on matter of protection of the atmosphere.

TRANSBOUNDARY POLLUTION IN URBAN REGION

Basically, there were two major disasters in the middle 1980s, which involved transboundary pollution in urban region and the violation of the concept of sustainable development. One incidence happened in Soviet Union and the other occurred in Switzerland.

The first disaster happened in Chernobyl, Soviet Union where a nuclear reactor exploded on 26th April 1986. A huge amount of radioactive was emitted to the atmosphere in urban region especially European

atmosphere. A number of people outside Soviet Union were affected by the disaster. Soviet Union authority informed the public only 15 days after the incident took place. At the time of the notification made by Soviet Union authority, a number of people in the European Continent had already been affected. Unfortunately, there was no action taken against the Soviet Union for the present and future safety of the mankind. This disaster is known as "Chernobyl Explosion" (Norsulfa 1997, Muhammad Rizal & Jamaluddin 2002). This disaster clearly showed the absence of the compliance with the concept of sustainable development, which emphasises all development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs.

The second incidence and disaster happened when a company's warehouse, Sandoz Corporation's warehouse in Schweizerhale, Switzerland caught fire on 1st November 1986. The chemical from the said warehouse had polluted Rhine River by seeping through the Sandoz Corporation's sewer system. This had caused the formation of toxic, which was harmful to the living things and creatures in the Rhine River and surrounding urban region. Switzerland authority only informed the neighbouring countries, 24 hours after the disaster. Immediately, after the notification, France government shut down all the water supply along the said river. As the result of this disaster, Sandoz Corporation had paid a lot of claims privately. Nevertheless, none of the neighbouring countries brought action against Switzerland for the present and future safety of the mankind. This incidence and disaster is known as "Sandoz Spill" (Norsulfa 1997, Muhammad Rizal & Jamaluddin 2002). The second disaster also highlighted the violation of the concept of sustainable development, which failed to ensure the safety of present and also future generations.

POST "SANDOZ SPILL" AND "CHERNOBYL EXPLOSION" FROM INTERNATIONAL ENVIRONMENTAL LEGAL PERSPECTIVES

Based on the above discussion, both countries, Switzerland and Soviet Union were free from the above-mentioned liability. No action was taken against these two countries in the year the said incident and disasters occurred. This was due to insufficient articulation of any international obligations concerning state obligation in the situation of transboundary environmental disasters.

These two disasters "Sandoz Spill" and "Chernobyl Explosion" have caused the growth of international community awareness on the importance of the principle of transboundary liability on the transboundary environmental disasters. There are two famous international legal documents that try to address the above-mentioned matter. (Table 5).

TABLE 5. International Legal Documents on The Transboundary Environmental Disasters

Year	Articles/ Principles	International Legal Documents
1994	1) Article 27 2) Article 28	The International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law
1992	1) Principle 18 2) Principle 19	The Rio Declaration

Source: Modification from Muhammad Rizal & Jamaluddin 2002

The Article 18 of the Rio Declaration, 1992 stated that "States are required to take immediate action to notify other states of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of the other states." The Article 19 of the Rio Declaration, 1992 mentioned "States shall provide prior and timely notification and relevant information to potentially affected states on activities that may have significant adverse transboundary environmental effect and shall consult with those states at early state and in good faith" (Sands 1995; Muhammad Rizal & Jamaluddin 2002)

Article 27 of the International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law, 1994 laid down that "States are required to mitigate or prevent conditions of any disasters which might affect any other state." As for Article 28 of the International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law, 1994 required "States to notify other states of an emergency originating within its jurisdiction, to mitigate, prevent and eliminate any harmful effects of the emergency and to develop contingency plans for responsibility to the emergency" (Norsulfa 1997; Muhammad Rizal & Jamaluddin 2002).

The International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law, 1994 complement the Rio Declaration, 1992 (Norsulfa 1997). These two international legal documents expressly laid down the obligations of all states throughout the globe on transboundary environmental harms and to ensure the safety of the present and future generations. This clearly show the growth and the development of the principle of transboundary liability and environmental protection and the concept of sustainable development.

THE MONTREAL PROTOCOL EXPERIENCES: APPLICATION ON THE PRINCIPLE OF TRANSBOUNDARY LIABILITY FOR BETTER LIVING ENVIRONMENT

THE MONTREAL PROTOCOL

The Montreal Protocol has been enacted for the protection of the ozone layer by taking precautionary measures to control world emissions of substances that deplete the ozone (Conservation and Environmental Management Division, MOSTE 2004) by promoting the principle of transboundary liability. Awareness on the existence of ozone layer i.e. O_3 at the stratosphere and threat of *chlorofluorocarbons* (CFCs) as ozone depletion substance has increased radically in the early years of 1970s (Seaver 1997; Breitmeier 2000; Breitmeier et al. 2006). Moreover, both scientists and policy makers had made a lot of initiatives in order to capture global attention about the threat of CFCs towards the ozone layer. As a result, in the middle 1980s, ozone layer problems became global concerns due to transboundary movement of the said chemicals (Breitmeier 2000; Breitmeier et al. 2006). Starting from this point, the global concerns became the catalyst for the international environmental cooperation and gave birth to the Montreal Protocol in order to acheive sustainable development (Bjorn 2007).

OBJECTIVES OF STUDY

This study embarks on the following objectives:

1. To identify and analyse the themes and sub-themes that relate to the influence of the interest approach that promotes the principle of transboundary liability in the early stage of negotiations that build up the international environmental cooperation in the Montreal Protocol
2. To explain the influence of the interest approach that promotes the principle of transboundary liability in the early stage of negotiations that build up the international environmental cooperation in the Montreal Protocol

MATERIALS AND METHODS

This study applied a qualitative set up. In line with the qualitative approach, the Montreal Protocol has been employed as a case study. Hence, this study analysed some of the relevant meeting documents of the Montreal Protocol.

DOCUMENTS SELECTION

This study is intimately linked to the international environmental cooperation in the Montreal Protocol, the influence of interest approach and also the response of the member states. The following documents have being selected as the main documents of this study.

1. Meeting reports of the First Session – Ad Hoc Working Group of Legal and Technical Experts for the Preparation of a Protocol on Chlorofluorocarbons to Vienna Convention for the Protection of the Ozone Layer' on 1-5 December 1986 at Geneva, Switzerland.
2. Meeting reports of the Second Session – Ad Hoc Working Group of Legal and Technical Experts for the Preparation of a Protocol on Chlorofluorocarbons to Vienna Convention for the Protection of the Ozone Layer on 23-27 February1987 at Vienna, Austria.
3. Meeting reports of the First Meeting – Ad Hoc Working Group of Legal and Technical Experts for the Harmonization of Data on Production, Imports and Exports of Substances that Deplete the Ozone Layer on 9-11 March 1988 at Nairobi, Kenya.
4. Meeting reports of the Second Meeting – *Ad Hoc Working Group of Legal and Technical Experts for the Harmonization of Data on Production, Imports and Exports of Substances that Deplete the Ozone Layer* on 24-26 October 1988 at The Hague, Netherlands.
5. Meeting reports – '*Meeting of Parties'* (Montreal Protocol) on 2-5 May 1989 at Helsinki, Finland.
6. Meeting reports of the First Session – 'Open-Ended Working Group Of The Parties' (Montreal Protocol) on 21-25 August 1989 at Nairobi, Kenya.

The above-said documents have been selected on the basis that those documents represent the early stage of negotiations of the Montreal Protocol. The first two documents represent negotiations in the making of the Montreal Protocol itself whereas the last four documents represent negotiations to persuade and attract more developing nations to join as members of the Montreal Protocol.

DOCUMENTS ANALYSIS

All the above-mentioned documents were analysed using Nvivo 2 software. By using Nvivo 2 software, the researchers built and tested the coding schemes. This action was necessary in order to determine the reliability. According to Maxwell (2005), there are a few necessary steps in analysing documents by using the software. All the documents are identified and selected for the purpose of fulfilling the study objectives i.e. the above-mentioned documents. These documents are numbered (1) to (6). Later, these documents are scanned in order to transform them into transcripts that can be analysed by the computer software (Nvivo 2). By using computer software (Nvivo 2), the researchers identified themes and sub-themes based on the above-mentioned selected documents, which are in line with the study objectives.

Following that, the researchers are required to determine the reliability of the coding schemes during the process of identifying themes and sub-themes by using the computer software (Nvivo 2). This determination of reliability is based on the reliability index of Cohen Kappa. This process is required to be repeated many times until the coding schemes manage to obtain the highest level of the reliability. Finally, these themes and sub-themes are built by displaying these results in the form of a model. This process of document analysis has been laid down below in Figure 1.

RESULTS AND DISCUSSION

Based on the document analysis on the influence of interest approach that promotes the principle of transboundary liability in the early negotiations of the Montreal Protocol, two main themes and eight sub-themes have been identified (Table 6). The themes are costs and benefits, while the sub-themes are implementation costs, market competitiveness, international trade conflict, increasing prices, flexibility, justice, incentives (technical and financial assistance) and cost-effectiveness.

TABLE 6. Themes and Sub-Themes of Documents Analysis of the Interest Approach that Promotes the Principle of Transboundary Liability in the Montreal Protocol

Themes	Sub Themes
Costs	Implementation costs, market competitiveness, international trade conflict, increasing prices
Benefits	Flexibility, justice, incentives (technical and financial assistance), cost-effectiveness

COSTS

When referring to the influence of interest approach in the negotiation of the Montreal Protocol, it is clear that the costs have played essential roles on this matter. This has been highlighted in document no. (ii) which indicate the subject matter.

"Another expert drew attention to the problems faced by small countries which might suffer increased costs or reduced availability of chemicals if producing nations restricted exports in favour of continued domestic consumption under regulatory measures" [Para 177, Document No. (ii)]

IMPLEMENTATION COSTS

This study has shown that implementation costs were also being considered as factors that influence states to participate in international environmental cooperation of the Montreal Protocol. This has been highlighted in document no. (vi).

"Incremental costs that might be covered by the international financial mechanism" [Para 103, Document No. (vi)]

MARKET COMPETITIVENESS

Beside the implementation costs, which has been highlighted above, market competitiveness has also been mentioned for consideration in order to influence the negotiation of the the Montreal Protocol. This has been highlighted in document no. (i) indicating the said matter.

"The delegates warned that a freeze at the 1986 production level as contained in one draft protocol before the Group would lead to a production monopoly for current producers" [Para 116, Document No. (i)]

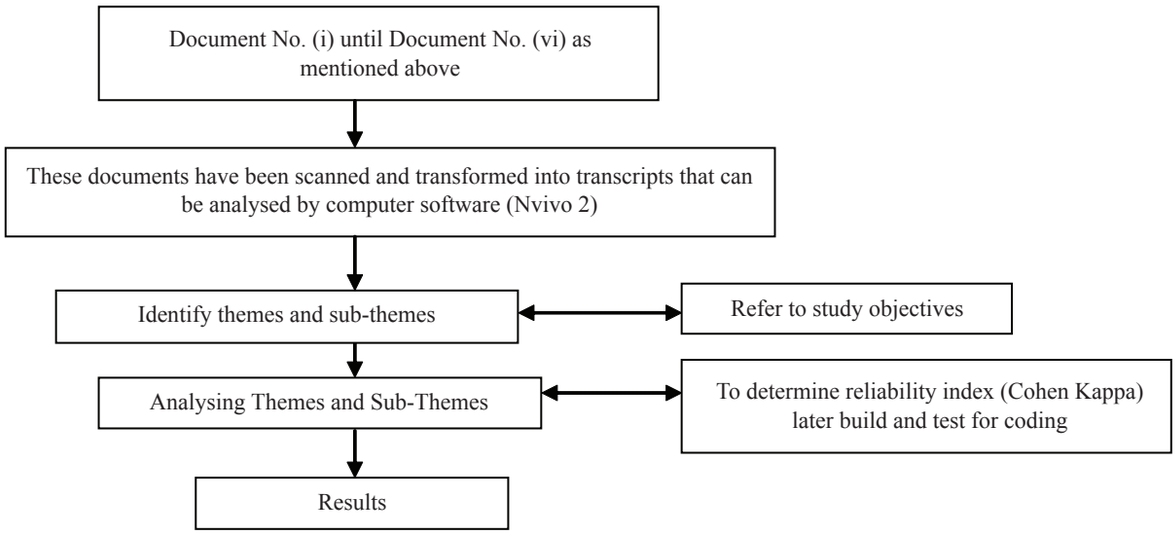

FIGURE 1. Documents Analysis Process Flow Chart

INTERNATIONAL TRADE CONFLICT

In the early negotiation of the Montreal Protocol, all of the states around the globe were anticipating that controlling trade measures in the Montreal Protocol should be consistent with the international trade laws in order to avoid international trade conflict that might cause international trade problems. This has been highlighted in document no. (ii) that indicates the subject matter.

"The Sub-Group on Trade Issues considered the compatibility of measures for controlling trade between parties to the Protocol, and trade between parties and non-parties, with the rules of international trade, especially the GATT" [Para 301, Document No. (ii)]

INCREASING PRICES

In addition to the discussion under the main theme 'costs', which are based on document no. (vi), during the negotiation member states always ensure that the Montreal Protocol must take into consideration the increasing prices due to the involvement of increasing costs in implementing the Montreal Protocol.

"He outlined the elements of the cost as follows: (a) the costs of using or manufacturing high price CFC substitutes; (b) the costs of amortization; (c) the cost of adjustments in industries using CFCs and halons as inputs; and 'the higher costs of importation of equipment and goods using the substitutes" [Para 91, Document No. (vi)]

BENEFITS

The second main theme that influence the negotiation of the Montreal Protocol from the interest approach perspective, is also clear that the benefits have played essential roles on this matter. This has been highlighted in document no. (vi), which indicates the subject matter.

He first identified the needs of developing countries; their reticence to ratify the Montreal Protocol was due to lack of the resources necessary to met its requirements without serious disruption of their development efforts; what they needed was concessional funding and outright grants additional to existing aid programmes [Para 18, Document No. (vi)]

FLEXIBILITY

These benefits also include the aspect of flexibility. This aspect of flexibility really help to influence states around the globe to join in and ratify the Montreal Protocol. During the negotiation of the Montreal Protocol many developing states have requested for flexibility in implementing the Montreal Protocol. This has been highlighted in document no. (ii), which indicates the said matter.

"Special clauses must be drafted for the developing countries that take into account their particular situation and that, at a minimum, permit them to continue their production and emission at current levels, since these countries are not in a position to replace these substances, in addition to which they are experiencing a very difficult economic situation" [Para 96, Document No. (ii)]

JUSTICE

This study has shown in document no. (i) that justice also bring benefits to states around the world during the negotiation of the Montreal Protocol because with the application of the principle of fairness in the Montreal Protocol, the Montreal Protocol will become an international law that would be accepted throughout the world.

"He said, however, in doing so it was important to apply the principle of fairness so that the regulations would be acceptable to all" [Para 85 Document No. (i)]

INCENTIVES (TECHNICAL AND FINANCIAL ASSISTANCE)

Incentives on technical and financial assistance bring benefits to member states especially to the developing nations in accepting the Montreal Protocol as one of the international environmental laws. This has been highlighted in document no. (vi) that indicates the subject matter.

"Two main purposes for financial or other support: first, compensation for the incremental costs of transition to substitutes of the ozone depleting substances, and, second, support which would serve as an incentive to ensure adherence to the Protocol" [Para 178, Document No. (vi)]

COST-EFFECTIVENESS

Cost-effectiveness, which bring benefits to member states by sharing the burden of costs relative to the regulatory process among governments. This has been highlighted in document no. (ii).

"Mr. Mansfield enumerated some of these issues; on the substances that should be regulated; on the levels of limitations to be chosen; on the cost-effectiveness of regulations and on how the burden of costs relative to the regulatory process would be shared among governments" [Para 32, Document No. (ii)]

MALAYSIA'S EXPERINCES IN THE MONTREAL PROTOCOL: TRANSFORMATION FOR BETTER LIVING ENVIRONMENT IN URBAN AREA

Malaysia is non-manufacturer of the Ozone Depleting Substances (ODS) (Malaysia 1999). However, Malaysia previously, imported ODS from United States of America, United Kingdom, Germany, Italy, Greece, Japan, India and China (Malaysia 1999). In early 1980s,

global community tried to restrict the use of ODS, with worldwide awareness of the ozone depletion problem and international agreement to implement preventive measure under the Montreal Protocol. As a result, patterns of consumption have been changing, often in reaction to objectives set under the Montreal Protocol for abolition of ODS use (Malaysia 1999; UNDP 2007).

Malaysia imports of CFCs have generally been declining since 1995 (Table 7) although it was a mark higher in 1997 in anticipation of the implementation of the Montreal Protocol in 1999 (UNDP 2007). UNDP (2007) explained that following the ratification of the Montreal Protocol, Malaysia implemented the National Action Plan which was divided into 2 phases. The first phase between the year 1992-2001 and the second phase between the year 2002- 2010. The main objectives of the National CFC Phase – Out Plan (NCFCP) is to assist the Government of Malaysia to phase out CFC consumption in accordance to the Montreal Protocol (UNDP 2007). A total consumption of 2092 metric tonnes ODS for the year 2000 of chemicals such as CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115 is being phased out under this effort (UNDP 2007). Based on these discussions, the above-mentioned effort by the Malaysian authority has indicated the transformation to phase out the ODS especially in urban area in order to ensure better living environment.

TABLE 7. Malaysia's Importation and Consumption of CFCs, 1995-2010 (metric tonnes)

Year	Actual Imports	Under Montreal Protocol	Permit Allocation for NCFCP Commitment
1995	3442		
1996	3048		
1997	3351		
1998	2351		
1999	**2040**	**3271**	
2000	1651	3271	
2001	1538	3271	
2002	1606	3271	1855
2003	1174	3271	1566
2004	1116	3271	1136
2005	662	1635	699
2006	-	1635	579
2007	-	491	490
2008	-	491	401
2009	-	491	332
2010	-	0	0

Source: UNDP (2007)

CONCLUSION

The transboundary liability principle imposed liability towards a country for adverse activities and operations within the said state jurisdiction that cause environmental harm to other states which include surrounding urban region. Regarding this transboundary liability principle and environmental protection for better living environment in urban region, however, this principle is still evolving and require further development and growth. The opportunity to enhance the growth of this transboundary liability principle and the environmental protection for better living environment in urban region, through state practice, following the transboundary disaster "Chernobyl Explosion," was lost due to the decision by the injured countries not to take international legal action for causing environmental pollution and violation on the concept of sustainable development, even though the injured countries have their right to do so (Sands 1995; Muhammad Rizal & Jamaluddin 2002). The support made by the countries around the world on the International Law Commission's Draft Articles on the Non-Navigational Uses of International Watercourses Law, 1994 and the Rio Declaration, 1992 are clearly the acceptance and the growth of this principle of transboundary liability in protecting human habitat and environment especially in urban region towards better living environment (Sands 1995; Muhammad Rizal & Jamaluddin 2002).

The above-mentioned study suggests that interest approach that promotes the principle of transboundary liability is an important feature to encourage and influence states around the globe to participate in the Montreal Protocol. After a series of negotiations, most of the negotiating countries felt that the Montreal Protocol would be able to supply the market with substitutes of CFCs and would not unduly upset the global cost-effective and to ensure the principle of transboundary liability will not be infringed. This study also suggests that the global economics and equity matters were also discussed in the negotiations of the Montreal Protocol. The developing states have tried to seek justice by promoting the principle of transboundary liability. Based on these two principles, the states managed to obtain flexibility in implementing the Montreal Protocol through the global forum of UNEP. Under the umbrella of the global forum of UNEP the Montreal Protocol has managed to minimise the conflict between the global environmental issues, the global economics and equity matters. Moreover, the developing states which are regarded as Article 5 states in the Montreal Protocol have also been given incentives on technical and financial assistance through Multilateral Fund in order to help them in implementing the Montreal Protocol to avoid the infringement of the principle of transboundary liability.

Finally, the preliminary findings indicate that the influence of interest approach in the international environmental governance is rather an important aspect to promote and persuade states around the globe to participate in the Montreal Protocol for the purpose to protect global environment by taking into consideration the principle of transboundary liability in order to control world emissions of pollution especially in urban region. These actions are to ensure the transformation for better living environment in urban region.

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REFERENCES

Ball, S. & Bell, S. 1995. *Environmental Law*. London: Blackstone Press Limited.

Birnie, P. W. & Boyle A. E. 1994. *International Law & the Environment*. Oxford: Clarendon Press.

Bjorn, L. O. 2007. Stratospheric Ozone, Ultraviolet Radiation and Cryptogams. *Biological Conservation* 135: 326-333.

Breitmeier, H. 2000. International Organizations and the Creation of Environmental Regimes. Rights, Rules, Resources in World Affairs. In *Global Governance: Drawing Insights from Environmental Experience* edited by Young, O. R., 87-114. Cambridge, MA: MIT Press.

Breitmeier, H., Young, O.R. & Zurn, M. 2006. *Analyzing International Environmental Regimes: From Case Study to Database*. Cambridge, MA: MIT Press.

Conservation and Environmental Management Division, MOSTE. 2004. *Multilateral Environmental Agreements with MOSTE as National Focal Point*. Putrajaya: Ministry of Science, Technology and Environment.

Elsom, D.M. 1992. *Atmospheric Pollution. A Global Problem*. 2nd Edition. Blackwell Publishing.

Hanim Kamaruddin. 2002. Protecting the Atmosphere from Transboundary Atmospheric Pollution – the Asean perspective. In *Proceedings International Conference on Environmental Management: Ten Years After* Rio, edited by Jamaluddin Md Jahi, Mohd Jailani Mohd Nor, Kamaruzzaman Sopian, Ismail Sahid & Abdul Hadi Harman Shah (eds.), 211-219. Bangi: Environmental Management Programme, Centre for Graduate Studies, Universiti Kebangsaan Malaysia.

Harris, D. J. 1991. *Cases and Materials on International Law*. London: Sweet & Maxwell.

Hughes, D. 1992. *Environmental Law*. London: Butterworth & Co (Publishers) Ltd.

Jamaluddin Md. Jahi. 2001. *Pengurusan Alam Sekitar di Malaysia: dari Stockholm ke Rio de Janerio dan Seterusnya*. Syarahan Perdana Universiti Kebangsaan Malaysia, 16 Februari. Bangi: Penerbit Universiti Kebangsaan Malaysia.

Malaysia. 1999. *Malaysia's Success Story in Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer*. Kuala Lumpur: Department of Environment.

Muhammad Rizal Bin Razman & Jamaluddin Md. Jahi. 2002. The Principle of Transboundary Liability and Environmental Protection: International Legal Perspectives. In *Proceedings International Conference on Environmental Management: Ten Years After Rio*, edited by Jamaluddin Md Jahi, Mohd Jailani Mohd Nor, Kamaruzzaman Sopian, Ismail Sahid & Abdul Hadi Harman Shah, 155-161. Bangi: Environmental Management Programme, Centre for Graduate Studies, Universiti Kebangsaan Malaysia.

Muhammad Rizal Bin Razman. 2002. Pemakaian Undang-undang Kecuaian di Dalam Menangani Pencemaran Alam Sekitar di Malaysia. Dlm. *Isu-isu Persekitaran di Malaysia*, disunting oleh Jamaluddin Md Jahi, Mohd Jailani Mohd Nor, Kadir Arifin & Muhammad Rizal Razman, 61-76. Bangi: Program Pengurusan Persekitaran, Pusat Pengajian Siswazah, Universiti Kebangsaan Malaysia.

Nor Azam Ramli, Peter Wathern & Muhammad Rizal Razman. 2002. Issues of Air Pollution in Environmental Impact Assessment of Development Projects. In *Proceedings International Conference on Environmental Management: Ten Years After Rio*, edited by Jamaluddin Md Jahi, Mohd Jailani Mohd Nor, Kamaruzzaman Sopian, Ismail Sahid & Abdul Hadi Harman Shah, 484-496. Bangi: Environmental Management Programme, Centre for Graduate Studies, Universiti Kebangsaan Malaysia.

Norsulfa Mohamad Sultan Sahib. 1997. The Right to Clean Air: Is there Legal Liability for Transboundary Pollution. *Bar Council Infoline* 9: 3-7.

Sands, P. 1995. *Principles of International Environmental Law I: Frameworks, Standards and Implementation*. Manchester: Manchester University Press.

Sands, P. 2003. *Principles of International Environmental Law.* Cambridge: Cambridge University Press.

Seaver, B. 1997. Stratospheric Ozone Protection: IR Theory and the Montreal Protocol on Substances that Deplete the Ozone Layer. *Environmental Politics* 6 (3): 31-67.

UNDP. 2007. *Protecting the Ozone Layer: Malaysia Implementing the Montreal Protocol*. Kuala Lumpur: UNDP.

Wolf, S & White, A. 1995. *Environmental Law*. London: Cavendish Publishing Limited.

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