

INTERNATIONAL ENVIRONMENTAL CRIME: A GROWING CONCERN OF INTERNATIONAL ENVIRONMENTAL GOVERNANCE

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Despite much development of the soft as well as hard laws in the field of international environmental governance, the response to environmental crimes has remained focused on non-criminal solutions. At the domestic level, laws addressing environmental crimes are traditionally seen as extension of public and administrative laws protecting the environment, rather than as a fully developed separate branch of criminal law. Various activities resulting in environmental degradation including the threat to global warming creates a sense of urgency, and also poses questions about the proper scope of international offences against the environment. Few international environmental instruments recognized environmental degradation as an offence such as illegal trade in wildlife, ozone depleting substances, dumping and illegal transport of various kinds of hazardous waste, illegal fishing, illegal logging and the associated trade in stolen timber. Recently there is a growing concern all over the world, regarding the fast growing criminal activities severely affecting the environment and the biodiversity. It poses a serious challenge to the international environmental governance which is already vulnerable mostly being soft law. The paper begins by looking at the conceptual limitations on the emergence of a mature international criminal law of the environment. It further discusses the issue by discussing the status of international environmental crime based on secondary data resource, and concludes by describing the future of the development of international criminal law to protect the environment.

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INTRODUCTION

International Environmental Crime (IEC) is one of the fastest growing areas of criminal activity globally, worth billions of dollars in profit to criminal groups around the world. According to INTERPOL, International Environmental Crime may be defined as “a breach of a national or international environmental law or treaty that exists to ensure the conservation and sustainability of the world’s environment, biodiversity or natural resources.”¹ Such crimes takes place in several forms—illegal trade in protected species, smuggling of ozone depleting substances, illicit trade in hazardous waste, illegal fishing and illegal logging and trade in timber. Apart from their serious environmental consequences, environmental crimes may involve corruption, loss of tax revenue and parallel trading with other forms of criminal activity. Due to the nature of environmental crimes, it affects the society at large and undermines prosperity, security and human rights. According to the World Economic Forum, environmental risks is to be of high concern in its 2012 Global Risk Assessment, from natural disasters such as irremediable pollution to species over exploitation.² Most importantly, International Environmental Crime constitutes a serious threat not only to sustainable development, but also to international peace and security. Such illegal activities pose challenges to the effective implementation of compliance with and enforcement of environmental law including multilateral environmental agreements (MEAs). UN Office of Drugs and Crime (UNODC) in its 2010 report included a chapter on the illegal trade in environmental resources as a fast growing international crime.³ In March 2012, INTERPOL convened its first meeting confirmed the scale of environmental crime and the connection with organized crime, including issues of smuggling, corruption, fraud, tax evasion, money laundering and murder.⁴ Most of these crimes often fail to prompt the required response from governments and the law enforcement agencies, as

¹ INTERPOL, *Environmental Crime Programme*, STRATEGIC PLAN (2009-2010).

² WORLD ECONOMIC FORUM, GLOBAL RISK REPORT (2012). Available at http://www3.weforum.org/docs/WEF_GlobalRisk_Report_2012.pdf (last visited January 04, 2016).

³ UN Office of Drugs and Crime (UNODC), *The Globalization of Crime: A Transnational Organized Crime Threat Assessment*, (Vienna: UNODC 2010). Available at http://www.unodc.org/documents/data-and-analysis/tocta/TOCTA_Report_2010_low_res.pdf (last visited December 12, 2015).

⁴ INTERPOL, INTERNATIONAL CHIEFS OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT: SUMMIT REPORT 2 (Lyon, France: INTERPOL 2012).

they are often perceived as 'victimless' crimes. For most countries, combating environmental crime is currently not a priority and the issue often remains overlooked and poorly understood, despite the actual and potential scale and consequences.⁵ The present paper first describes various impediments in the emergence of International Environmental Crime (IEC) due to its unique nature. Further, it focuses on the magnitude of the problem of IEC describing five types of international environmental crimes which are currently considered to be the major importance. It also discusses the various initiatives taken at international level in response to IEC through policies and programmes and institutional mechanism involve to deal with such type of crimes. Lastly the paper concludes the discussion with suggestions.

I. IMPEDIMENTS IN THE EMERGENCE OF IEC

The edifice of public international law has long been seen as an impediment to the growth of both international criminal law and international environmental law. States will quickly raise the principal of sovereignty when they perceive that, the relevant acts occurred within their territorial jurisdiction. The principal of state sovereignty may be reinforced in international environmental debate, because of the close association between the environment and development as well as the principal of the control over natural resources. The dominant mode of regulating environmental matters is dependent on the traditional international mechanisms such as international instruments, international institutions and international conferences. States are more concerned about their sovereignty and upgrading the international environmental law through criminal sanctions to the extent to which it is in their national interest.

The international community in practice has experimented with three broad areas of criminalization, none of which wholly capture the particular characteristics of offences relating to the environment. The first category of international criminal law has developed to address the cross-border wrongs of private actors, such as trafficking offenses (e.g., of persons, drugs, works of art, protected species).⁶ In case of environmental crime, it involves legal

⁵ NIMUN:14, UNEP, DELEGATE STUDY GUIDE. Available at http://www.nimun.com.pk/study_guides/undp.pdf (last visited December 20, 2015).

⁶ There are some international instruments to deal with the international crime such as UN Convention against Transnational Organized Crime, 2000; Protocol to Prevent, Suppress and Punish Trafficking in Person specially Women and Children 2000; Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973; UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970.

entity such as companies and sometime state itself involved and it occurs either domestically or transnational. The second category of international crimes deal mainly with the international or inter-state relations and offenses that obstruct the proper functioning of the international system. Environmental crimes do not fall in this category of crime. A third category of international criminal law highlights its fundamental role as part of global projects related to protecting human beings themselves, rather than states such as genocide and crimes against humanity. The theoretical basis for this category is that, the offense is considered to “shock the conscience of mankind” and thus mandates a response based in international criminal law. However, it is hard to understand how environmental crimes could fit into the existing categories of crimes against humanity. The idea that an international crime arises if the act “shocks the conscience of mankind” is ambiguous. Environmental crimes do not necessarily shock the conscience of mankind.⁷ All the three categories of international criminal law are not conducive to the crime against the natural environment.

Numerous features of criminal law confine the development of a strong international criminal law regime for the protection of environment. *Firstly*, the distinctiveness of environmental damage as compared to other types of damage traditionally prescribed by the criminal law is problematic. This is because environmental interests and values do not enjoy an absolute protection under the law. Unlike traditional crime such as theft or homicide which may cause personal benefits only to the criminal, most polluting activities generate substantial societal benefits as well as environmental costs.⁸ This stands in clear contrast to existing international criminal offenses. At the same time, it is very difficult to distinguish between the legal and illegal destruction when much of the economy is based on the destruction of natural environment. *Secondly*, the diffused character of much of the harm inflicted on the environment may complicate any effort to reconcile environmental damage. Environmental harm is typically multi-layered; it exists at the global, regional and local levels. Indeed, environmental crime often lacks the single-event character typical of ordinary localized crime, and consequently may be much more about process than a one-time occurrence. In some cases, the existence of harm may only be ascertainable with a substantial passage of time, and might only

⁷ Frédéric Mégret, *The Problem of an International Criminal Law of the Environment*, 195-257, 505. Available at <http://www.columbiaenvironmentallaw.org/assets/pdfs/36.2/megret.pdf> (last visited January 12, 2014).

⁸ Susan F. Mandiberg, & Michael G. Faure, *A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe*, 34(2) COLUMBIA JOURNAL OF ENVIRONMENTAL LAW 448.

affect future generations.⁹

Thirdly, the common culpability involved in some crime against the environment is also problematic for the establishment of an international criminal law of the environment. When it comes to major global environmental damage, liability may be so multifarious that criminal law may struggle with the delimitation of its scope. If the scope of responsibility is extended to all who have contributed in producing a certain result (e.g., global warming), there may be an infinite number of guilty parties. *Fourthly*, much of the environmental damage may result from negligence rather than intentional behaviour. Criminal liability for negligence in the act which causes environmental damage raises issues of substantive fairness to the accused, since the act having been in good faith, should not attract strong punishment. *Fifthly*, many environmental law obligations (the precautionary principle, general duties of care, etc.) are vague and broad. Typically, these principles are designed for broad domestic regulation or inter-state relations rather than the acting standards of criminal justice. Indeed, the criminal law may not seem a very appropriate tool for complex environmental risk management given the uncertainties involved.¹⁰ *Sixthly*, international environmental criminal liability will inevitably raise questions about the limitations of individual liability that must be addressed if any progress is to be made. At the Rome Conference that adopted the ICC Statute, attempts were made to include a regime of criminal liability for legal entities (particularly corporations), but were rejected.¹¹ This failure was not a problem for aggression or war crimes in international armed conflicts, which are largely committed by states, or even crimes against humanity and genocide, which are characteristically committed by individuals. However, it may be particularly problematic in the context of efforts to protect against global environmental degradation, where corporations play a significant role.¹²

II. ASSESSMENT OF THE SCOPE OF IEC

Five types of International Environmental Crimes are currently considered to be of major importance: illegal trade in wildlife; illegal

⁹ Mégret, *Supra* n. 07, at 506-507.

¹⁰ *Ibid.*, at 508

¹¹ Joanna Kyriakakis, *Corporate Criminal Liability and The ICC Statute: The Comparative Law Challenge 348 NILR*, (2009). Available at <http://mongolianmind.com/wp-content/uploads/2012/10/CORPORATE-CRIMINAL-LIABILITY-AND-THE-ICC-STATUTE-the-comparative-law-challenge-2009.pdf> (last visited January 02, 2016).

¹² Mégret, *Supra* n. 07, at 228.

logging and its associated timber trade; illegal, unreported and unregulated (IUU) fishing; illegal trade in controlled chemicals (including ozone-depleting substances); and illegal disposal of hazardous waste. However, new types of environmental crimes are emerging, for example in the carbon trade and other crimes related to water.¹³ Brief description regarding the status of these crimes is pertinent to discuss.

A. *Illegal Trade in Wildlife*

Illegal trade in wildlife is a severe transnational organized crime. Apart from the loss of the endangered species, the communities that live around them are also deprived from their livelihood and the potential source of income through wildlife tourism. According to the report (2002) of the Secretary-General, “In the absence of an exhaustive and reliable register of wildlife trafficking, together with indicators of the number of undetected cases, an assessment of the scope and nature of the problem becomes difficult. Worldwide, legal as well as illegal trade in wild animals (dead or alive) and plants, and in by-products such as ivory, skins, coral and medicines, is thought to represent an annual turnover of several billion dollars. The World Wildlife Fund estimates the total at \$20 billion.”¹⁴

Further, the report states that, “Available statistics on the world trade in animals, plants and their products indicate that, there are countries that are virtually exclusively exporters (or producers), and others that are essentially importers (or consumers). The latter are often re-exporters of finished products. The exporting countries are in Africa, Asia, Central and South America and Eastern Europe; the consumers are in East Asia (China (Hong Kong Special Administrative Region), Japan, Republic of Korea and Singapore), Western Asia, North America and Western Europe. Some countries (Canada, Australia and South Africa) are both consumers and producers.”¹⁵

Although, Elephant ivory has been banned since 1989, it is one the most demanded items in international illegal trade related to wildlife. However, in June 2002, 532 elephant tusks and over 40,000 traditional Japanese name seals, weighing in at over 6.2 tonnes, were seized from a ship arriving in Singapore from South Africa routed through Japan. It proves that, those involved in international ivory syndicates are rarely

¹³ *INTERPOL-UNEP Bulletin*, 216(1) 1 (Nov. 2013).

¹⁴ Progress made in the implementation of Economic and Social Council resolution 2001/12 on illicit trafficking in protected species of wild flora and fauna, Report of the Secretary-General, Feb. 2002 (E/CN.15/2002/7), *para.* 14.

¹⁵ E/CN.15/2002/7, *para.* 15.

brought in to justice, reinforcing perceptions of the illegal trade as a low risk-high return enterprise.¹⁶ According to UNEP report, the systematic monitoring of large-scale seizures of ivory destined for Asia is indicative of the involvement of criminal network, which are increasingly active and entrenched in the trafficking of ivory between Africa and Asia. At sites monitored through the CITES-led Monitoring Illegal Killing of Elephants (MIKE) programme alone, which hold approximately 40 per cent of the total elephant population in Africa, an estimated 17,000 elephants were illegally killed in 2011.¹⁷ Poaching is spreading primarily as a result of weak governance and rising demand for illegal ivory in the rapidly growing economies of Asia, particularly China, which is the world's largest destination market.¹⁸

In 2013, an INTERPOL led operation targeting criminal organizations responsible for illegal trafficking of ivory in West and Central Africa, resulted in some 66 arrest and the seizure of nearly 4,000 ivory products and 50 elephant tusks in addition to military grade weapons and cash. Intervention across five countries—Central African Republic, Cote d'Ivoire, Congo, Guinea and Liberia—also resulted in the seizure of 148 animal parts and 222 live animals, including crocodiles and parrots, which were released back into the wild.¹⁹ The international trade in Asian big cat skins (tiger and leopard) is largely driven by the market of China. Most of the tiger and leopard skins for sale across the Tibetan plateau and western China have been sourced from India and Nepal.²⁰ This is corroborated by information

¹⁶ *Environmental Crime: A Threat to Our Future*, Report of Environmental Investigation Agency (EIA), (2008). Available at http://www.unodc.org/documents/NGO/EIA_Ecocrime_report_0908_final_draft_low.pdf (last visited December 20, 2015).

¹⁷ UNEP, CITES, IUCN, TRAFFIC, *Elephants in the Dust—The African Elephant Crisis. A Rapid Response Assessment*. United Nations Environment Programme, GRID-Arendal, (2013). Available at http://www.cites.org/sites/default/files/common/resources/pub/elephants_in_the_dust.pdf (last visited October 10, 2015).

¹⁸ Matti Joutsen, *Emerging Crime That Have an Effect on the Environment: Scope, Trends and Links to Corruption and Organized Crime*, WORKSHOP ON “EMERGING FORMS OF CRIME THAT HAVE AN IMPACT ON THE ENVIRONMENT: LESSONS LEARNED” 7 (UN Commission on Crime Prevention and Criminal Justice, April 22, 2013). Available at http://www.unodc.org/documents/commissions/CCPCJ_session22/PNI/2013_04_21_PNI_workshop_HEUNI.pdf (last visited October 12, 2015).

¹⁹ UNEP and INTERPOL, *Assess Impacts of Environmental Crime on Security and Development*, (UNEP News Centre). Available at <http://www.unep.org/newscentre/Default.aspx?DocumentId=2755&ArticleId=9686> (last visited November 20, 2015).

²⁰ *Hidden in Plain Sight: China's Clandestine Tiger Trade*, REPORT OF ENVIRONMENTAL INVESTIGATION AGENCY (2013).

from seizures in India and Nepal.²¹ The WWF estimated that, the value of illegal trafficking in wildlife is between US \$7.8 and 10 billion.²² United Nations in 2013 also estimated the annual cost of the illegal trafficking in endangered species range between US \$8 and 10 billion.²³

B. Illegal Logging & Its Associated Timber Trade

Serious organized crime in the forestry and timber industries is one of the most pressing environmental issues facing the global community. Driven by the low risks and high profits of a largely unregulated international market for cheap timber and wood products, illegal logging is threatening precious forests from the Amazon, through West and Central Asia, to East Asia. The timber trade involves major crimes not only in the illegal harvesting of forest but in the illegal acquisition of logging rights, illegal transportation, transshipment, use of forged documents, misrepresentation at customs, failure to pay relevant taxes, bribery and corruption of officials and a host of other financial and social crimes. During the trade of stolen timber Intimidation, human rights abuses, violence and even murder have all occurred which poses a serious threat to peace and security. Illegal logging threatens biodiversity, contributes to environmental catastrophes like flooding and forest fires, and is directly linked to the problem of climate change as around one fifth of global greenhouse gas emissions are linked to forest loss.²⁴

Between 50 and 90 per cent of logging in key tropical countries of the Amazon basin, Central Africa and South East Asia—is being carried out by organized crime, threatening efforts to combat climate change, deforestation, conserve wildlife and eradicate poverty. According to UNEP-INTERPOL report, globally illegal logging is worth between US \$30-100 billion

²¹ Kotwali (Rajasthan, India) seizure, 1992 where tiger bones were recovered; Ghaziabad (Uttar Pradesh, India) seizure, Dec. 1999 where 3 tiger skins, 50 leopard and 5 other skins were seized; Khaga (Uttar Pradesh, India) seizure, January 2000 where 4 tiger skins, 70 leopard skins, 221 other skins, 1,800 leopard claws, 132 tiger claws and 175 kg tiger bones were seized; Kanpur (Uttar Pradesh, India) seizure, April 2001 where 1 tiger skin, 19 leopard skins were seized; Lucknow (Uttar Pradesh, India) seizure, January 2003 where 12 leopard skins were seized; Allahabad (Uttar Pradesh, India) seizure, December 2007 where 3 tiger skins and 3 tiger skeletons were seized.

²² WWF, 2012: *Fighting Illicit Wildlife Trafficking: A Consultation with Governments*. Available at http://awsassets.panda.org/downloads/wwffightingillicitwildlifetrafficking_lr_1.pdf (last visited November 23, 2015).

²³ *Discussion Guide for the Thematic Discussion on the Challenge Posed by Emerging Forms of Crime, That Have a Significant Impact on the Environment and Ways to Deal with It Effectively*, E/CN.15/2013/2. Available at <http://www.unodc.org/unodc/en/commissions/CCPCJ/session/22.html> (last visited November 23, 2015).

²⁴ ENVIRONMENTAL INVESTIGATION AGENCY REPORT (2008).

annually—account for between 15 and 30 per cent of the overall global trade.²⁵ In 2013, an INTERPOL operation targeting large scale illegal logging and forest crime resulted in almost 200 arrests as well as in the seizure of millions of dollars' worth of timber and some 150 vehicles across Latin America. The operation carried out under Project Leaf, an INTERPOL-UNEP initiative, was undertaken in 12 countries in Central and South America resulting seizures of wood and related products, during the operation are equivalent to some 2,000 truckloads of timber estimated at around USD 8 million. The illegal trade hampers the Reducing Emissions from Deforestation and Forest Degradation (REDD) initiative—one of the principal tools for catalyzing positive environmental change, sustainable development, job creation and reducing emission.²⁶

Indonesia's rainforests have been the victim of one of the biggest environmental crimes the world has ever witnessed. UNEP report (2007) estimated that, 73-88 percent of timbers logged in Indonesia are illegally sourced.²⁷ In terms of a monetary valuation of illegal logging, estimates range from US\$600 million to US\$8.7 billion per year.²⁸ Both supply and demand-side companies contribute to unlawful, inequitable and destructive illegal logging practices. Consumer's appetite for pulp, paper and furniture in developed nations like the United States, the European Union and Japan, coupled with growing demand in developing countries like China and India, have fueled further exploitation of already depleted forests. Current models of globalization have encouraged the flourish of trade of products made in countries with poorly enforced labor and environmental standards.²⁹ It is estimated that, the European Union imports around US\$4 billion worth of illegally—sourced wood products annually, but has failed to put in place any form of legislation to exclude illegally-sourced timber from the market.

²⁵ UNEP-INTERPOL REPORT, *Green Curb on Black Trade: Illegal Logging, Tax Fraud and Laundering in the World's Tropical Forests*, (2012). Available at http://www.unep.org/pdf/RRAllogging_english_scr.pdf (last visited November 08, 2015).

²⁶ UNEP and INTERPOL, *Assess Impact of Environmental Crime on Security and Development*, (Press Release, December 06, 2013). Available at <http://www.unep.org/environmentalgovernance/News/PressRelease/tabid/427/language/en-US/Default.aspx?DocumentID=2755&ArticleID=9686&Lang=en> (last visited December 18, 2015).

²⁷ Christian Nellman, *The Last Stand of the Orangutan—State of Emergency: Illegal Logging, Fire and Palm Oil in Indonesia's National Parks*, 43 (United Nations Environment Program and United Nations Economic, Social and Cultural Office, February 2007). Available at <http://www.grida.no/files/publications/orangutan-full.pdf> (last visited December 11, 2015).

²⁸ Cecilia Luttrell, *Lessons for REDD+ from Measures to Control Illegal Logging in Indonesia*, WORKING PAPER 74 4 (UNODC 2011).

²⁹ ALDA CHAN, *ILLEGAL LOGGING IN INDONESIA: THE ENVIRONMENTAL ECONOMICS AND SOCIAL COSTS* (2010). Available at http://www.unece.lsu.edu/responsible_trade/documents/2010/rt10_01.pdf (last visited December 18, 2015).

C. *Illegal Unreported and Unregulated Fishing*

Illegal, unreported and unregulated (IUU)³⁰ fishing in various forms is a significant threat to achieving biological sustainable fisheries and a serious management problem for a large number of fisheries on which industries and coastal communities depend. IUU fishing contributes to overexploitation of fish stocks and is a hindrance to the recovery of fish populations and ecosystems. It damages the marine environment, distorts competition and puts those fishers who operate legally at a disadvantage. It also adversely affects the economic and social well-being of fishing communities, especially in third world countries where coastal communities may rely heavily on fish resources.³¹ Common forms of IUU fishing include fishing without permission, catching protected species, breach of gear restrictions, disregarding catch quotas, high grading catches and deliberate under-reporting and misreporting.³²

It is estimated that, the total value of current illegal and unreported fishing losses worldwide are between \$10 billion and \$23.5 billion annually, representing between 11 and 26 million tonnes. Developing countries are most at risk from illegal fishing, with total estimated catches in West Africa being 40% higher than reported catches. Such levels of exploitation severely hamper the sustainable management of marine ecosystems. Although there have been some amount of success in reducing the level of illegal fishing in some areas, these developments are relatively recent and follows growing international focus on the problem.³³ World fisheries deliver annual profits

³⁰ Illegal fishing violates the laws of a fishery. It includes fishing out of season; harvesting prohibited species; using banned gear or techniques; catching more than a set quota and fishing without a license; unreported fishing is that which is not declared (or is misreported) to the relevant authority or regional fisheries management organization; unregulated fishing is conducted by vessels without nationality; flying a flag of convenience; or flying the flag of a State not party to the regional organization which governs that particular fishing region or species. It also relates to fishing in places—or for fish stocks—where there is a lack of detailed knowledge, conservation or management measures in place. (SEAFISH 2012).

³¹ SEAFISH, THE SEAFISH GUIDE TO ILLEGAL, UNREPORTED AND UNREGULATED (IUU) FISHING 2 (Nov. 2012). Available at http://www.seafish.org/media/742176/seafishguidetoiuu_201211.pdf (last visited October 12, 2015)

³² EFTEC, COSTS OF ILLEGAL, UNREPORTED AND UNREGULATED (IUU) FISHING IN EU FISHERIES 6 (2008). Available at

http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting_ocean_life/eftec_Costs_IUU_Fishing.pdf (last visited October 14, 2015).

³³ AGNEW, D. J., WALMSLEY, S. F., LEOTTE, F., BARNES, C., WHITE, C., & GOOD, S., WEST AFRICA REGIONAL FISHERIES PROJECT, ESTIMATION OF THE COST OF ILLEGAL FISHING IN WEST AFRICA: FINAL REPORT (Marine Resources Assessment Group Ltd. 2010). Available at http://www.mrag.co.uk/Documents/Estimation_of_The_Cost_of_Illegal_Fishing_in_West_Africa_Final_report_20100513.pdf (last visited December 18, 2015).

enterprises worldwide of about US\$8 billion and support directly and indirectly 170 million jobs, providing some US\$35 billion in household income annually. When the total direct and indirect economic effects arising from marine fish population in the world economy amounts to some US\$235 billion annually. At the same time, according to WWF estimates, pirate fishing accounts for an estimated 20 per cent of the world's catch and as much as 50 per cent in some fisheries with the value of pirate fish product estimated at between US\$10-23.5 billion per year. Food and Agricultural Organization (FAO) reports that, 52 per cent of the world's marine fish stocks are fully exploited, 16 per cent are overexploited and 7 per cent are depleted.

D. Illegal Trade in Controlled Chemicals (Including ODS)

The smuggling of ozone-depleting substances is directly connected to the Montreal Protocol on Substances that Deplete the Ozone Layer. The treaty entered into force in 1989, and has been amended several times. It calls for the gradual phasing out of the use and production of, first, chlorofluorocarbons (CFCs) by 2010 and then hydrochlorofluorocarbons (HCFCs) by 2030. These substances are used in particular as solvents and refrigerating agents. Illegal trade in Ozone Depleting Substances (ODS) as well as equipments containing or relying on ODS has been and continued to be a serious concern for many parties to Montreal Protocol. There are number of reasons for continued illegal trade in ODS and ODS equipments.³⁴ Since CFCs and HCFCs are markedly cheaper than the substances required replacing them, the illegal smuggling and use of CFCs increased during the 1990s.³⁵ Illegal trade of ODS began flourishing soon after the phase-out of CFCs production began in the European Union (EU) and the United States (US) in 1995. The first target for the smugglers was the lucrative US market, where a high import tax on CFCs designed to dampen down consumption, meant high profit to smugglers. Most of the smugglers used a gaping loophole in the Montreal Protocol allowing free trade in recycled CFCs. The production of CFCs continued in EU, Russia and China to fulfill the need of domestic market as well as shifting the target to developing countries by illegal trade of CFCs.³⁶

³⁴ OZONNEWS, XIII, 4 (UNEP, Dec. 30, 2013).

³⁵ Joutsen, *Supra* n. 18, at 8.

³⁶ *Environmental Crime: A Threat to our Future*, REPORT OF ENVIRONMENTAL INVESTIGATION AGENCY (EIA) (2008). Available at http://www.unodc.org/documents/NGO/EIA_Ecocrime_report_0908_final_draft_low.pdf (last visited December 18, 2015).

According to a report³⁷ issued in September 2011 by the Environmental Investigation Agency (EIA) and the UNEP, 22 global consumption of CFC peaked during the mid-1990s (at 189,000 metric tons), and then decreased to the full phase-out of CFCs in 2010. The illegal trade in CFCs was estimated to have had its own peak of about 20% of the legal trade. However, the report expressed concern that, along with the phase-out of HCFCs in developing countries, smuggling will increase sharply. This assumption was based on the observation, that consumption of HCFCs grew twice as fast in the decade leading up to the establishment of the baseline than had occurred previously during CFC phase out over the corresponding length of time, and that the market size for HCFCs is much larger. Since 2004, most production of HCFCs has been in developing countries, particularly in Asia, and the smuggling of HCFCs is increasingly directed at the United States and Europe. This can be explained readily by the price differential: for example the cost of HCFC22 in the European Union ranges from €18 to 30 (ca. US \$24-40) per kilogram, the price in developing countries was only about €2 per kilogram.³⁸

E. Illegal Disposal of Hazardous Waste

Crime relating to the dumping of illegal wastes is the fastest growing waste stream in the world, a consequence of rapid turnover of electronic devices, particularly in the developed countries. In case of crime relating to the dumping of illegal wastes, the question of assessment of harm is particularly difficult. It is also difficult to specify the harm caused by the dumping of illegal wastes to individuals and to the community, since there are both direct and indirect effects on health and the economy. Most illegal wastes are dumped in developing countries, particularly in Asia and Africa. Indeed, given the enormous consumption in Europe and North America as well as the tightening of environmental laws in these same regions, a clear pattern of exporting wastes—illegally—from the developed “north” to the developing “south” has emerged. Already about ten years ago, it was suggested that, about a fifth of the containers of waste plastic and paper sent from Europe to Southeast Asia for recycling may be illegal. More recent estimates have been as high as 70%.³⁹ An increasing portion of these wastes

³⁷ *Joint Report by UNEP, European Commission DG Climate Action, Environmental Investigation Agency, Risk Assessment of Illegal Trade in HCFCs*, (2011).

³⁸ Joutsen, *Supra* n. 18, at 8-9.

³⁹ ELIZABETH HANFMAN, A COMPREHENSIVE ASSESSMENT OF ILLEGAL WASTE DUMPING. Available at <http://waterhealtheducator.com/upload/Illegal%20Waste%20dumping%Article.pdf> (last visited January 12, 2016).

are e-waste. Some 50 million tons of e-waste are produced annually, and for example in Europe only about 25 percent of this is recycled. The rest is usually shipped to developing countries for recycling—where the concern is that much of it is dumped illegally.⁴⁰

III. RESPONSE TO THE IEC

As a response of the transnational environmental crime, there are few initiatives taken at the international level. In 1994, United Nations in its resolution⁴¹ considered the role of criminal law in the protection of environment. In the resolution, the member states were urged to consider acknowledging the most serious forms of environmental crimes in an international convention. There are some international agreements that seek to protect the environment from the severe form of degradation. Protocol I of Geneva Convention 1977 relating to the victims of international armed conflict in its Article 35(3) include the prohibition on means of warfare which are intended or may be expected to cause widespread, long term and severe damage to the natural environment.⁴² This provision of the Protocol of Geneva Convention has been raised in the case of use of Agent Orange by US military in Vietnam⁴³ and the setting ablaze of oil wells in Iraq following the first Gulf War.⁴⁴ Though none has been convicted in these cases, it leads to the insertion of a provision under the statute of International Criminal Court which brings about international criminal responsibility in case of severe damage to natural environment. According to the statute of ICC (Rome), the act of “launching an attack in the knowledge that such attack will cause widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated is a war crime.”⁴⁵

Besides the direct international offence relating to environmental

⁴⁰ *Ibid.*

⁴¹ E/RES/1994/15 of July 15, 1994, (The resolution contains various recommendations regarding the Role of Criminal Law in Protecting the Environment).

⁴² *Article 35(3) of Protocol Additional to the Geneva Convention of 1949 Relating to the Victims of International Armed Conflict*, (1977). (Article 35(3), it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment).

⁴³ *Agent Orange and The Vietnam War: Magnitude And Consequences*. Available at http://www.nlinternational.or/g/report/Agent_Orange_Flyer.pdf (last visited November 12, 2015).

⁴⁴ Jessica E. Seacor, *Environmental Terrorism: Lessons from the Oil Fires of Kuwait*, 2(1), AMERICAN UNIVERSITY INTERNATIONAL LAW REVIEW 1994.

⁴⁵ Rome Statute of International Criminal Court Art. 8(2)(b)(iv), July 17, 1998, 2187 U.N.T.S. 90.

degradation, there is an indirect criminal law emanating from the criminal sanctions for the violation of certain environmental norms under certain Multilateral Environmental Agreements (MEAs) for example, the Marpol Convention⁴⁶ and London Convention⁴⁷ along with various regional agreements relating to marine pollution. The Convention on International Trade in Endangered Species (CITES)⁴⁸ and the Basel Convention on the Control of Transboundary Movement of Hazardous Waste, and their Disposal⁴⁹ also contain some criminal implementation provisions. Some animal protection⁵⁰ and ocean protection⁵¹ treaties include penal provisions both in terms of criminal conduct and the reporting requirement. International efforts have also been devoted to the role of criminal law in protecting the environment in the context of fighting organized crime. The UN Convention against Transnational Organized Crime, 2000 (UNTOC)⁵² and the UN Convention against Corruption, 2003 (UNCAC),⁵³ consists of detailed provisions to support international cooperation in criminal matters, such as extradition and mutual legal assistance, and provide for specific and innovative forms of cooperation that can be applied in the field of wildlife and forest crime.

The United Nations General Assembly (UNGA) in its resolution⁵⁴ affirmed the relevance of the UNTOC to fight illicit trafficking in natural resources, in which it stated that, the Convention “constitutes an effective tool and the necessary legal framework for international cooperation in combating such criminal activities as illicit trafficking of protected species of wild flora and fauna, in furtherance of the principles of the CITES.” In this connection, the UN Office on Drugs and Crime (UNODC) has an important role to play in terms of strengthening the capacity of Governments to investigate, prosecute and adjudicate crimes against

⁴⁶ International Convention for the Prevention of Pollution from Ships, 1973, 1340 U.N.T.S. 60.

⁴⁷ Convention for the Prevention of Marine Pollution by Dumping of Waste and other Matters, 1972, 1046 U.N.T.S. 120.

⁴⁸ Art. 8(1) (1) of Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES) 993 U.N.T.S. 243.

⁴⁹ Art. 4 of Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal 1989, 1673 U.N.T.S. 125.

⁵⁰ INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING (1931).

⁵¹ International Convention for the Protection of Pollution of the Sea by Oil, 327 U.N.T.S., 3.

⁵² UN CONVENTION AGAINST TRANSNATIONAL ORGANIZED CRIME (2000). Available at <http://www.unodc.org/documents/treaties/UNTOC/publication/TOCCConvention/TOCebook-epdf> (last visited January 14, 2016).

⁵³ UN CONVENTION AGAINST CORRUPTION (2003). Available at http://www.unodc.org/documents/treaties/UNCAC/publication/Convention/08-50026_E.pdf (last visited December 18, 2015).

⁵⁴ UNGA Res.55/25 of 15 November 2000.

protected species of wild flora and fauna, complementing other international legal frameworks that are relevant for the protection of the environment, as for instance the Convention on Biological Diversity (CBD) and the CITES. Economic and Social Council of United Nations (ECOSOC) in its resolution⁵⁵ urged Member States to adopt “the legislative or other measures necessary for establishing illicit trafficking in protected species of wild fauna and flora as a criminal offence in their domestic legislation.” In a subsequent resolution⁵⁶, the ECOSOC urged Member States to cooperate with UNODC as well as with the secretariats of CITES and the CBD with a view to preventing, combating and eradicating trafficking in protected species of wild fauna and flora.

In 2007, the Commission on Crime Prevention and Criminal Justice (CCPCJ) adopted a resolution on “International cooperation in preventing and combating illicit international trafficking in forest products, including timber, wildlife and other forest biological resources”.⁵⁷ In 2008, the ECOSOC, in its resolution⁵⁸, reiterated the need for international cooperation and called for “holistic and comprehensive national multi-sectoral approaches to preventing and combating illicit international trafficking in forest products, including timber wildlife, and other forest biological resources.” At the International Tiger Forum held in Saint Petersburg, Russian Federation, in November 2010, UNODC Executive Director Mr. Yury Fedotov addressed the representatives of the 13 Tiger Range Countries regarding the importance of an effective response to the challenges posed by wildlife, and forest crime and stressed UNODC’s commitment to combat illicit trade in endangered wildlife.⁵⁹

In July 2011, national governments, international organizations and non-governmental organizations met to discuss critical issues related to the illicit trade of commodities such as wildlife, timber, fish and waste at the 11th Asian Regional Partners Forum on Combating Environmental Crime

⁵⁵ *Illicit Trafficking in Protected Species of Wild Flora and Fauna*, ECOSOC Res. 2001/12, 40TH PLENARY MEETING (July 24, 2001). Available at https://www.unodc.org/documents/WilflifeandFC/ECOSOC_resolution_2001-12.pdf (last visited December 14, 2015).

⁵⁶ ECOSOC Res. 2003/27.

⁵⁷ CCPCJ Res. 16/1 of 2007.

⁵⁸ ECOSOC Res. 2008/25 of 2008, *International Cooperation in Preventing and Combating Illicit International Trafficking in Forest Products, Including Timber, Wildlife and Other Forest Biological Resources* ECOSOC, 42ND PLENARY MEETING (July 24, 2008). Available at http://www.unodc.org/documents/WilflifeandFC/resolution_2008-25.pdf (last visited January 18, 2016).

⁵⁹ UNODC. Available at <http://www.unodc.org/unodc/en/frontpage/2010/November/tackle-organised-crime-to-save-the-tiger-says-unodc-executive-directer.html> (last visited January 04, 2016).

(ARPEC).⁶⁰ In 2012, ECOSOC adopted a resolution,⁶¹ on the recommendation of the Commission on Crime Prevention and Criminal Justice, on strengthening international cooperation in combating transnational organized crime in all its forms and manifestation. In this resolution, the Council recognized the involvement of transnational criminal organizations in all aspects of crimes, that have a significant impact on the environment and urged Member States to consider addressing different forms and manifestations of such crime. Cooperation is taking place between intergovernmental organizations such as UNEP, UNODC, INTERPOL, WCO, CITES and the World Bank, and through the International Consortium on Combating Wildlife Crime (ICWC). Other partners and environmental Non-Governmental Organizations (NGOs) such as the International Network for Environmental Compliance and Enforcement (INECE), the Environmental Investigation Agency (EIA) and TRAFFIC are also assisting governments in combating environmental crime.

CONCLUSION

Despite various efforts to respond the issue of transnational environmental crime, it is evident by the incessant rise of environmental crimes that, the issue of the development of international environmental criminal law remains episodic and quite limited in scope. The prohibition under Protocol-I of Geneva Convention is less concerned with protecting the environment than it is with regulating war. Though during the armed conflict attack on environment can certainly occur, but it is not the only context where they might cause sufficient damage to justify criminal sanctions. Most of the efforts to use criminal sanctions to protect the environment have originated at the regional level which is limited in its scope.⁶² UN efforts have never produced strong results and UNTOC ultimately omitted all reference to the environment.⁶³ Further none of such initiatives has intended to deal with perhaps the gravest dangers and global environmental threats but these initiatives have sought to target particular forms of harm to the environment. The paucity of international criminal

⁶⁰ ARPEC. Available at <http://www.unodc.org/eastasiaandpacific/en/2011/07/arpec/story.html> (last visited January 04, 2016).

⁶¹ ECOSOC Res. 2012/19.

⁶² CONVENTION ON THE PROTECTION OF THE ENVIRONMENT THROUGH CRIMINAL LAW (1998).

⁶³ The Convention against Transnational Organized Crime makes no reference to the environment. In comparison, trafficking in person, smuggling of migrants, and illicit manufacturing and trafficking in firearms were subsequently made into protocols to the Convention against Transnational Organized Crime (UNGA Res. 55/25 Jan 08, 2001; UNGA Res. 55/255 June 08, 2001).

environmental legislation perhaps reflects the relatively recent and secondary status of environmental crimes in domestic legal systems. Laws relating to environmental crimes are traditionally seen as an extension of public and administrative laws protecting the environment at domestic level, rather than as a fully developed separate branch of criminal law to deal with environmental crime. In most of the cases, laws dealing with environmental crime developed after some incident occurred and aimed at remedying the particular causes of that disaster rather than creating a more comprehensive system of criminal law of the environment. Both international environmental law and international criminal law are booming disciplines in their own right, but their interaction remains curiously under-explored. Considering the distinct nature of transnational environmental crime, there is a need to have a comprehensive policy and institutional framework in response to the growing activities of transnational environmental crime. Being considered the nature of environmental crime and its potential impact as well as the reluctance of the states to punish those involved in such criminal activities, require a tribunal having super-national jurisdiction to deal with this category of criminal activities. Agencies such as INTERPOL, UNEP, WCO and the UNODC along with the secretariat of key MEAs and NGOs working in the field, should enhance cooperation with national agencies to strengthen enforcement of criminal law to prevent, suppress and punish transnational environmental crimes.