Emerging Crimes that have an Effect on the Environment: Scope, Trends and Links to Corruption and Organized Crime

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Introduction

1. As noted in the conceptual framework adopted for this Workshop, the focus here is on environmental crime, which is understood as a *violation of laws that are put into place to protect the environment.* In the broad sense, environmental crime is understood to include *all illegal acts that directly cause environmental harm.*[1] The conceptual framework identifies five specific types of environmental crimes:

- the dumping of industrial wastes into water bodies, and illicit trade in hazardous waste (examples: waste oils, nuclear waste, e-waste);
- unreported, unregulated, and illegal fishing (examples: illegal whaling, illegal use of driftnets, fishing beyond quota);
- the buying and selling of endangered species (examples: ivory, rhino horn, tiger bones, sturgeon eggs – basically many commodities with a high value, but with a low bulk, thus making smuggling relatively easy and highly profitable);
- smuggling of ozone-depleting substances (related substances include chemicals, pesticides and persistent organic pollutants); and
- illegal logging and trade in stolen timber.

2. This paper first examines environmental crime as a "hidden crime", and how to assess its scope. From there, the paper moves on to what we know of the scope of, and trends in, environmental crime, and of possible links to corruption and organized crime, using examples of the different types of environmental crime from around the world.

Environmental crime as "hidden crime": can you hide a polluted river?

3. A discussion of the scope of environmental crime must begin with the observation that the available information is very limited and patchy. Making overall assessments, as well as comparisons between types of environmental crime and between countries, is even more difficult than it is for many forms of "traditional" crime. Although environmental crime has been a special focus of attention for several decades, it often remains a "hidden crime". That may strike many as an oxymoron: how can a crime that does so much harm to our living environment remain "hidden"?

4. There are several reasons why environmental crimes remain unreported, and why the offenders remain beyond the reach of the law. Among the more important are the following:[2]

- (a) countries differ in the extent to which deliberate or negligent conduct harming the environment is illegal. As ISISC points out,[3] conduct that endangers the environment may be covered by criminal law, administrative law or civil law. What is met in one jurisdiction by penal sanctions may be met in another by administrative measures, and in a third by civil penalties;

[1] This is a very general definition. As ISISC (p. 10) points out, even the terms "environment" and "harm" lack a clear definition.
[2] See also E/CN.15/2013/9, para. 44.
[3] ISISC 2010, pp. 6 ff.

- (b) many environmental crimes remain undetected. For example, it is often difficult to distinguish between legal and illegal fishing, and the activity itself may take place far away from watching eyes;

- (c) lack of detection may also be due to the fact that the harm caused to the environment may be gradual (as with the slow despoliation of a river) or minute (as with the disappearance of individual parrots from the wild);

- (d) the impact may be seen only far from the source (as is often the case with the dumping of industrial wastes), possibly across international borders, and it may be difficult to identify the source;

- (e) in the case of the dumping of industrial wastes, the definition of illegal conduct may depend on measurement, which in turn is prone to error (especially if the industry itself is responsible for self-monitoring and/or for record-keeping);

- (f) much environmental crime affects remote areas of developing countries (illegal logging, poaching of wildlife, dumping of hazardous waste), that are relatively unpopulated and where people may not be used to thinking in legal categories, and thus would not report the conduct;

- (g) even if the conduct is identified as illegal, people may be unaware of to whom the activity can be reported;

- (h) the conduct may not be identified as illegal, but seen by the local population as a "necessary evil", as a cost of employment and industrialization; and

- (i) many in the local population may be aware that the conduct is illegal, but they themselves benefit from it (as is often the case in respect of illegal fishing, illegal logging, and the buying and selling of endangered species).

Scoping environmental crime: how do you count an oil spill?

5. Even when reported to the authorities, environmental crime offers challenges to attempts to measure its scope. Many of the comments of the Secretary-General ten years ago in respect of the illegal trade in endangered species are applicable in general to the problems in assessing the scope of environmental crime:

> "In spite of the widespread tendency to attempt to estimate the size of such illegal markets, many of which are described as second only to drugs or, in some cases, to drugs and arms, there are few reliable statistics. Efforts to estimate the size of the illicit market in fauna and flora encounter enormous problems. There are several layers of uncertainty, which, in many respects, are irreducible: the number of animals or plants in the wild, the number that are illegally but successfully trafficked to customers, the percentage of those trafficked that are intercepted and the prices that are paid. Moreover, there are multiple sectors and multiple products and the dynamics of the market differ from sector to sector. Those uncertainties are compounded by inadequate reporting, the paucity of controlled deliveries and other undercover operations that are critical to the process of knowledge discovery in illegal markets and the over-reliance on anecdotal or specific cases without adequate consideration

> of their wider applicability, broader relevance or adequacy as a typical sample. The fact that the size of the illegal trade in endangered species cannot be precisely established does not, however, mean that the market is insignificant: it is a large and vibrant market with considerable demand and sufficient profit to attract both organized and other crime."[4]

6. Among the difficulties is that in many countries, there are no data collection mechanisms in place to bring together information on environmental crime. The responsibility may be allocated to a number of different law enforcement agencies, customs, the border guard and regulatory agencies, each with their own procedures. International comparability is further hampered by the varying degree to which countries use the criminal, administrative and civil law control regimes. Even if the same regime is used, different countries often define and label conduct differently, again hampering international comparability.

7. There is also the question of how to count environmental crime. With many types of "traditional" crime, the individual unit of count is more or less self-evident: the individual burglary, or car theft, or assault. These vary in terms of, for example, their target (the burglary of a home, as opposed to of a business), but the information that there were a certain number of burglaries in a city over the course of a year is more or less straightforward.

8. With environmental crime, this is rarely the case. The unit may vary considerably. Illegal fishing may range from an individual person catching a few protected fish out of season, to a trawler using a driftnet to catch several tons of protected fish. Illegal logging may involve a single protected tree, or an entire forest.

9. Another challenge arises when counting the number of suspects / offenders. Much environmental crime is at the same time corporate crime, and so the question arises whether one should count the individual persons involved, or the number of corporations.[5]

10. Bringing the different factors together, a single "environmental crime" may thus range in seriousness (and environmental impact) from one individual poaching and selling a single protected parrot, to a large refinery deliberately releasing toxic industrial wastes into a river over the course of many years.

11. Furthermore, the five types of environmental crime discussed here vary considerably as to their nature, and each brings to bear unique problems of measurement:

- in respect of the dumping of industrial wastes into water bodies, and illicit trade in hazardous waste, among the variables are the amount of wastes dumped, and the level of their toxicity;
- in respect of unreported, unregulated, and illegal fishing, the unit of count may be the tonnage or the species. A particular problem is that to a large extent this illegal activity takes place on the high seas, or otherwise far away from effective enforcement, Furthermore, illegally caught fish may be mixed with legal catch, making detection (and measurement) difficult;
- in respect of the buying and selling endangered species, the variables include the number of units and the species. A particular problem in assessing the harm caused is that the

[4] United Nations 2003, para 27.

[5] Interpol has solved this question in part by counting both "entity persons" and "entity companies". See, for example, http://www.interpol.int/Crime-areas/Environmental-crime/Information-management. Interpol also uses as its unit of count a single "environmental incident".

"value" of an individual plant or animal increases varies from the source to the market, to the final purchaser. Also, the market price may vary considerably from place to place, and time to time;

- in respect of the smuggling of ozone-depleting substances, the nature of the offence (the smuggling of individual units) makes calculation difficult; and
- in respect of illegal logging and trade in stolen timber, the variables include the amount of lumber, and the value of the lumber. As with illegally caught fish, illegally cut lumber may be mixed with legally obtained lumber. And as with endangered species, the value increases from source to market, from one market to another, and varies from place to place and from time to time.

12. An alternative to counting "environmental incidents" (individual environmental crimes) is to look at the harm caused by environmental crime, especially the monetary value of this harm.[6] Although such a figure is a popular way of conveying to the public the seriousness of environmental crime, the underlying data may be flawed, and yet the figures may be repeated time and again until they are accepted as "scientific truth". The Royal Institute (p. 6), for example, cites a commonly used estimate according to which the commercial exchange of wildlife in contravention of CITES may be some US $ 5 billion. The Royal Institute points out, however, that this figure was originally based on the monetary value of the total trade in wildlife between two specific countries, and on a rough estimate of what proportion of this was illegal. This was then extrapolated to apply to wildlife trade around the world.

13. Given these difficulties in reporting, recording and counting, all data purporting to assess the scope of environmental crime must be treated with a considerable amount of caution. However, a beginning must be made somewhere, and this may help to improve our efforts at data gathering and assessment.

14. The most recent UNODC report to the Commission on crime trends contains a section on environmental crime.[7] According to the report, 32 out of the 57 countries that responded to the note verbale were able to provide at least some data on environmental crime.[8] Most of these were pollution offences (58 %) and waste offences (38 %), with only a small proportion (4 %) involving illegal trade in flora and fauna.

15. As for trends, the report suggests, among the reporting countries, an increase in the number of recorded pollution offences (15 % over a six-year period) and a decrease in the number of waste offences (19 %). The total number of recorded environmental offences in these countries appeared to remain stable over the six-year period.[9]

16. Finally, the report notes the low conviction rate for environmental offences, as compared to other types of crime.[10]

[6] See also the discussion in the paper by Eileen Skinner on assessing the harm caused by environmental crime, a paper also prepared for this Workshop.
[7] E/CN.15/2013/9, paras. 42-47.
[8] E/CN.15/2013/9, para. 43.
[9] E/CN.15/2013/9, para. 45.
[10] E/CN.15/2013/9, para 46.

The dumping of industrial wastes, and illicit trade in hazardous waste

17. To turn to the various types of environmental crime, and first to the dumping of illegal wastes, the question of assessment of harm is particularly difficult. The pollution of air, water and soil results from both legal and illegal activities. 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. However, one possible way to assess the scope of the dumping of illegal wastes is in terms of tons of waste. The "Let's Do It" organization has used a variety of sources to estimate the amount, in tons, of illegal waste dumping (in forests, public areas and elsewhere) in different countries around the world.[11] The organization concludes that the global total of illegally dumped waste is about 100,000,000 tons. (The organization does not specify the methods used, nor the time period covered.)

18. According to this source, most illegal wastes are dumped in developing countries, in particular in Asia and Africa. The wastes in question are by no means necessarily from the country in question. 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 %.[12] An increasing portion of these wastes are e-waste (for example discarded computers). 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.[13]

19. To put the amount of illegal waste dumping and the harm caused into perspective, reference can be made to the costs of environmental clean-up. Europol (2011) cites an example of 134,000 tons of waste dumped illegally into a large gravel pit in north-east Europe. Extracting and transporting this waste cost 160 euros per tonne, or a total of 21 million euros.[14] (It would be highly risk to combine this assessment with the earlier cited estimate of a global total of 100,000,000 tons in illegally dumped waste, given not only the ambiguity of the source of that estimate, but also the huge variation in the costs of clean-up in different parts of the world and in different environmental circumstances.)

Unreported, unregulated, and illegal fishing

20. Agnew et al have attempted a global assessment of unreported, unregulated and illegal fishing. According to their estimates, which cover the period from 1980 to 2003, the overall proportion of illegal fishing has stayed about the same (roughly 20 %), but there are considerable regional differences. They note that the level of illegal fishing was highest in the Eastern Central Atlantic, and the lowest in the Southwest Pacific. They further note that the level of illegal fishing had increased in particular in the Northwest Pacific (from 16% in 1980 to 33 % in 2003) and the Southwest Atlantic (15 % to 32 %). Agnew et al estimate that the overall loss was between 13 and

[11] http://chartsbin.com/view/576.
[12] Hanfman, p. 3.
[13] Hanfman, p. 4. See also Interpol
[14] Europol also notes that had the wastes been classified as hazardous, the cost would rise to 300 euros per ton for extraction and transport.

31 % of the total catch, with a corresponding monetary value in 2003 of between US $ 5 and 11 billion.[15]

21. Various studies focus on individual countries. For example in respect of Western Africa, Falaye has looked at illegal and unauthorized fishing by foreign vessels off Nigeria and Ghana. These vessels are larger than the size recommended for fishing in these waters, and use unauthorised fishing equipment. He assesses the economic impact on the local fishermen, and concludes that the total annual loss to Nigeria alone is about US $30 million.

The buying and selling of endangered species

22. The issue of buying and selling of endangered species was dealt with by the Commission on Crime Prevention and Criminal Justice in 2002. According to the report of the Secretary-General,[16]

> "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. As there is seldom a complainant, enforcement agents can only record detected cases or seizures; thus, the view of the situation as a whole is flawed. However, recent United States estimates put the profits of wildlife trafficking somewhere between 2 billion and 3.5 billion United States dollars per year. 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."

23. As for patterns, the report states that[17]

> "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, South Africa) are both consumers and producers."

24. In updating this data for the 2013 session of the United Nations Commission, the Secretariat has cited an estimate that the annual cost of the illegal traffic in endangered species ranges between US $ 8 and 10 billion.[18]

25. A variety of organizations seek to monitor the international wildlife trade, and at the same time the illegal trade in endangered flora and fauna. One such organization is TRAFFIC, which is a joint programme of the World Wildlife Federation and the World Conservation Union, and which works in close cooperation with the secretariat of the Convention on International Trade in Endangered Flora and Fauna (CITES). According to TRAFFIC's estimate, during the early 1990s the annual (legal) trade in wildlife products was worth roughly US $ 160 billion. TRAFFIC has noted that the

[15] Agnew et al 2009. WWF 2012 cites a somewhat similar figure of between US $4,2 and 9,5 billion annually; WWF 2012 p. 9.
[16] UN 2002, para. 14.
[17] UN 2002, para. 15.
[18] UN 2013, para. 21.

illegal wildlife trade was "large and profitable", adding that "because it is conducted covertly no-one can judge with any accuracy what this may be worth."[19]

26. Others, however, have stepped up to put a monetary value on the illegal trade in wildlife. The problem here, as noted above, is that the value of an individual specimen varies considerably. For example Wyler and Sheikh (2008) suggest that the annual value of the illegal trade may range between US $ 5 and 20 billion. They cite data which help to explain the need to remain on a general level. The market value of ivory may range from ca. US $120 to US $900 per kilogram, and the market value of rhinoceros horn may range even more, from US $945 to US $50,000 per kilogram. The value of a bear gallbladder may range from US $ 250 to US $ 8,500, and the value of a mature breeding bear of black palm cockatoos may range from US $ 25,000 to US $ 80,000.

27. The World Wildlife Federation, in turn, has recently suggested that the value of illegal trafficking in wildlife is between US $ 7,8 and 10 billion.[20]

28. The Wildlife Conservation Society has prepared another source of data, an Internet-based mapping tool designed to improve the monitoring of the illegal trade in wildlife and, at the same time, the disease risks that it may present to both people and animals.[21] This tool supplements the official records of interceptions based on CITES enforcement, as well as official import-export records, and records of confiscations. The tool is based on media reports related to the illegal trade in wildlife and wild animal products, as well as "alerts" provided by members of the public.

Smuggling of ozone-depleting substances

29. 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. Speaking very generally, 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. Since CFCs and HCFCs are markedly cheaper than the substances required to replace them, the illegal smuggling and use of CFCs increased during the 1990s.

30. According to a report issued in September 2011 by the Environmental Investigation Agency and the United Nations Environment Programme,[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. (Because of the phase-out of CGCs, the potential market for illegal CFCs shrunk accordingly.)[23] However, the report expressed concern that along with the phase-out of HCFCs in developing countries, smuggling will increase sharply. This conclusion 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 with during CFC phase out over the corresponding length of time, and that the market size for HCFCs is much larger.

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[19] TRAFFIC, http://wwf.panda.org/about_our_earth/species/problems/illegal_trade/ .
[20] WWF 2012, p. 9.
[21] See http://www.healthmap.org/wildlifetrade/ .
[22] ACR 2011.
[23] See also Royal Institute 2002, pp. 14-15.

31. Since 2004, most production of HCFCs has been in developing countries, in particular 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.[24]

Illegal logging and trade in stolen timber

32. To turn finally to illegal logging, Interpol and the United Nations Environment Programme have recently estimated that globally, 15 to 30 % of logging is illegal, and that in key producer tropical countries the percentage may range from 50 to 90 %. The economic value of illegal logging globally, including processing, is estimated to range from US$ 30 and US$ 100 billion.[25]

Identifying and assessing links to corruption and organized criminal groups

33. Much environmental crime requires organization. The illicit trade in hazardous wastes requires considerable investment in the equipment for the collection, handling, transport and ultimate dumping of the wastes. Correspondingly, unreported, unregulated and illegal fishing, when done on a large scale, requires considerable investment in the fishing vessels, and in marketing the catch. Illegal logging and the trade in stolen timber requires equipment and organization of its own.

34. Although the present paper discusses possible links between environmental crime and organized criminal groups, it must be noted that much environmental crime is conducted by, or with the tacit approval of, corporations, and would fall under the category of corporate crime. For example, the captain of a fishing vessel may decide to fish in waters illegally, as in the Nigerian and Ghana cases identified by Falaye (Falaye 2008). The catch will then generally be brought to the home harbour and declared to the authorities as legitimate.

35. More generally, the fact that much environmental crime is organized does not as such mean that organized crime is involved to the same extent. To apply the observations made by the Secretary-General ten years ago in respect of the illegal trade in endangered species more generally to environmental crime,[26] offenders can be organized in different ways:

- an organized criminal group may include environmental crime in a wider portfolio of activities. Its involvement in that particular form of environmental crime can be infrequent, sporadic or sustained, depending on the calculation of risk and profit and the attractions of alternative markets and products;
- an organized criminal group may include environmental crime in its activities simply because it involves the same network that is used for the smuggling of other illegal, regulated or stolen products. “In the mid-1990s, for example, Global Survival Network, a nongovernmental organization based in the United States, started to focus on the targeting of women from the former Soviet Union when it realized that the same groups that were targeting Siberian tigers were also moving women to Western Europe and elsewhere for commercial sex”; and

[24] ACR 2011.
[25] Interpol 2012. See also Nellemann, pp. 6 and 13.
[26] United Nations 2002, para. 24. See also Wyler 2008.

- legitimate organizational structures (such as those bringing together collectors of wildlife, or persons interested in exotic wood) may shift from legal activities to certain forms of environmental crime. "That process can be gradual or abrupt."

36. The Secretary-General stresses that the "key point about all of those criminal organizations ... is that they depend on the connivance and collusion of ostensibly legitimate people and groups if they are to operate effectively in illegal markets."[27]

37. In the same report, the Secretary-General noted various examples of organized criminal involvement in organized crime, ranging from the way in which African rebel groups fund their activity through the illegal trade in ivory, to the heavy involvement of Chinese, Japanese, Italian and Russian organized criminal groups in illegal wildlife trade. Individual examples include the involvement of triad societies such as the Wo Shing Wo group and 14K in the smuggling of ivory, rhino horn, shark fin and abalone into South Africa, the alleged involvement of the Neapolitan Mafia in the illegal trade in endangered parrots, and the involvement of organized Russian groups in the poaching of tigers and bears as well as in the handling of sturgeon.[28] Other examples from the 1990s are cited of links between the illegal trade in endangered species, and drug trafficking.[29]

38. The World Wildlife Federation has pointed out the particular attraction that at least the illegal trade in endangered species has to organized criminal groups: "The risk involved is low compared to drug trafficking, and high profits can be generated. The price of rhinoceros horn has increased to around US $60,000 per kilogram – twice the value of gold and platinum – and it is now more valuable on the black market than diamonds and cocaine. The penalties associated with trafficking in rhinoceros horn are not aligned with its value ..."[30]

39. In 2002, the Secretary-General requested information from states on the illegal trade in endangered species, including on the possible involvement of organized crime. In presenting the results, the Secretary-General summarized them by stating that

> "Drawing on the comments received and on the basis of more in-depth research, it appears that organized crime, while not involved in all forms of trafficking in protected species of fauna and flora, is strongly present in various sectors. Even when organized crime, as such, is not fully involved, much of the trafficking is highly organized."[31]
>
> "Yet another reason for the divergent assessments is that there are various sectors within the fauna and flora market and the role of organized crime varies significantly from sector to sector. In any sector of the market it is necessary to look at the role of organized crime and smuggling networks, criminal companies that are simply set up as fronts, predominantly legitimate companies that sometimes stray across the line into illegality and amateur enthusiasts and collectors who in some cases develop what might be termed end-user, organized-crime supply chains. Market facilitators also have to be examined, with particular attention to collusion and corruption, and the links between law-abiding society and the underworld."[32]

[27] United Nations 2002, para. 24.
[28] United Nations 2002, para. 20. It should be stressed that the data referred to here dates in some cases back to the mid-1990s.
[29] United Nations 2002, para. 21.
[30] WWF 2012, p. 11.
[31] United Nations 2003, para. 29.
[32] United Nations 2003, para. 30.

40. To bring the data on possible organized criminal groups in environmental crime up to date, and to begin again with the dumping of industrial wastes, Europol has reported in its 2011 Organized Crime Threat Assessment that illegal waste disposal in the European Union "is organised by sophisticated networks of criminals with a clear division of roles (e.g. collection, transportation, recovery or legal expertise)." This illegal waste trafficking is "often facilitated through cooperation with legitimate businesses, including those in the financial services, import/export and metal recycling sectors, and with specialists engaged in document forgery to acquire permits."[33] As has been noted in previous years, the direction is from the developed "north" (in this case the European Union") to the developing "south". Europol further notes that "[t]here is evidence of corruption in the public and private sectors, in relation to the issuing of certificates by laboratory technicians. Intermediate storage sites are often used to disguise the ultimate destination of waste, which makes it difficult to identify the source companies."

41. To turn to illegal fishing, Putt notes in respect of the growth of organized criminal activity in connection with illegal fishing off Australia:

> "The increase in value of certain fish stocks, especially those that had lucrative overseas markets, such as rock lobsters, abalones and sharks, is among the potential vulnerabilities of the fishing sector. Other contributing factors included the prevalence of many small-scale illegal business ventures, which are pressured by the competition from seafood imports into the country. The involvement of organized criminal groups that have significant financial resources, are willing and capable of using violence and had large distribution networks both domestically and internationally, add to the complexity of dealing with the problem in the region, and significantly hinder the effective enforcement of fisheries management and regulation mechanisms in the country."[34]
>
> "In terms of organised serious offending, the stakeholder consultations revealed concerns in a number of jurisdictions about existing involvement of outlaw motorcycle gangs (OMCGs) or Chinese organised crime groups. For example, in Western Australia, an OMCG was said to have been involved in the theft of pearls; in the Northern Territory, OMCGs had purchased fishing licences; and in South Australia, enforcement stakeholders believed that an OMCG had been involved in the illegal abalone trade. These gangs were also reported to have purchased fishing vessels to distribute illicit drugs."[35]

42. The links between organized crime and the illegal trade in endangered species have already been identified by the Secretary-General. More recently, Interpol has noted that the same routes used to smuggle endangered species are also used to smuggle other things, including weapons, drugs and persons. "Indeed, environmental crime often occurs hand in hand with other offences such as passport fraud, corruption, money laundering and murder."[36]

43. The World Wildlife Federation, in turn, has stressed corruption as a contributing factor:[37]

> "Poaching tends to thrive in places where corruption is rife, government enforcement is weak and there are few alternative economic opportunities. Respondents from the international organizations that took part in this study, and most government representatives, highlighted corruption as one of the most critical factors enabling illicit wildlife trafficking. Corruption facilitates transactions between supply, transit and demand countries. As mentioned by a

[33] Europol 2011.
[34] Putt 2008.
[35] Putt 2008.
[36] http://www.interpol.int/Crime-areas/Environmental-crime/Environmental-crime
[37] WWF 2012, p. 14.

government representative who asked to remain anonymous, "Corruption is a serious issue. Criminal organizations and exporters have a lot of money and they can pay rangers, customs officers and police officers to receive false documents certifying the legal provenance and make sure the products do not get stopped at the borders."

44. Along the same lines, and in respect of illegal logging, Nellemann notes that not only do the organized criminal groups involved engage in corruption, fraud, money laundering extortion, threats of violence and even murder, but "[a]nother critical issue is that most illegal logging takes place in regions characterized by conflict or widespread corruption. There are advanced corruption schemes in many tropical forest regions, including the Amazon Basin, the Congo Basin, Southeast Asia and Indonesia. Enforcement efforts during the mid-2000s simply triggered a series of more advanced means to launder illegally logged timber or to conduct illegal logging under the cover of plantation development, palm oil establishment, road construction, redefinition of forest classifications, exceeding legal permit limits or obtaining illicit logging permits through bribes."[38]

Concluding observations

45. Environmental crime takes a number of different forms, each of which present its own challenges not only to detection and interdiction of the activity, as well as to bringing the offenders to justice, but also to the assessment of the scope of environmental crime. Lack of information may have the unfortunate consequence of allowing the criminal activity to continue, since the public and the authorities are not sufficiently aware of the activity, and of the harm it causes.

46. In this respect, it is encouraging that intergovernmental organizations such as the United Nations Environmental Programme and Interpol, and nongovernmental organizations such as the World Wildlife Federation, are joining together with governments around the world to shed more light on environmental crime. Several institutes in the United Nations Crime Prevention and Criminal Justice Programme Network, such as the Australian Institute of Justice, the International Institute of Higher Studies in Criminal Sciences and the United Nations Interregional Crime and Justice Research Institute, have contributed to the ongoing research effort to respond to the continuing need for policy-related information. Measurement of scope and assessment of trends are necessary steps in developing the proper response.

47. In its contribution to the 2013 session of the United Nations Commission on Crime Prevention and Criminal Justice, the International Sociological Association together with Criminologists without Borders have provided an overview of research on environmental crime, and in so doing have performed an important task in identifying not only "lessons learned" (in terms of what we now know about environmental crime), but also in identifying some of the many "unknowns".[39] Among these are the following:

- in respect of the trade in endangered species, "we do not have a quantitative knowledge of the species trafficked nor do we know the extent to which organized crime is involved; the links between the illegal wildlife trade and other illegal activity; and the role that traditional medicine markets play in the illegal harvesting of species";
- in respect of illegal fishing, "we do not know which marine species are most vulnerable to IUU fishing and at present have not quantified the true geographic concentrations of

[38] Nellemann, pp. 14-15, INTERPOL 2009, and Hiemstra van der Horst 2011.
[39] Petrossian et al 2013.

IUU fishing. Further, we do not know the extent to which POCs [ports of convenience] and FOCs [flags of convenience] contribute to the problem"; and

- in respect of the illegal trade in electronic waste "we do not know the international extent of this trade. Further, we do not know the major source and destination countries where most of illegal trade in electronic waste occurs, nor do we know the international trade routes."

48. The same source[40] also cites two specific illegal activities that involve several important "unknowns": illegal international trafficking in precious metals (the primary source and destination countries, the actors involved, and the links to other forms of illegal activity) and illegal international ship-breaking, in other words the movement of ships to countries with few regulations on dismantling (the effectiveness of regulation, and the human and environmental impact).

Sources

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