



Univerza v Mariboru

Fakulteta za varnostne vede

DOCTORAL DISSERTATION

**Crimes against the Environment - Comparative Criminology and
Criminal Justice Perspectives**

March, 2012

Katja EMAN, M.A.



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DOKTORSKA DISERTACIJA

**Ekološka kriminaliteta - kriminološko-primerjalni in varstvoslovni
vidiki**

March, 2012

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Index

Table of Contents

1 INTRODUCTION WITH METHODOLOGICAL AND HYPOTHETICAL FRAMEWORK OF THE DISSERTATION	20
1.1 PRESENTATION OF THE RESEARCH PROBLEM	20
1.1.1 <i>Objectives and purpose of the dissertation</i>	25
1.1.2 <i>Scientific-research theses</i>	27
1.1.3 <i>Expected authentic scientific contributions</i>	29
1.1.4 <i>Methods used</i>	30
1.1.5 <i>Limitation of the dissertation</i>	32
1.2 INTRODUCTION TO STRUCTURE AND CONTENT OF THE DISSERTATION.....	33
1.3 ENVIRONMENTAL CRIME IN COMPARATIVE CRIMINOLOGY AND CRIMINAL JUSTICE SURVEYS	36
2 ENVIRONMENTAL CRIME.....	47
2.1 CONCEPT AND MEANING OF ENVIRONMENTAL CRIME	48
2.2 PHENOMENOLOGY AND ETIOLOGY OF ENVIRONMENTAL CRIME	58
2.2.1 <i>Phenomena, structure and classification of environmental crime</i>	62
2.3 ENVIRONMENTAL CRIME IN THE LIGHT OF CRIMINOLOGICAL THEORIES	73
2.3.1 <i>Socio-biological theories and environmental crime</i>	75
2.3.2 <i>Critical criminology and environmental crime</i>	79
2.3.3 <i>The rational choice theory, the profit theory and environmental crime (the rational polluter model)</i>	80
2.3.4 <i>The theory of social risk and environmental crime</i>	83
2.3.5 <i>Legitimacy theory and environmental crime</i>	86
3 GREEN CRIMINOLOGY.....	94
3.1 DEVELOPMENT OF GREEN CRIMINOLOGY THROUGH HISTORY	95
3.1.1 <i>Origins in the 1960's</i>	96
3.1.2 <i>Eco-critical criminology</i>	99
3.1.3 <i>Environmental sociology and philosophical perspectives</i>	101
3.1.4 <i>Green criminology at the beginning of 21st century</i>	106
3.2 DEVELOPMENT OF GREEN CRIMINOLOGY IN SLOVENIA	115
3.3 CONCEPT AND MEANING OF GREEN CRIMINOLOGY.....	118
3.3.1 <i>Not environmental, it is green criminology</i>	123

4 ENVIRONMENTAL PROTECTION LEGISLATION, ENVIRONMENTAL VICTIMS AND ENVIRONMENTAL CRIME PREVENTION	127
4.1 ENVIRONMENTAL CRIME AND CRIMINAL LAW	128
4.2 VICTIMS OF ENVIRONMENTAL CRIME	134
4.3 ENVIRONMENTAL CRIME AND CRIME-PREVENTION	141
4.3.1 <i>Concept and meaning of environmental crime prevention.....</i>	141
4.3.2 <i>Models of environmental crime prevention</i>	149
5 CRIMINOLOGICAL AND CRIMINAL JUSTICE ASPECTS OF ENVIRONMENTAL CRIME TRENDS IN SLOVENIA.....	157
5.1 OFFICIAL STATISTICAL DATA ABOUT ENVIRONMENTAL CRIME IN SLOVENIA	159
5.2 PUBLIC OPINION ABOUT ENVIRONMENTAL ISSUES.....	167
5.2.1 <i>Slovene public opinion surveys - public opinion about the environmental threats and the threats against the environment</i>	167
5.2.2 <i>Expert opinion about environmental crime in Slovenia</i>	171
5.4 VERIFICATION OF THE RESEARCH THESES	184
6 DISCUSSION.....	194
7 CONCLUSION	205
8 REFERENCES	211

List of Figures

Figure 1: From a natural environment to environmental crime - the changes of the process of a human behavior towards the environment (through history).....	54
Figure 2: Impact of ecophilosophy on criminological definition of environmental crime.....	61
Figure 3: Scheme of forms of environmental crime detected in Slovenia.	72
Figure 4: Criminological theories in the environmental crime scheme.	89
Figure 5: Number of scientific publications in the field of green criminology from the study of Zielney and colleagues (2006).	99
Figure 6: Number of scientific publications in the field of green criminology in Slovenia in 1970-2011.....	117
Figure 7: Local dispersion of the respondents' sample.	174
Figure 8: Informal responses to environmental crime in Slovenia.	181

List of Tables

Table 1: Criminological and criminal justice comparative approaches.	42
Table 2: Philosophical perspectives on the environment and human: anthropocentric, biocentric and ecocentric perspective.....	103
Table 3: Time scale of the development of green criminology and its classification into the frames of the historical development of criminology.	111
Table 4: Primary, secondary and tertiary environmental crime prevention methods divided by offender, victim or target and place of circumstances.	155
Table 5: Data about the inspection provisions of the offences against the environment, space and natural resources in the period from 2003 to 2010.....	160
Table 6: Number of criminal offences against the environment, space and natural resources, which in the period from 2000 to 2010 were dealt with and investigated by the Slovenian police.	163
Table 7: Number of criminal charges filed by the state prosecution office and number of convicted offenders for crimes against the environment, space and natural resources in the period 2000-2010.....	165
Table 8: Factors of possible threats to the security of the Republic of Slovenia in years 1994, 1999, 2001, 2003, 2005, 2007 and 2009.....	168
Table 9: The description of sample.....	173
Table 10: Most often encountered forms of environmental crime.....	177
Table 11: Victims of environmental crime.	179
Table 12: Cooperation between organizations when dealing with environmental issues.....	182

Abstract

The dissertation *Crimes against the environment - criminology and criminal justice perspectives* represents a study of environmental crime and a work about green criminology in general and in the environment of the Republic of Slovenia. The comparative criminological and criminal justice aspects of the environmental crime are the link from the beginning to the end of the present dissertation.

Research results show that environmental crime occurs under the influence of the social conditions and circumstances (i.e., environment as a resource for survival) and economical factors (i.e., environment as a resource for profit). The origin for the committing environmental crime lies in the nature itself, because the environment represents the resources for the survival and the opportunity for profit. It is possible to conclude that the primary and main cause or reason for the committing crime against the environment is human nature related to past anthropocentric attitude towards the environment. The primary motives for environmental crime are profit and human development. Very rare are the cases where offenders have a different reason for committing environmental crime, such as cruelty to animals.

Today, we can talk about a new branch of criminology in Slovenia. In the 21st century, green criminology can be described as a social study that uses multidisciplinary and interdisciplinary approach. It is based on the critical criminological conviction to defend environment as one of the basic human rights. The research agenda of green criminology is based on the assignment to study the known forms of deviant behavior against the natural environment. Green criminology observes the dynamics between the human and the natural environment, especially human behavior and acts. It is interested in the human as a perpetrator of environmental crime, humans as victims of environmental crime, and possible prevention methods. Green criminology is much more than just a debate of environmental issues. Due to the multidisciplinary subject of the study it also has characteristics of critical criminology, "modern" criminology, public criminology and news-making

criminology. Nevertheless it is important that green criminology within the framework of its work and with the findings and proposals affects the creation of politics on environmental issues. Criminology of the 21st century should have an intellectual base and a legal space to be able to include all elements of the environment as an inseparable and connected field of expertise. The ecocentric or socio-ecological centered perspective, which emphasizes the equality of the human with the rest of the nature, should be followed in all criminological and criminal justice studies.

Dealing with environmental crime from criminological and criminal justice perspective demands new ways of thinking about humans and society. We have to overcome the conservative definition of a victim and adopt the broader concept of the term victim allowing all seven elements of the natural environment beside human to gain a status of environmental victim. More consistent implementation of formed responses and supplementation with the crime prevention methods, especially situational crime prevention, represents more promising response of society to environmental crime. The general conclusion is that environmental protection must become a national priority and the society must develop a complete intolerance to all forms of environmental crime. This is the way that Slovene (and every other) society has to struggle to reach the goal of sustainable development in a clean and protected environment.

Key words: environmental crime, ecological crime, comparative criminology, criminal justice, green criminology, victimology, crime-prevention, environmental threats and environmental protection

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Povzetek (Executive Summary in the Slovenian language)

Ekološka kriminaliteta - kriminološko-primerjalni in varstvoslovni vidiki

Ekološka kriminaliteta - primerjalno kriminološki in varstvoslovni vidiki je doktorska disertacija, katere namen je bil analizirati dogajanje na področju kriminalitete, kriminologije in varstvoslovja v Sloveniji. Ker so preliminarne študije in pregled literature pokazali v veliki meri nerazvito področje v slovenskem prostoru, smo uporabili primerjalno kriminološki vidik ter se pri raziskovanju oprli in črpali iz tujih virov ter študij o ekološki kriminaliteti. Ekološka kriminologija in proučevanje ekološke kriminalitete sta najbolj razvita v Združenih državah Amerike, Avstraliji in Veliki Britaniji.

Sodobni človek se sooča s spoznanjem, da je njegovo preživetje odvisno od ohranitve okolja, katerega del je tudi sam. Čezmerno izkoriščanje in uničevanje narave je tesno povezano s strukturiranostjo in funkciranjem modernih družb, za katere je značilen koncept gospodarstva. Ta se odraža tudi v odnosu do narave, ko postavlja človeka za absolutnega gospodarja narave. Pri posegih v okolje, ki so v nasprotju s pravnim varstvom okolja, govorimo o kriminaliteti zoper okolje. Posamezniki praviloma (namerno) kršijo zakonodajo in pravila o varovanju okolja, zaradi udobja, dobička ali moči.

Slovenija je parlamentarna republika, uvrščena v sam vrh gospodarsko razvitih tranzicijskih držav, s staro rudarsko in industrijsko tradicijo (ki je v fazi posodabljanja) in razvitim storitvenimi dejavnostmi. Približno 20 odstotkov površine ozemlja države je namenjeno poljedelstvu in živinoreji, kar dve tretjini države pa pokrivajo gozdne površine. Na drugi strani narašča delež površin, namenjen cestam. Slovenija se je usmerila k trajnostnemu razvoju in povečanju proizvodnje energije iz obnovljivih virov ter njeni ustrezni rabi, prav tako pa smo v zadnjih letih priča prestrukturiranju ravnana z odpadki in njihovega recikliranja. Posebnost Slovenije so njena v veliki meri še vedno neokrnjena narava in bogati vodni viri ter gozdne površine. Prav tako je posebnost Slovenije njena prostorska umeščenost v območje prehoda med zahodno in vzhodno Evropo ter mejo med severom in jugom, zaradi česar je na eni strani znana po tem, da združuje raznolike svetove, od alpskega do

dinarskega in od panonskega do kraškega, ter na drugi strani po tem, da je tranzitna država organiziranih kriminalnih skupin, ki »dragoceni tovor« na našem ozemlju zgolj skladiščijo, najpogosteje pa samo prepeljejo skozi državo. Slednje velja tudi za ekološko kriminaliteto, pri čemer so v zadnjih treh letih še posebej nevarni ilegalni prevozi odpadkov iz zahodne Evrope na vzhod ter tihotapljenja živali in rastlin v nasprotni smeri.

Bolj podrobnih in natančnih podatkov ter odgovorov na vprašanja o ekološki kriminaliteti pa v slovenskih in tujih bazah ter virih ni bilo možno najti, zato je bila pričujoča raziskava osnovana na primerjavnih kriminoloških in varstvoslovnih vidikih ekološke kriminalitete.

Ekološka kriminaliteta je specifična tako zaradi storilcev, njihovih motivov in izbranega modusa operandi, kot tudi zaradi posebnosti dveh različnih žrtev. Dejanja ekološke kriminalitete običajno ne prizadenejo človeških žrtev neposredno, ko se to zgodi pri klasičnih oblikah kriminalitete, ampak je prva žrtev okolje, ki potem nadalje ogroža tudi človeka. Ozko polje raziskovanja ekološke kriminalitete jasno nakazuje potrebo po širitvi metodoloških pristopov v kriminoloških študijah ekološke kriminalitete. Poleg dopolnjevanja in verifikacije različnih spoznanj, se izraža tudi potreba po alternativnih pristopih k raziskovanju novodobnih oblik ogrožanj okolja, saj se s človeškim razvojem in modernim napredkom spreminjajo tako oblike kot tudi storilci ekološke kriminalitete. Problem v disertaciji izvedene raziskave je bil vezan na analizo pojavnih oblik ekološke kriminalitete v Sloveniji ter značilnosti storilcev le-te in njihovih žrtev. Izhajajoč iz pregleda literature in dosedanjega raziskovanja ekološke kriminalitete po svetu in v Sloveniji, doktorska naloga predstavlja celotni pregled in analizo stanja in dogajanja na področju ekološke kriminalitete v Sloveniji: pojavne oblike ekološke kriminalitete, raziskovanje ekološke kriminologije, odzivi (formalnega) družbenega nadzorstva, odkrivanje in določanje lastnosti žrtev ekološke kriminalitete ter oblike preprečevanja ekološke kriminalitete. Celostni model ekološke kriminalitete obsega konkrenejša vprašanja glede te oblike kriminalitete in odzivov nanjo. Uporabili smo triangulacijo kvalitativnih in kvantitativnih raziskovalnih metod.

Z uporabo analize vsebine pisnih virov (strokovne literature, zakonodaje, obravnavanih primerov itd.), primerjalne analize (primerjava pojavnih oblik ekološke kriminalitete v Sloveniji in v tujini) smo prikazali in oblikovali teoretična izhodišča, ki definirajo diskurz ekološke kriminalitete med kriminologi in drugimi zainteresiranimi skupinami. Pojav ekološke kriminalitete v Sloveniji smo analizirali z uporabo analize teoretičnih izhodišč, analize deskripcije in metodo klasifikacije, ponekod smo kombinirali tudi metodo analize in sinteze ter modelirali posamezne delitve in sheme. Dodali smo tudi metodo kompilacije raziskav in rezultatov tujih avtorjev, uporabili komparativno metodo ter opise konkretnih primerov. V drugem delu smo najprej izvedli analizo vseh javno dostopnih statističnih baz podatkov o ekološki kriminaliteti in javnomnenjskih raziskav o ekoloških vprašanjih v Sloveniji potem pa še strukturirane intervjuje na vzorcu 25 posameznikov, ki se z oblikami ogrožanja in varovanja okolja redno srečujejo v okviru svojega dela. Vprašalnik je obsegal pet kratkih sklopov vprašanj o ekološki kriminaliteti v Sloveniji (pojem, oblike, posledice, storilci, žrtve). Zbrane podatke smo analizirali z uporabo metod sinteze in analize baz statističnih podatkov ter metodo analize besedil, ki so nastala pri zapisu izvedenih strukturiranih intervjujev. Za obdelavo podatkov smo uporabili programsko orodje za elektronske preglednice in za analizo besedil oziroma statistično obravnavo jezikovnih podatkov v družboslovnih raziskavah.

Predvidevali smo, da obstajajo za Slovenijo značilne karakteristike pri obstoječih pojavnih oblikah ekološke kriminalitete, kot tudi pri storilcih in žrtvah ekološke kriminalitete v Sloveniji. Da bi tezo preverili, smo oblikovali posamezne pomožne teze, ki jih implicitno izražamo v obliki raziskovalnih vprašanj, pri tem pa smo izhajali iz Sutherlandove (1949; v Sutherland in Cressey, 1974) definicije kriminologije, ki navaja da kriminologija obsega študije kriminalitete (etiologijo in fenomenologijo kriminalitete); študije storilcev kriminalitete (kršenje zakonov in vzrokov za kršenje družbenih norm); in študije kazensko-pravosodnega in kazenskega sistema (nastajanje norm, zakonov in drugih podzakonskih aktov ter formalne in neformalne odzive zoper kršitelje zakonov).

Kriminološke razprave o ekološki kriminaliteti se nanašajo na vprašanja, kako kriminaliteta nastane, kako je prikazana v resničnem življenju, kako se meri, na kakšen način jo pojasnjevati, preprečevati in sankcionirati. Slednje je še posebej pomembno zaradi nenehnega spreminjanja področja, saj je nekoč »normalno« početje zdaj strogo pravno regulirano, posamezna dejanja so tudi prepovedana, za kršitev pa je predpisana sankcija. Ekološka kriminologija dejansko pojasnjuje pojave ekološke kriminalitete in javnosti približuje aktualne probleme. V tri in pol leta dolgem obdobju raziskovanja ekološke kriminalitete smo se osredotočili na ekološko kriminaliteto, ekološko kriminologijo, kazensko-pravno varstvo okolja, žrtve ekološke kriminalitete in metode preprečevanja ekološke kriminalitete ter dobili naslednje ugotovitve. Problem enotnega definiranja pojma ekološke kriminalitete ima osnove v različnem pojmovanju in dejstvu, da gre pri ekološki kriminaliteti za zelo raznolike pojave, ki jih je težko zajeti v enotno definicijo. Z inkriminacijo pojavov zoper okolje je za kriminologijo nastalo novo področje delovanja; nova odklonskost in drugačna vzročnost. Sociološka definicija pojma kriminalitete razširja bolj od opredelitve kazenskega prava; gre za nesocialno obnašanje v celoti, zato s sociološkega zornega kota med ekološko kriminaliteto prištevamo vsako obliko vedenja, ki ni v skladu z okoljevarstvenimi normami določene družbe, čeprav morda ni v nasprotju s pravnimi določili. Kot pojmovanje ekološke kriminalitete so se razvile različne definicije. Ekološka kriminaliteta, tako kot druge vrste kriminalitete, ni ekskluzivni pravni pojem. Z njenim preučevanjem se ukvarjajo tudi druge vede, kar ji daje multidisciplinarni značaj. Izhajajoč iz opisov tujih in domačih avtorjev ter prevladujoče pravne opredelitve v slovenskem prostoru, ekološko kriminaliteto lahko opredelimo kot *vsako začasno ali trajno pravno opredeljeno odklonsko ravnanje ali opustitev dolžnega ravnanja, opredeljeno in definirano kot deviantno z (nad)nacionalno zakonodajo, ki povzroča kakršno koli obliko škode (umetno spremembo, poslabšanje, breme, propadanje ali uničenje) enemu ali več od skupaj osmih elementov okolja (zrak, voda, prst, mineralne snovi, človek, živali, rastline, mikroorganizmi) ali prekine za okolje značilne naravne spremembe.* Storilec je lahko kdor koli izmed nas (podjetja ali korporacije, interesne skupine, posamezniki, država

itd). Posebnost ekološke kriminalitete so žrtve, ker so poleg okolja ali neposredno preko okolja (biotskih in abiotiskih naravnih elementov) ogroženi tudi ljudje.

Okolje je med seboj povezan sistem, zato se tudi dejanja ekološke kriminalitete med posameznimi deli sistema prepletajo. Čeprav ima vsaka vrsta ekološke kriminalitete svoje posebnosti in je določena z različno, sebi lastno kombinacijo (kriminoloških) teorij, ne moremo potegniti natančne razmejitve in se izogniti medsebojni povezanosti in vplivom. Delitev ekološke kriminalitete in razvrščanje v tipologije, poleg organiziranosti in preglednosti, ponuja tudi možnost primerjave na državni ali mednarodni ravni. Poleg tega jih lahko uporabimo tudi pri spopadanju z ekološko kriminaliteto in preprečevanju te kriminalitete. Analize podatkov so pokazale, da v slovenskem prostoru zaznane oblike ekološke kriminalitete glede na to, kdo je storilec, lahko razvrstimo v naslednjo delitev: ekološka kriminaliteta posameznika; ekološka kriminaliteta bogatih in vplivnih; ekološka kriminaliteta posameznih (interesnih) skupin; in ekološka kriminaliteta države oziroma vladajoče oblasti. Hitro spremenjanje oblik in pravne opredelitve kriminalitete zoper okolje vnaša spremembe v primarne fenomenološke sheme. Ena takih oblik je tudi organizirana ekološka kriminaliteta, ki se lahko poveže z vsako od štirih naštetih skupin ekološke kriminalitete.

Posebnost ekoloških kaznivih dejanj je v tem, da gre za novo odklonskost, ki se še vedno nenehno spreminja. Tukaj so na poseben način ogrožene posebej varovane dobrine. V Sloveniji se na področju kazenskopravnega varstva okolja še vedno soočamo z razvijajočo se pravno zakonodajo na področju ekološke kriminalitete ter žal še vedno pomanjkljivo pravno prakso; proces sistemizacije (kazensko)pravnega varstva okolja. Velik vpliv na sam proces imajo določbe Evropske unije, ki uvajajo natančno, podrobno in učinkovito urejeno pravno varstvo okolja na vseh ravneh. Na eni strani sta tako imenovana evropeizacija in globalizacija okoljevarstvenih standardov s strani Unije brez spremljajočega učinkovitega uveljavljanja in izvajanja sankcij (posledično v državah članicah prihaja do prenasičenosti pravnih norm in težav pri implementaciji), na drugi strani, v praksi, je značilna deregulacija sistema sankcioniranja v državah članicah. Pokazalo se je, da je izvajanje

kazenskih sankcij na evropskem ozemlju v praksi skrajno neučinkovito, kjer še posebej izstopa pravno varstvo okolja (pojav *placebo zakonodaje*). Izpostavljeni procesi oblikovanja kazenskopravnega varstva okolja nedvomno vplivajo na kriminološko preučevanje procesa nastanka in razvoja kazenskih sankcij ter družbenih odzivov na povzročene kršitve zoper okolje. Poleg pomanjkljive sodne prakse se kriminologi v slovenskem prostoru soočajo tudi z nizkim številom pravnomočnih obsodb storilcev, kar nedvomno otežuje kriminološke, penološke in viktimološke študije ekološke kriminalitete.

Posebnost ekološke kriminalitete je, da so poleg ali neposredno preko okolja žrtve tudi ljudje (primarna in sekundarna žrtev). Poleg tega je varstvo pravic živali trend zadnjega desetletja, ki je aktualen tudi v Sloveniji. Kar zadeva problematiko žrtev ekološke kriminalitete, so v ospredju še vedno vprašanja, kdo je ogrožen, kdo je žrtev in koga dejansko lahko štejemo med žrtve ekološke kriminalitete. Izpostavljeno vprašanje je zelo pogosto tema kriminoloških in socioloških ter tudi širših družboslovnih razprav (ali lahko med žrtve ekološke kriminalitete štejemo samo ljudi ali sem spadajo tudi druge skupine živih bitij).

Oblike ekološke kriminalitete se razlikujejo, zato so potrebni tudi različni odzivi. Reaktivni odzivi zgolj reagirajo na že povzročeno okoljsko škodo in jo poskusijo sanirati. Proaktivni odzivi pa poskušajo ekološko kriminaliteto preprečevati, da do storitve kaznivega dejanja in povzročitve okoljske škode ne pride. Če kriminologija želi biti uspešna pri preprečevanju ekološke kriminalitete, mora področje okolja podrobno poznati. Ravno posebnosti ekološke kriminalitete, njene oblike in značilnosti so eden od glavnih razlogov za vedno pogosteje zanimanje kriminologov in uporabo metod situacijske metode za preprečevanje ekološke kriminalitete. Metode situacijskega preprečevanja kriminalitete spadajo v skupino primarne prevencije, zato se osredotočajo na kriminaliteto in situacije, v katerih do storitve kaznivih dejanj pride, ne pa toliko na storilca, saj teorija o situacijskem preprečevanju temelji na ideji, da so situacije bolj predvidljive kot posamezniki. Pri tem je v ospredju uporaba petih teorij Ronald Clarka in kolegov (teorija situacijskega preprečevanja kriminalitete, teorija racionalne izbire, teorija rutinskih dejavnosti, teorija nadzora in teorija življenjskega sloga), vendar pa je v prvi

vrsti potrebna učinkovita krepitev skrbništva nad okoljem, pri čemer izstopa razmerje med nadzornikom in nadzirancem.

Razvoj ekološke kriminologije v Sloveniji je izhajal iz razvoja ekološke kriminologije v svetu, ki se je po letu 1960 začel znotraj sociologije in kritične kriminologije. Tri smeri razvoja: radikalnokritična, sociološkoteoretična in sociološko-filozofska, so se okrog leta 1990 združile v eno, Lynch (1990) pa jo je poimenoval ekološka kriminologija (angl. green criminology). Danes smo priča razvoju nove veje kriminologije v svetu, ki je še vedno dovzetna za vplive drugih ved, kar se kaže tudi v predlogih novih smeri znotraj kriminologije, kot sta *globalna ekološka kriminologija* (angl. eco-global criminology) in tako imenovana *kriminologija varstva okolja* (angl. conservation criminology), katerih predmet preučevanja so deviacije zoper okolje in njihove posledice. Dogovor, ali gre zgolj za nove smeri znotraj ekološke kriminologije ali smo priča novim vejam kriminologije, še ni dokončno sprejet. Med kriminologi od začetka devetdesetih let prejšnjega stoletja poteka razprava o poimenovanju nove veje kriminologije, pri čemer sta v ospredju dva predloga: ekološka oziroma okoljska kriminologija (angl. environmental criminology) in zelena kriminologija (angl. green criminology). Diskusija o primernosti poimenovanja je poleg že obstoječih nejasnosti vnesla še nova nasprotovanja, kar otežuje normalen razvoj nove veje kriminologije. Tovrstno poimenovanje v Sloveniji ni tako velik problem, kot se je pojavil v angleško govorečih državah, kjer ima termin »environmental criminology« dva različna pomena, saj pomeni tako okoljska kot tudi ekološka kriminologija, zaradi česar je Lynch (1990), da bi se izognil zmešnjavi, uvedel termin »green criminology«. V svetu lahko spremljamo razprave tujih kriminologov, ki razpravljamajo o ponovni rabi termina okoljska kriminologija (angl. environmental criminology), prvotno postavljenega na področje preprečevanja kriminalitete z oblikovanjem okolja, oziroma o njegovi zamenjavi sedaj uporabljanega termina »green criminology«. Zaradi naštetih razlogov se med slovenskimi kriminologi poraja vprašanje prezgodnjega poskusa utemeljitve termina ekološka kriminologija in ekološka ali okoljska kriminaliteta pri Slovenski akademiji znanosti in umetnosti, dokler razprave o tem v svetu še

vedno potekajo. Ko v slovenskem prostoru govorimo o ekološki kriminologiji, imamo v mislih vejo kriminologije oziroma *družboslovno vedo*, ki uporablja *multidisciplinarni in interdisciplinarni pristop pri preučevanju pojavov ekološke kriminalitete in njihovega nastanka, raziskovanju kaznivih dejanj zoper okolje, povzročene okoljske škode, razvoju okoljevarstvene zakonodaje in predpisov, ukrepov za zaščito okolja in družbenih odzivov na povzročene kršitve*. *Ekološka kriminologija je veliko več kot le razprava o okoljskih vprašanjih. Temelji na kritičnem kriminološkem prepričanju, da je treba okolje varovati kot eno izmed temeljnih človekovih dobrin in pravic. Namen raziskovanja ekološke kriminologije temelji na nalogi, da preuči znane oblike odklonskega vedenja zoper okolje in njihov nastanek. Pri tem upošteva dinamiko med človekom in okoljem, še posebej človeško vedenje do enega ali več elementov okolja. Poleg tega jo zanimajo tudi ljudje kot storilci kaznivih dejanj zoper okolje, okolje in ljudje kot žrtve ter metode preprečevanja kriminalitete.*

O razvoju ekološke kriminologije v Sloveniji je še pred desetletjem bilo moč napisati bore malo. Prvo delo konec 20. stoletja s tega področja sega v leto 1981, ko je Pečar (1981) s poskusom opredelitve pojma ekološke kriminalitete opozoril na pojav novih oblik kriminalitete. Podal je etiološko delitev v Sloveniji zaznanih oblik ekološke kriminalitete, opredelil vlogo kriminologije in njej sorodnih ved (sociologije, kriminalistike, kriminalne prevencije) ter naloge nadzorstvenih organov. Kljub zapisanim predvidevanjem za prihodnost je zanimanje za ekološko kriminologijo zamrlo za več kot 25 let. Ne prej kot v zadnjih petih letih, od leta 2007, v slovenskem prostoru lahko govorimo o ponovnem (prenovljenem) razvoju oziroma nadaljevanju razvoja ekološke kriminologije. V primerjavi z Anglijo, Združenimi državami Amerike in Avstralijo je ekološka kriminologija v Sloveniji šele na začetku razvoja, približno dve desetletji za vodilnimi na tem področju, od katerih se učimo. Nedvomno pa poteka razvoj od samega začetka naprej pri nas precej hitreje, kot se je to dogajalo v vodilnih državah.

Ekološka kriminaliteta je problem sodobne družbe, ki dobesedno kliče po odzivu in rešitvah. Nobeno drugo področje v primerjavi z varstvom okolja ne

vključuje in ne združuje tako širokega kroga naravoslovnih in družboslovnih ved ter tako velikega števila strokovnjakov. Mednarodne, ali bolje rečeno, globalne razsežnosti ogrožajočih posledic počasi, vendar vztrajno prodirajo v vsak del človekovega življenja. V zadnjih treh desetletjih smo priča razvoju ekološke kriminologije in povečanemu obsegu raziskovanja pojavov ekološke kriminalitete. Kljub temu pa, kot poudarja White (2003: 293), »[p]osameznik ne more kar izbirati določene okoljske problematike in od nje pričakovati, da bo izpolnjevala vse vidike kriminološke teorije in prakse«. V realnem svetu je ravno obratno; ekološka kriminologija se prilagaja porajajočim se pojavom odklonskosti zoper okolje. Kot se skozi obdobja spreminja ekološka kriminaliteta, se temu primerno prilagaja tudi ekološka kriminologija. Za kriminologijo današnje dobe je še posebej značilno njen zanimanje za normativno vedenje, žrtve kriminalitete ter področje pravičnosti in človekovih pravic, poudarjanje pomena neenakosti, moči in politike v procesu kriminalizacije, prevzemanje na dokazih temelječe kriminalitetne politike, usmerjene v preprečevanje in nadzorovanje nezakonitega vedenja. Kriminologija zelo hitro postaja vedno bolj globalizirana, kar kaže na nove tende na področju kriminologije, ki ponujajo nove teme (kot je ekološka kriminaliteta) ter vodijo kriminologijo v nove delitve in v sodelovanje z drugimi vedami.

Ekološka kriminologija je družboslovna veda, ki uporablja multidisciplinarni pristop pri preučevanju pojavov in procesov nastanka ekološke kriminalitete, povzročene okoljske škode, razvoju okoljevarstvene zakonodaje in predpisov, ukrepov za zaščito okolja in družbenih odzivov na povzročene kršitve. Ekološka kriminologija je veliko več kot le razprava o okoljskih vprašanjih, saj ima zaradi multidisciplinarnosti predmeta svojega preučevanja tudi lastnosti *kritične kriminologije*, iz katere pravzaprav izhaja, ko je treba opozoriti na kršitve človekovih pravic in ogrožanje okolja, tako imenovane »moderne« *kriminologije*, saj se ukvarja s trenutno aktualnim področjem (problem poskusov »normalizacije kriminalnega«), ki se ga zaveda širša javnost oziroma celotna družba, *kriminologije oblikovanja javne politike* (tako imenovane public criminology), saj aktivno sodeluje pri pripravi programov kriminalitetne politike in spodbuja udejstvovanje kriminologov s prakso, v družbenih

dejavnostih in predstavljanje njihovega raziskovalnega dela na strokovnih in znanstvenih posvetih, ter *kriminologije oblikovanja medijskih novic* (tako imenovane »news-making criminology«), ki v dobi prevlade mainstream medijev skrbi za resnično medijsko poročanje in s tem povezano informiranje ter ozaveščanje javnosti. Ekološka kriminologija v okviru svojega dela ter s spoznanji in predlogi vpliva tudi na kreiranje politike do ekološke problematike, kamor uvrščamo tako kriminalitetno politiko kot tudi politiko (varstva) okolja.

Vsekakor gre po štirih desetletjih dolgem razvoju za višek na področju ekološke kriminologije, ki ga spremljamo tudi v slovenskem prostoru, saj ekološka kriminologija prodira v vse sfere človekovega življenja, ki ogrožajo in so ogrožene zaradi pojavov ekološke kriminalitete in posledično uničenega okolja. Ekološka kriminologija v Sloveniji ohranja pozicijo »moderne« oziroma nove veje kriminologije, vpliva na nove teme kriminološkega preučevanja in spodbuja razvoj kriminologije v tem delu sveta. Ekološka kriminaliteta je specifična, ker na področje kriminologije vnese multidisciplinarnost in vpliva na to, da kriminologija pogleda izza lastnih okvirjev, sodeluje z drugimi vedami ter se še naprej razvija in sproti objavlja svoje ugotovitve, obvešča javnost, izobražuje in ozavešča ter tako prispeva k varstvu okolja.

Na podlagi rezultatov in ugotovitev je bilo mogoče ustvariti za slovensko okolje uporabne predloge rešitev. Ugotovili smo, da za Slovenijo ni značilen poseben vzorec oblikovanja pravnih norm, kot odziva na ekološko kriminaliteto. Slovenija je članica Evropske unije, zato oblikuje zakonodajo v skladu z direktivami in uredbami Unije. Za Slovenije je še vedno značilen postopek sistemizacije področja pravnega varstva okolja, zato je treba več storiti za učinkovito izvrševanje zakonodaje ter paziti na izogibanje številčnosti in razdrobljenosti zakonskih predpisov. Analize kažejo, da ne moremo trditi, da število obravnavanih dejanj ekološke kriminalitete v Sloveniji narašča in predstavlja glavni razlog za spremembe v številu kriminalitete. Drugi pomemben dejavnik, ki ima vpliv na število kriminalitete, je spremenjanje zakonodaje in razširitev področja kaznivih dejanj zoper okolje. Pri tem moramo upoštevati oba izpostavljeni razloga za spremembe v

številu ekološke kriminalitete in upoštevati tudi morebitne izredne dogodke, kot je bila nacionalna čistilna akcija 'Očistimo Slovenijo v enem dnevu', ki imajo pomemben vpliv na število in trende ekološke kriminalitete.

Vedoč vse to o oblikah ekološke kriminalitete, vzrokih in storilcih, je veliko lažje razumeti, zakaj posamezne skupine storijo dejanja ekološke kriminalitete, kaj so njihove značilnosti ter kako in kje jih izslediti. Prav tako je priprava metod za odvračanje in preprečevanje ekološke kriminalitete ob vseh teh podatkih precej lažja. Vsekakor pa bi boljše sodelovanje med pristojnimi organi in njihovo sodelovanje z nevladnimi organizacijami lahko pripomoglo k bolj učinkovitem in uspešnem odzivanju na kršitve zoper okolje. Še več, bolj dosledno izvajanje zakonskih določil ter kombinacija (oziroma dopolnjevanje) z metodami za preprečevanje kriminalitete, predvsem situacijsko preprečevanje kriminalitete, in neformalnimi odzivi bi predstavljalno bolj obetaven odziv družbe na kršitve in storilce ekološke kriminalitete. Varstvo okolja mora postati prednostna naloga na nacionalnem nivoju. Da bi dosegli zastavljeni cilj, je potrebna kombinacija reaktivnih in proaktivnih metod pri odzivanju na okoljska vprašanja (npr. škoda, kriminaliteta, grožnje), ki združuje t. i. 'top-down' (sprejetje in izvajanje strožje zakonodaje) in t. i. 'bottom-up' (izvajanje ozaveščanja in izobraževalne programe) ukrepe hkrati. Vendar pa je treba opraviti temeljito analizo za vsak konkreten primer ali problem, zato da lahko razvijemo ustrezne reaktivne in proaktivne ukrepe.

Namen disertacije je bil prispevati k znanstvenim in družbenim dosežkom z oblikovanjem pregleda in ocene obstoječega znanja in opravljenega raziskovanja na področju ekološke kriminalitete z vidika primerjalne kriminologije in varstvoslovja. Izsledki predstavljajo pomemben vpliv in razvoj za ekološko kriminologijo kot tudi za viktimalogijo, kriminalistiko, kriminalno prevencijo, pravo in druge družboslovne vede. Omejitve, s katerimi smo se soočali v času priprave doktorske disertacije, so bili problemi enotnega definiranja ekološke kriminalitete in ekološke kriminologije ter razhajanja med kazensko-pravno in sociološko opredelitvijo ekološke kriminalitete. Prav tako sta pojem in posledično razumevanje ekološke kriminalitete v Sloveniji

še vedno razmeroma nova. Tematika in raziskovalni pristop, ki sta bila obravnavana v disertaciji, sta relevantna za slovensko znanost in tudi za delovanje kriminologije ter pristojnih organov, saj predstavljata natančno analizo problematike ekološke kriminalitete pri nas in širše v svetu. Uporabnost disertacije se kaže v tem, da ponuja rezultate in spoznanja, na podlagi katerih se bodo lahko pripravili ukrepi za varovanje družbe pred ekološko kriminaliteto.

Rezultati predstavljajo izvirni znanstveni prispevek, ker presegajo vsa do sedaj opravljena raziskovanja okoljske problematike v Sloveniji ter tudi svetovno raven do sedaj pripravljenih klasifikacij in shematskih delitev pojavnih oblike ekološke kriminalitete. Glavni pomen raziskovalnega dela vidimo v analizi in ugotovitvi realnega stanja na področju ekološke kriminalitete v Sloveniji ter postavitvi temeljev za nadaljnja raziskovanja in delovanje na področju ekološke kriminalitete. Pričajoče delo omogoča razvoj novih metod prevencije na področju ekološke kriminalitete in okoljskih ogrožanj nacionalne varnosti, zmanjša razhajanje med različnimi pojmovanji in pomanjkanjem definicije ekološke kriminalitete v svetu in pri nas ter pozitivno vpliva na nadaljnji razvoj in raziskovanje na področju ekološke kriminalitete. Rezultati predstavljajo pomemben temelj za nadaljnji razvoj družboslovnih znanosti. Hitro ukrepanje pri pojavu tovrstne kriminalitete je zelo pomembno, zato je velikega pomena tako priprava programov in oblik preprečevanja ekološke kriminalitete, kot tudi razvoj ustreznih metod in izobraževanj za policiste in druge pristojne službe, ki delujejo na področju odkrivanja in obravnavanja dejanj ekološke kriminalitete.

Ključne besede: okoljska kriminaliteta, ekološka kriminaliteta, primerjalna kriminologija, varstvoslovje, ekološka kriminologija, viktimologija, preprečevanje kriminalitete, ogrožanje okolja in varstvo okolja

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1 Introduction with methodological and hypothetical framework of the dissertation

"Dealing with environmental harm will demand new ways

of thinking about the world..."

D. Heckenberg (2009: 9)

1.1 Presentation of the research problem

Scientific and technological developments have become the obsession of man at the end of 20th century, which continues into the 21st century. Industrial revolution was only the beginning of capitalist development and progress. Today, in an age of electronics, the internet and robots, we have to face with the other side of human development: environmental degradation, pollution, destruction and environmental harm. The globalised, modern and daily improved world has two ‘faces’; two sides of a coin so to speak. Pollution and waste as a side or end-product of the production¹ have very negative influences on the natural environment, in which man lives, and threatens his life and survival. Environmental issues and natural disasters as part of the consequences were almost rocketed to the top of the scale of security problems as well as survival issues of the modern society. Environmental depletion and pollution became a part of modern societies within a developed economic and industrial system.

The *environment* in its wider meaning refers to the natural, cultural and social environment. On the contrary, in its narrow meaning, environment refers only to the natural environment (Šinkovec, 1986; Mihalič, 1993) and is comprehended as an area with specific characteristics surrounding the man.² More specifically the term environment can be defined as the natural

¹ The real problem occurred due the fact that people have adopted pollution (in the past pollution was named differently because it was not so long ago, when solid waste disposal and construction materials disposal in the woods represented completely acceptable social behavior) as an unpleasant matter of fact of life on which they can do very little or nothing (Hannigan, 1995: 1).

² Mihalič (1993) and Šinkovec (1986: 156) describe the environment as a collection of items, divided into the physical environment, social environment and cultural environment. This is a very broad definition of the environment, which is much wider than that of the human environment (an environment where man lives, including property that is closely tied to him, his associated plants and animals) in terms of a legal regulation of the environmental protection.

environment or part of the earth's surface, which man has not significantly changed (i.e., nature means the independent world of objects and forces working in it) (Plut, 2004: 233). Even clearer is the concept of environment defined in Article 3 of the Slovene Environmental Protection Act (Zakon o varstvu okolja [ZVO-1-UPB1], 2006; 2008; 2009): "*The environment is part of nature that reaches or could reach the impact of human activity. The parts of environment are soil, mineral materials, water, air, animal and plant species, including their genetic material*". This definition, beside the broad description, sets the legal frame of the term.

Once complete natural environment, known also simply as nature, is now divided to natural and human environment. The human environment can be divided into hundreds of different parts and pieces (e.g., cultural, social, school and family environment, political environment, etc.). While originating from the primarily natural environment, humanity is still part of it. From above presented descriptions it can be concluded that environment consists of four basic elements: 1) air; 2) water; 3) soil; and 4) biodiversity. Moreover, these four elements expand to eight elements: 1) air; 2) water; 3) soft soil; 4) mineral materials; 5) human species; 6) animal species; 7) plant species; and 8) microorganisms. The presented definition of natural environment, dividing environment in eight elements, is going to be used in the present dissertation.

Humanity cannot exist outside of nature and must remain consistent and in direct contact with it, so as not to become extinct. The problem of survival occurred because ever since the Middle Ages people have been convinced that human is the ruler of this planet. This has led into unjust rights to the unlimited use of all natural resources: stones, soil, trees, plants and crops, as well as killing animals, etc.³ We must face the emerging consequences today. Such illegal threatening and destroying of the environment is defined as action which is in contrast to the environmental protection legislation. In other words, the intentional and illegal destroying of the environment is defined as environmental crime. Crimes against the environment include

³ Often seems that human does all this only because he wants to create (the ideal conditions of) his own survival (and comfort).

various forms of human invasion, exploitation and destruction of the natural environment, which are still increasing, and so are their ‘side effects’ - environmental devastation and destruction.

During the processes of environmental depletion, destruction, and pollution (caused by humans), environmental issues occur. When this happens, we talk about *environmental harm*: numeral injuries and degradations linked to the use, misuse and poor management of the ‘natural environment’, including things such as pollution, toxic waste, the killing of plants and animals (Heckenberg, 2009: 12), and poisoning the fertile soil. White (2009: 267) speaks broadly about environmental harm and stresses that environmental crime is associated with harm against humans, specific environments, and animals. Not all of these harms are illegal, but to some degree, they are all being identified as problematic due to the work of environmentalists, researchers and academics, who are defining harm in more expansive way.

From the criminological perspective of the natural environment and harms against it, environmental harm represents the human legal or illegal acts or omissions against the environment (Heckenberg, 2009). Thereby, we deal with environmental crime when confronting human illegal acts and/or omissions against the entire environment or just its' elements. The focus is above all on the aspects of environmental sociology⁴ and green criminology,⁵ which deal with an increasingly widespread problem of endangering and destroying the environment, killing animal and plant species, and, consequently, endangering human life. Environmental protection,⁶ which strives for the so called right to healthy and clean environment, and the already mentioned green criminology and environmental sociology most often intervene in the

⁴ The environmental sociology is a social science dealing with the reciprocal interaction between the society (the individual as part of society) and environment in which this individual lives and works. The origin of these problems lies in the relationship between the individual (society) and the environment (King and McCarthy, 2008; Hannigan, 1995).

⁵ Green criminology is a science about environmental harm (White, 2009; Heckenberg, 2009).

⁶ Environmental protection can be defined as any action for the protection and conservation of the nature against different human activities, such as pollution, (excessive) use of natural resources, protection against toxic and radioactive wastes, loss of biodiversity, genetically modified food and organisms, which result in the depletion of the ozone layer, the greenhouse effect and climate change - environmental degradation (Plut, 2004: 233).

area of environmental issues by seeking applicable solutions. Environmental justice⁷ is more often mentioned in similar discussions. In the field of social sciences we can observe cooperation and interdisciplinary approach to the study, analyzing and solving of the environmental issues.

In the 1970s and 1980s, the legal environmental protection strengthened as a response to the increase of deviations against the environment around the world. Nevertheless, the level of academic research has remained very low. In recent years, this situation is slowly improving. Performed studies often preferred to focus on sensational and high profile crime cases than on the overall situation. Therefore, there was very little effort to determine and define violations against the environment as crime. Although it is rarely mentioned in professional and scientific texts, criminologists came across various forms of environmental crime while they studied other forms of crime, especially corporate crime and later on, organized crime.⁸ Environmental crime was detected and even studied but not named as such or defined as specific form of criminality. Therefore, crimes against the environment are not so new and unknown, as it first seemed. Within the last decade of the past century criminological interest has transferred to studying environmental crime as a specific group or form of criminality. While discussing environmental crime, we witness an explicit particularity. When compared to other forms of crime, the punishment of offenders of environmental crime is not the primary interest. An inseparable connection of environmental criminality with society and the way of life in globalised modern society makes such efforts even more difficult. In the forefront of the discussion about facing this situation is the problem of defining the relationship between individual and environment.

The described relationship of a human towards the environment, its forms and

⁷ Environmental justice refers to the distribution of environments among population. It relates to the access and use of specific natural resources in defined geographical areas, and the impacts of particular social practices and environmental hazards on specific populations (e.g., class, occupation, gender, age, ethnicity) (Heckenberg, 2009: 13).

⁸ The recent findings (Schmidt, 2004; Faure & Visser, 2003; Elliott, 2009; Klenovšek & Meško, 2011) show the close connection between environmental crime and corporate (white-collar) and organized crime (e.g., involvement of organized crime groups in the waste trafficking, movement of the heavy production in the undeveloped countries because of profit and less restricted environment protection regulations, illegal logging of national forests due the corrupted governmental representatives; illegal poaching for the reason of profit or demand of the industrial magnates, etc.).

some consequences, are the object of discussion in this dissertation. In the focus are the continuation of the issues outlined above, associated with comparative criminological and criminal justice perspectives of environmental crime in Slovenia and foreign countries (United States of America, Australia and Great Britain) where green criminology is developed and environmental crime is better studied.

For a better understanding of what exactly environmental crime is, what is punishable, how deviations are punished, why it comes to environmental harm and who are the victims of environmental crime, we first need to define the basic terms. The answers on the following questions *who* committed crime, *why* one committed it and *how* the crime against the environment is committed, are expected to be explained by criminology. In the past decade we witnessed numerous discussions of criminologists about how to name a branch of criminology, which deals with researching the criminality against the environment as a social and individual phenomenon⁹, its concept, purpose, meaning etc. Because of the lack of adjusted terminology and united internationally acknowledged definition issues have arisen on all other levels of discussion, research, analyses, punishment and prevention of environmental crime. Ross (2005: 503) warns with a reason that recognizing environmental crime is more than obvious and its defining is anything but easy. No individual definition of environmental crime has been dominating or generally accepted and the discussion about the naming (the proper term) of the branch of criminology that covers the field of the environmental crime is still very much alive. The terms environmental criminology and green criminology are often reasons for debate. The lastest discussions indicate the growing recommendations and purposes of some criminologists and other experts (Bottoms,¹⁰ 2007: 529; Bottoms & Wiles, 2002: 620) to rename the

⁹ Ever since 1990 a discussion among criminologists about naming the branch of criminology, which studies environmental deviations, takes place (Edwards, Edwards, & Fields, 1996).

¹⁰ Bottoms (2007: 529) argues that the use of the term 'environmental criminology' should be altered due two reasons: 1) the term environmental criminology is very often used for the study of criminality in relation to so called 'green issues', therefore it is necessary to avoid unnecessary confusion between these two separate and completely different research fields; 2) the term 'socio-spatial' captures the interaction between the studied objects (the society and space) in a way that environmental criminology does not.

well known and broadly used term environmental criminology, that developed from the urban sociology, to the 'social-spatial criminology' or the 'study of crime, criminality, and victimization' as they relate to place or better to say spatial factors. With this change the term 'environmental criminology' would become available for the field of crimes against the environment, now covered by green criminology.

Green criminology, as a branch of criminology,¹¹ developed in the mid 70s of the 20th century. With a huge lack of clarity, lack of necessary knowledge from the naturalistic field, and with a small number of scientific research work and publications, it succeeded to set a basis for further work. In four decades of development, green criminology had numerous tries of defining the environmental criminality. Therefore criminology of the 21st century must be aware of the meaning of the environment (South, 1998: 225). It has to include the intellectual width and the reserved part of a field, in which it would be able to classify the fields of expertise like environmental, human and animal rights and their threatening. This assumption, in detailed explained in the objectives, will be followed through the present dissertation.

1.1.1 Objectives and purpose of the dissertation

From the changes occurring around the world and from academic activities in the field of environmental protection issues, it is evident that environmental crime is gaining in importance and international interest (White, 2009). The role of green criminology, as a study about crimes against the environment, in response to occurrences of the deviations against the environment and its perpetrators, is exposed. Environmental crime is unique on one hand because of the perpetrators, their motives and the chosen *modus operandi*, and on the other hand because of special features of two different victims. Environmental crime acts usually do not affect human victims directly, as it happens in classical forms of criminality.

¹¹ In the present dissertation criminology is understood as a science about criminal acts and their perpetrators, which researches the forms of a deviant behavior and investigates the causes of such behavior, describes such phenomena and observes them in their development. After all, criminology is not a legal, but an empirical science, which uses comprehensions of empirical researches and results of the experience.

The primary goal of this dissertation is to review and analyze the existent situation in the field of research work, investigation and facing with environmental crime in the Republic of Slovenia. The theoretical groundwork will be based on available national sources and foreign scientific works and experiences. The secondary goal is comparison of the results of the researched field in Slovenia with other countries who are leading in the field of environmental crime and green criminology studies (Great Britain, the United States of America and Australia). For this the comparative criminological and criminal justice studies will be used, whose scope includes the study of (trans)national crime, the problems of exporting models of crime control to other countries and the way the views of criminologists are themselves influenced by their cultures in the search of explanations of crime (Neuman & Berger, 1998). Furthermore, when talking about environmental crime, green criminologists try to identify the similarities and differences in the environmental crime patterns. They try to understand and explain the causes for committing environmental crimes (as done in the present dissertation).

The goal of the planned research is to gain an integrated view into the research problem (i.e., environmental crime) by combining qualitative and quantitative research methods. With the triangulation we tried to increase the validity and reliability of the gained results. We also reviewed official statistics about criminality (bases of statistical data from police, public prosecutor's office, court of justice and inspections) and compared it. Furthermore, we used our viewpoints and experience of experts in the field of research and handling the problems of actions of environmental crime. By using a method of structured (in-depth) interviews, we tried to understand the trends and particularities in the field of environmental crime in Slovenia. The presented research problem is in detailed explained in the research theses below.

1.1.2 Scientific-research theses

Environmental crime causes depletion, destruction, devastation and often irreparable damage in the natural environment. The rise of environmental criminality and the environmental issues emerging from it are the subject of wide academic debates and studies. Although just a small, but still very important, part of these issues is an object of the study in the present dissertation. In the dissertation, a hypothesis that characteristics typical for Slovenia exist in existent phenomenal forms of environmental crime, as well as by green criminology, is tested through the use of empirical indicators. The survey is grounded on:

- 1) the analysis of historical development of criminological study of crimes against the environment (based on the primary and secondary sources analysis);
- 2) the analysis of development and changing of the phenomenological forms of environmental crime (based on the scientific papers and statistical data sets source analysis);
- 3) the attitudes of criminologists, legal theorists, sociologists, and other criminal justice experts (evidenced through the published scientific work) towards the crimes against the environment, its perpetrators, consequences, and victims (comparative criminology and criminal justice);
- 4) the changes of the number of environmental crime offences in the period 2000 to 2010 and the comparison of the number of convictions for the crimes against the environment in the same period; and
- 5) the opinion of experts and academics that daily confront the environmental criminality issues (based on the conducted survey with use of structured interviews).

The crucial issues of the crimes against the environment are highlighted by a comparative criminological and criminal justice insight through the greater part of the dissertation. In conclusion, the analysis is completed by an assessment of the situation regarding the crimes against the environment and with it connected criminological, and criminal justice issues in Slovenia. Due

to the reason of merely undeveloped field in Slovenia, such study would be impossible without the use of comparative studies.

To check up the thesis individual auxiliary theses were formed, implicitly expressed in a form of research questions. At the same time, Sutherland's (1949; in Sutherland & Cressey, 1974) definition of criminology¹² is followed:

- 1) Is there any special pattern of law formation as response to deviational phenomena against the environment in the Republic of Slovenia that is typical? What does it come to increase/change in criminal acts against the environment?
- 2) What are the reasons that cause an individual to break environmental laws? What are the most frequent criminal acts against the environment, space, natural goods and other deviant actions of an individual against the environment? Are there any specific groups who are perpetrators of criminal acts against the environment?
- 3) What are the formal and informal responses of society against environmental lawbreakers? Do agencies cooperate, when handling environmental problems and its perpetrators? How do they work together?
- 4) What forms and methods of preventing environmental crime would be useful and effective for Slovenian society and environment?

The presented research questions, derived from scientific-research theses are pursued throughout the theoretical and empirical part of the dissertation with the use of comparative criminological and criminal justice analysis. On

¹² Sutherland (1949; in Sutherland & Cresy, 1974) explains that criminology is the study of law formation, breaking law and social response to their committers. Meško (2010) divides Sutherland's definition of criminology into contexts; criminology includes the sociology of law (formation of norms, laws and other sub-law acts), breaking law (etiology and phenomenology of deviant phenomena) and responses against the lawbreakers (informal and formal responses, which could be classified into so called criminal justice and security studies. When defining criminology, Newburn (2007) also originates from Sutherland's (1937; in Newburn 2007) definition, where he exposes, that for criminologists three great directions are important. These directions are a part of the subject of criminology: 1) criminality studies; 2) studies of criminal offenders; and 3) studies of criminal justice and penal system. The goal of criminology is development of the basis of general principles and other types of knowledge about the processes of law formation, criminality and discussions about prevention.

the basis of presented theses a questionnaire for structured interviews was designed, enabling verification of the set theses.

1.1.3 Expected authentic scientific contributions

The purpose of this doctoral dissertation and carefully planned research work is to contribute to scientific and social achievements that have already been conducted. An exhaustive review of existing knowledge and previous research in the field of environmental crime and environmental issues that are connected with it is completed. The results of the planned research are influential in the development of green criminology and other social sciences which deal with the field of environmental crime - especially criminal justice, criminal investigation, victimology, criminal law and crime prevention.

The planned research represents an important contribution, because it is beyond the scope of research of this problem of environmental crime in Slovenia that has been done up to this time. The planned work is also beyond all the prepared classifications and analysis of environmental crime forms on the world level, which were based only on analysis of statistical data basis, use of quantitative methods or analysis of legal sources (legal and court records). In the present dissertation conceptualization is different from ones previously used. This work includes the triangulation of qualitative and quantitative research methods, which confirm the reliability of the thesis testing and increase credibility of the results.

The primary meaning of this research is in its originality, research and finding the real state in the field of environmental crime in Slovenia. Furthermore, the criminological and criminal justice comparison with other countries, and setting up the basis for further research and activity in the field of environmental crime (e.g., development of fields, which fell behind, abolishing the weaknesses, analysis of specific characteristics for Slovenia), is done. With this work, we try to spark determination and further development of green criminology as a scientific discipline and its field of research (i.e., environmental crime). We also try to develop new methods of prevention in

the field of environmental crime. Reducing the differences among different comprehensions and lack of a common definition of environmental crime and green criminology in the world (and in our country) will have a positive influence on further development and research in the field of environmental crime. Timely action in this area is very important, therefore preparation of programs and forms of environmental crime prevention are also pertinent. Programs should be developed for the victims of environmental crime, as well as adequate methods and education for police officers, environmental protection inspectors, criminal prosecutors and other competent agencies and services, which are active in the field of discovering and handling the actions of environmental crime. Finally, the results of the planned research work represent an important starting point for changes and expansion in the field of legal protection of the environment in Slovenia (possible supplements and changes of laws) and development of legal experts and other scientific disciplines. All that should have a positive influence on assuring the safety of the Slovene society.

White (2009: 23) is provocative with the statement: "*Our world is in danger*" and insists that the deviations against the environment are taking place all over the world. The only difference is that the intensity and forms of these deviations vary depending on the characteristics of the individual region and population. Therefore, these acts are handled as crimes in certain places, elsewhere merely as offenses or socially unacceptable behavior, and sometimes as quite normal and customary practices. No matter how they are defined in specific countries all over the globe, from the criminological point of view it is important that these 'crimes' are studied, analyzed and understood. Only this way the responses to their emergence can be quick and effective or they also can be prevented.

1.1.4 Methods used

In the process of verification of the hypotheses, we used a variety of social science research methods. For verification of the set objectives we combined all methods, especially comparative criminological and criminal justice

methods. This was particularly necessary due to the initial development of the studied area of environmental crime and green criminology in Slovenia, the lack of written sources, and the research results of the applied analyses and studies in the Slovenian territory.

The triangulation of the qualitative and quantitative research methods is new. Up to this point, it has been rarely used in the Slovene criminology field and therefore increases the validity and reliability of the gained results as showed in the empirical part of the dissertation. To verify the formed research theses we used the following methods:

- 1) The method of the sources analysis (written and electronic sources) is used throughout the thesis, in particular for the preparation of the theoretical part of the dissertation and at the verification of the formed research thesis one and partly formed research thesis two and four.
- 2) The method of crime statistics analysis from police, inspectorate, public prosecutors' office and court of justice, is used for the analysis of trends of growth and decline of the number of environmental crime in Slovenia. The same method is used for the analysis of the characteristics and phenomena of the individual forms of environmental crime in Slovenia, and for the classification of different forms of environmental crime in the phenomenological scheme. We combined a method of analysis of official statistics with the method of content analysis of written sources (annual reports by the competent authorities) and applied a method of induction. These methods were used at the verification of the formed research thesis two.
- 3) The method of structured interviews is used to collect data about the standpoints on environmental crime taken by each group of experts that meet with environmental threats and/or environmental protection regularly during their work. For this purpose, 25 in-depth interviews were conducted with individuals from different parts of Slovenia, who work as members of nongovernmental organizations (NGOs), environmental protection inspectors, police officers and criminal investigators, prosecutors and judges, journalists, firefighters and

representatives of civil protection, academics researchers, governmental officials from the ministries, and teachers in elementary and secondary schools. Their unique views on the seriousness of the problem of environmental crime and what causes the most trouble to experts in the field of environmental crime in Slovenia was one particular focus. The kind of phenomenal forms of criminality they meet at their work, what do they think about the victims of environmental crime in Slovenia, which methods of how to deal with and especially prevent the environmental crime in our space would be effective was also addressed. This method was used at the verification of the formed research thesis three and four.

1.1.5 Limitation of the dissertation

The problem of the research is bound to findings and analysis of phenomenal forms of environmental crime in Slovenia and characteristics of the offenders and their victims. From the literature review, previously conducted studies and research analysis of environmental crime worldwide and in Slovenia, this dissertation represents a whole review and analysis of the situation and happening in the field of environmental crime in Slovenia: e.g., phenomenal forms of environmental crime, research of green criminology, responses of (formal) social control, discovering and defining the characteristics of victims of environmental crime and environmental crime prevention programs and models. An integrated model of environmental crime includes more concrete questions about the form of criminality and responses to it. The model includes quantitative methods of the analysis and comparisons of statistical bases, as well as qualitative methods, analysis of the written sources and in-depth interviews. Triangulation of the used research methods enables a bigger validity of data and findings about environmental crime in Slovenia.

Although some conclusions of the theoretical part are possible to be generalized on the situation in other countries, the empirical part of the present dissertation is explicitly nationally determined. As such, this

dissertation is suitable for any future comparisons between countries in terms of exploration, response and prevention of environmental crime.

1.2 Introduction to structure and content of the dissertation

Basically, the doctoral dissertation is divided into two parts; a theoretical introduction, which represents the basis for the second, empirical section of the presented work.

In the dissertation research problems and themes are first introduced and described and divided into three parts or six chapters:

1. EXPLICATIVE ANALYTICAL AND RETROSPECTIVE (HISTORICAL) PART
 2. chapter - Environmental crime
 3. chapter - Green criminology
 4. chapter - Environmental protection legislation, environmental victims and environmental crime prevention
2. EMPIRICAL PART
 5. chapter - Empirical analysis with the verification of the theses
3. PERSPECTIVE (ANALYTICAL) PART
 6. chapter - Discussion
 7. chapter - Conclusion

All chapters represent a completed thematic section. As a whole, they reflect the complex discussion about the doctoral dissertation topic title. In addition to the already listed contents the dissertation contains two additional chapters: the first introductory chapter and the last chapter in which all in the dissertation included literature is recorded.

In the introductory chapter of the dissertation, the theme of environmental crime and the field of green criminology are described. After the research problem is presented, the chapter reveals the purpose and the objectives of the research, research methods utilized, and the limitations. At the end the research of the environmental crime with the comparative criminological and criminal justice studies is presented. Both perspectives flow as a common

thread throughout all chapters in the dissertation and combine them together, one after another, into the completed whole.

The second chapter, entitled *Environmental crime*, is the longest and the most important chapter in the dissertation. It represents the skeleton of the doctoral dissertation on which all other chapters are built upon. The chapters' content contains the criminological and criminal justice perspectives. First, the discussion about the concept and the meaning of the environmental crime is presented. Secondly the etiology and phenomenology of environmental crime leads the theoretical part of the chapter into the waters of the criminological theories. Next, environmental crime as one of the possible threat to national security is addressed.

The third chapter deals with green criminology that addresses environmental crime and related environmental issues. In the beginning, the concept and the meaning of the green criminology is presented. Furthermore, different forms of criminology that deal with environmental crime and have developed in the last four decades are presented. Another environmental issue concerns the development of green criminology in different countries. In Slovenia the lack of this criminological knowledge in the field of the environmental criminality was present in the past. For this reason, the needed criminological knowledge has to be taken from the wealth of knowledge of other countries and the comparative criminology has to be used.

The fourth chapter first discusses the interactions between law and criminology. This cooperation is evident in the field of combating and prevention of environmental crime. In this process, criminologists work with all three branches of criminal justice system: enforcement, prosecution and sentencing. In this chapter first the assumption that the environmental legislation, especially criminal law, set standards for what people and institutions must do to control or prevent environmental harm and environmental violations is discussed. Secondly, the chapter discusses about the environmental crime, victimology and crime prevention. Victims of the

environmental crimes deserve special attention, because of massive collectivity and anonymity of the victims and the abstract comprehension of the damage caused to them. After the concept and meaning of environmental victimology is given, the past empirical findings about the victims of environmental crime are presented and crime-prevention programs discussed. Although few past empirical findings were discovered, they mostly confirmed the usefulness and positive effects of crime prevention models. These examples of good practice are presented in the end of the last chapter in the theoretical part of the dissertation.

Second, the empirical part of the dissertation is composed of three parts: 1) analysis of the official statistical databases in Slovenia; 2) analysis of the Slovene public opinion survey and experts opinion survey, conducted for the purpose of the present dissertation; and 3) interpretation and comparison of the results.

After the theses are examined, a discussion about everything in the dissertation written so far is made. The gained results are compared with the theoretical facts and evaluated. In the concluding part of this dissertation the analysis and synthesis of the facts are given together with our own views on the discussed topic. Furthermore, the presentation of key findings in the form of closure is offered.

Dealing with environmental crime from criminological and criminal justice perspectives demands new ways of thinking about humans and society. To understand environmental crime and to protect the environment from it is the guiding thread from the beginning till the end of the present dissertation, starting with studying of environmental crime in comparative criminological and criminal justice surveys.

1.3 Environmental crime in comparative criminology and criminal justice surveys

The rapid social, technological, political and environmental development of the world we live in is almost beyond comprehension. These changes have created growing demands for goods and services that cannot be supplied anymore by the ordinary economy and business services, so the criminal economy must jump in. New mobility has increased trade, tourism, expansion of the scientific and cultural cooperation. Borders are turning pale and becoming insignificant. Everything has gone to the undreamed-of rate. But unfortunately, at the same time, all this progress has caused crime of unprecedented proportion (Fields & Moore, 2005). The results of this process - consequences of destruction in the natural environment - are beyond understandable, sometimes even imaginable (i.e., striving for profit has no limitations). Environmental crime represents one of such (inter)national problem that is growing very fast and wide. These crime problems are highly complex in relation to those with whom criminologists were used to deal with, even in comparative studies (Fields, Arrigo, & Webb, 2005).

Comparative criminology refers to the systematic and theoretically-informed comparison of criminality (crime and crime trends) in two or more countries (Howard, Newman, & Pridemore, 2010). In Reichel's (2008: 3) opinion, one of the goals of comparative studies is to extend scholar's knowledge of other people's and foreign cultures. By doing this, researchers better understand the society they live in and can find ways to improve it. For this reason, comparative studies are very important for criminology; they offer great potential for increasing the explanatory power of criminological theories. Comparative criminal justice studies can reduce the enormous differences between crime rates among different countries.¹³ Although some authors (Shelley, 1981; Rokaw, Mercy, & Smith, 1990; Hans-Gunther, Shelley, & Kaoth, 1992) in the field of comparative criminal justice assume that the goal

¹³ The cultural presuppositions of widely influential explanations of crime, such as anomie theory, rational choice theory, world system theory, modernization theory, social disorganization theory, rational polluter theory, etc., tend to rise to the surface if one asks how far they can be applied. Furthermore, comparative work offers an essential antidote to ethnocentrism (Beirne & Nelken, 1997).

of comparative criminology is simply to test whether claims about crime causation stand up in the rich texture of cultural variation, Beirne and Nelken (1997) stress that the scope of comparative criminology is much wider. It includes the study of transnational crime, the problems of exporting models of crime control to other countries, and the way the views of criminologists are influenced by their cultures in the search of explanations of crime. The comparative crime and criminal justice studies also influence public policy (Bennett & Lynch, 1990: 153), with the intention of bringing the right decision about the public related crime problems. A similar trend is observed in the field of environmental protection, when science is very often abused¹⁴ with the purpose to influence the public opinion.

Comparative criminology is plagued by a hiatus between theory and research (Neuman & Berger, 1998: 300-301). The different levels of theoretical explanations need to be explored with data that simultaneously employ variables at the contextual and individual levels. Quantitative cross-national studies must be complemented by in-depth historical research in order to aggregate appropriate data for evaluation of alternative perspectives and to examine the specific processes occurring within nations. In comparative surveys criminologists study crime as a social phenomenon and try to identify commonalities and differences in crime patterns (Barak-Glantz & Johnson, 1983) among different nations (groups, cultures, regions etc.). The purpose of comparative studies of crime and criminal justice is to know the impact of cultural, political, economic and other effects on the crime and criminality¹⁵ (e.g., the differences in attitudes towards crime, law enforcement response to violations of laws, public response to violations and perpetrators, etc.). To achieve the described purpose and to conduct the planned comparison, the variation in crime rates must be established before behavioral explanations

¹⁴ Monckton (2009), Alkalaj (2010) and other scientists, especially climatologists, point out numerous 'mistakes' in the presentation of the global warming and climate changes done by the Intergovernmental Panel on Climate Change and its' representatives, especially Al Gore.

¹⁵ Fields, Arrigo and Webb (2005: 3) emphasize that in the comparative sense the study of crime and criminality represent challenges to those who teach and research in this area. The main cognition of the authors is that criminality and criminal justice systems cannot be studied apart from other 'systems', such as cultural, political, economic and others, nor can they be examined using the typical human reductionist approaches (Fields et al., 2005: 3).

are offered (Reichel, 2008: 30) and the transfer of data and knowledge comparison must be done carefully.¹⁶

Any serious comparative analysis of crime must confront the reliability of information about crime rates and victimization (Beirne, 1983) which in the field of environmental crime is very challenging. No society can incorporate another culture's system in its own system entirely, without any modifications to account for cultural differences, and expect it to successfully operate (Reichel, 2008: 5). Like all cross-cultural analyses, comparative criminology is beset with difficulties about what to compare, how and for what purpose. The perils of comparative criminology are everything but negligible, because this form of criminological research faces additional obstacles of problems. The definition of crime is conventional and depends on differences between systems of criminal justice. The technical and conceptual obstacles to comparing crime rates and explaining the causes of criminal behavior comparatively are serious. New questions emerge constantly, such as: Is the meaning of criminal behavior constant across different legal systems and cultures? How far can we risk explanations of environmental crime, which avoid reference to meaning? How much reliability should we attach to crime data from different societies that are gathered by the police or by victimization surveys? Although many theoretical, methodological, and philosophical issues have dogged comparative criminology since its inception, this research field is rapidly expanding (Howard, Newman, & Pridemore, 2010: 142). Published results of the conducted comparative studies bear witness to that situation.

In 1987, Michalowski and Kramer (1987) conducted a comparative criminal justice study in the field of environmental crime. Back in 1980s they noticed the significant expansion of transnational corporations in the Third World. In several developing nations legal control over corporate violations against the

¹⁶ The issues surrounding the movement of crime and crime policies between countries and cultures and comparison between countries are important. According to this it is important who are the carriers of these changes and comparisons, and furthermore the transfer of knowledge, ideas and concepts themselves and their understanding and implementation in a society (Meško, 2008: 31).

environment did not grow commensurately. These corporations engaged legally in a variety of injurious actions that would have been recognized as violations of criminal regulatory, or civil law in their home countries (Michalowski & Kramer, 1987: 35). Authors used the political descriptive approach in their analysis. According to Michalowski and Kramer (1987: 36) the differences in the laws of countries of origin and host countries, and the ability of transnational corporations to influence the legal climate in the host countries renders the laws derived at the level of nation-states an unsatisfactory basis for determining the scope of criminological research on transnational corporate (environmental) crime.¹⁷ Similar cases of ‘expansions’ are seen in Europe; Eastern Europe (Czech Republic, Bulgaria, Romania, Ukraine etc.) and the Balkan Region (Bosnia and Herzegovina, Montenegro, Albania, Kosovo etc.). Some West European and other foreign corporations moved most of their production to these developing countries with the reason of reasonable production costs, although the second (hidden) reason for such decision was and still is less restricted environmental protection legislation.¹⁸

Comparative criminology tends to understand criminal and deviant behavior, and if the crime survey is manifested globally, comparative criminological studies will provide useful insights into the control of observed antisocial activity.¹⁹ It is inevitable that the criminological study intersects with the

¹⁷ Michalowski and Kramer (1987) argue that the study of corporate transgression by transnational corporations can legitimately embrace violations of law and also violations of international codes and other injurious actions. In a previous study of corporate injuries to workers, physical environment and consumers have been discovered as problematic when talking about legality of corporate activities in developing countries. Michalowski and Kramer (1987: 36) explored each of these areas. They focused particular attention to injurious actions that arise in the space between legal systems. With other words, actions, which were prohibited in countries of origin but permissible in the host countries, where they occurred. Their assessments showed that all three emphasized fields were seriously endangered by the transnational corporations’ acts: 1) working conditions; 2) environmental pollution; and 3) consumer safety.

¹⁸ The examples of relocation of heavy industries in third world countries from the developed West to East, in which Europe is no exception, are nowadays still happening (well-known are examples of Balkan countries and also the case of German takeover of Slovenian factory Tosama. At a takeover the factory machines were sold to German owner, although some Slovenian media indicated that there was a real exchange of good Slovenian machines with the obsolete, decrepit machinery from companies in Germany).

¹⁹ Michalowski and Kramer (1987) ascertained that only by moving beyond national level (i.e., laws) it is possible to begin to perform comparative criminological studies and research international corporate crime that rise up in the ‘empty’ space between national legal system. To do this comparative criminal justice surveys are necessary. In Nelkens’ (1997) opinion the

field of criminal justice. Howard and colleagues (2010) divide the methodology used in comparative criminological surveys into two groups. The first group includes surveys of comparative research that examine specific issues of crime (e.g., violent crime, property crime, national crimes with international implications such as genocide, domestic violence, transnational crime), where crime represents a dependent variable. The second group includes the general types of studies (e.g., meta-level studies [victimization surveys], parallel studies [crime rate/criminal justice system analysis; topical comparison; replication of an experimental design], and case studies) normally undertaken by comparative criminologists. Likewise, Howard, Newman and Pridemore (2010: 144-146) attribute several aims of comparative research in criminology:

- 1) extending theories beyond cultural and national boundaries;
- 2) assessing the performance of national criminal justice systems;
- 3) evaluating national criminal justice policy; and
- 4) coordinating the fight against transnational crime and reasonable critique.

Reichel (2008) identified three main approaches used in comparative criminological and criminal justice studies:

- 1) *historical approach*: collection of information and experiences from history for the purpose of comparison;²⁰
- 2) *political approach*: (Terrill, 1982) one has to understand a country's political system to be able to understand its' criminal justice system. Political philosophies, together with legal provisions, explain why behavior is treated as deviant.; and

importance of such comparatives studies is increasing: 1) the evidence of serious transnational and cross-border crimes is increasing at the practical and policy making level; 2) major changes in political systems and boundaries (countries in transition) caused increase in organized crime, which need to be understood better; 3) the reason for doing comparative research may have as much to do with understanding one's own country better as it has with understanding anyone else's; and 4) comparative criminology can also contribute to the theoretical development of criminology itself even apart from its immediate practical or policy relevance (reformulation of central problems in criminological theory) and it can also influence other social science theories.

²⁰ An understanding and appreciation of history provide criminal justice students with information about the present and the future. Like all other social institutions, criminal justice changes over time (Reichel, 2008: 15).

3) *descriptive approach*: Description is the essential first step in comparing criminal justice system. It provides an overview of a countries' justice system, so that scholars can begin to identify similarities and differences among compared countries, nations.

The descriptive approach uses two different strategies for conducting the comparative criminological and criminal justice studies after the differences among standard components of criminal justice systems were explored (Reichel, 2008): 1) *functions and procedures strategy* (Lynch (1988) notes that cross-national research benefits from functional description of national criminal justice systems) and 2) *institutions and actors strategy* (reveals duties and highlights the similarities among compared countries). Reichel (2008: 20-21) stresses that when we are to deal with diversity, the comparison through classification is very helpful and applicable. For this comparative approach two different ways of classifying, are presented in Table 1 below, are used (Reichel, 2008: 22-23):

- 1) *synthetic or artificial strategies*: categorization of artificial groups with attempt to bring order to a confusing array of objects; the classification is the result of scientists' manufacturing a group that categorizes objects based on some criteria of scientists' interests;
- 2) *authentic or natural strategies*: categorization of natural groups with the use of a great number of characteristics to categorize objects into groups; scientists' group objects are based on factual characteristics shared by members of a group.

The cross-cultural study of criminal justice system is relatively new, and therefore has not investigated its various 'objects' to the extent necessary to provide authentic systems and natural groups. For this reason the synthetic classifications in such comparative studies are more frequently used (Reichel, 2008: 23).

Table 1: Criminological and criminal justice comparative approaches.

Criminological and criminal justice comparative approaches			
Descriptive approach		Classification approach	
<i>Functions and procedures strategy</i>	<i>Institutions and actors strategy</i>	<i>Synthetic or artificial strategy</i>	<i>Authentic or natural strategy</i>
Results in functional description of national criminal justice systems.	Results in organizational and positional description of criminal justice systems.	Results in artificial groups.	Results in natural groups.
Is based on description and comparison of two aspects of the object (function and procedures of criminal justice system).	Is based on clarification of duties and similarities among compared countries.	Is based on only one or two aspects of the object.	Is based on extensive study of the object.
Resulting classification has a practical purpose that highlights specific functions and procedures.	Resulting classification has a practical purpose that emphasizes the institutions and actors for easier comparison.	Resulting classification has a practical or special purpose that brings order to diversity.	Resulting classification allows some predictivity regarding the group's members.

Source: summarized after Reichel (2008: 18-23).

When performing comparative criminological research, two essential issues are detected (Reichel, 2008: 30): 1) criminologists need to ensure that crime data from different countries have been defined, reported, and recorded in a similar manner; and 2) criminologists need to compile crime data in a manner that allows them to conveniently compare many different countries. But when studying environmental crime, we first have to deal with the problem of definition of environmental crime.

As described above, national legislation differentiates from country to country. Sometimes these differences are enormous, for example between the environmental protection legislation of the North and South America (the United States of America vs. Bolivia, Chile, Ecuador, Guiana, Peru, Paraguay), developed states in the USA and Europe and the states of the black continents, and even West and East European countries (Spain, France, Germany, Finland vs. Romania, Bulgaria, Moldova). The massive movements of the heavy industry from developed countries to countries with less restricted environmental protection are happening from 1980s onwards. These cases, described and analyzed already by Michalowski and Kramer (1987), are often connected with corruption of officials and other violations (organized crime, extortion, intimidations, workers' rights violations etc.). For this reason

criminologists and other scholars (White & Habibis, 2005; White 2007; White, 2008b; 2009; Lynch & Stretsky, 2007; Beirne & South, 1998; Carrabine, Lee, Plummer, South, & Iganski, 2004b) try to find the common definition of environmental crime, that does not rely (only) on legal provisions and is applicable in all countries. In general and especially for the necessity of the discussed comparative studies, the definition of environmental crime should be simple, clear and understandable. That way the definition could be broadly acceptable (i.e., unified) and used for the purpose of comparative studies. Clifford and Edwards (1998: 26) provided a useful and applicable definition of environmental crime. The definition can be divided into two parts. The first part defines the term environmental crime from the philosophical aspect: "*Environmental crime is an act committed with the intent to harm or with a potential to cause harm to ecological and/or biological systems and for the purpose of securing business or personal advantage.*" The second part of the definition, arising from the legal aspect, states that (Clifford & Edwards, 1998: 26) "...*an environmental crime is any act that violates an environmental protection statute.*" With the use of such definition of environmental crime the execution of comparative criminological and criminal justice studies is possible and achievable.

For the purpose of comparative studies, the Clifford and Edwards' (1998) definition of environmental crime can be broken down into an even more simple form, arising from the legal aspect but still giving the consideration to the philosophical and environmental justice aspect. The legal aspect of the environmental crime definition is closer to comparative criminological and criminal justice studies than philosophical, justice, sociological or other areas. In the legal definition of environmental crime the central point of national criminal legislation has to be exchanged with the basis that is universal. Here we have to diverge from the natural sciences, because the description of the natural environment is universal (environment consists of eight elements). Therefore, the desired definition of the violations against the environmental would be:

Environmental crime is by the legislation (inter)national determined human act or omission that results in any form of harm

to one or more of eight elements that compound the natural environment.

The natural environment is preserved by the environmental protection legislation pillar, which originates from acts, regulations, resolutions and national programs, conventions, international agreements, and sometimes even a constitution. Acts and omissions committed by humans' are in global society comprehended as environmental harm. These consequences of human behavior can be treated as environmental crime only if they were determined as such by the criminal law and/or any other national, rarely international, legal act. Deriving from the Reichel's (2008) criminological and criminal justice approaches described above, the environment, environmental harm and environmental crime can be used as an object of comparison in the study. If the object of comparison is the environment, authentic or natural strategy based on a classification approach, is the most applicable method. If the object of comparison is the environmental protection legislation pyramid, synthetic or artificial strategy is more convenient because that legislation hierarchy was artificially constructed by the society. Descriptive strategies, functions, procedures strategy, institutions and actors' strategy, are more applicable in the process of comparison of the environmental justice system. The presented definition of environmental crime²¹, emphasizing the elements that compound the natural environment, can also be useful for the purpose of comparative studies. The reason that elements of environment cannot be changed is absolute and not defined by national legislation. The country can decide only whether the specific form of environmental harm will be incriminated or not.

When discussing environmental crime, we talk about very different phenomena. When dealing with environmental crime and performing (comparative) criminological or criminal justice studies we have to be aware of the specific particularities of the environmental criminality, such as

²¹ Environmental crime is act or resigned activity determined and defined as deviant by the law, which causes any form of harm (an artificial change, worsening, burden, degeneration or destruction) to one or more of eight elements that compound the natural environment or interrupt the environments' natural changes.

changing and new forms, problem of definition, relation to technical development and progress, specific groups of perpetrators and victims of environmental crime, and others, as discussed in continuation. These characteristics of environmental criminality are important and must not be ignored when performing comparative criminological surveys; otherwise the results may be incorrect and misleading. One such example is the use of International Crime Victimization Surveys (ICVS) results in environmental crime comparative criminological survey. The victims of environmental crime, caused harm and consequences, are still mostly unknown, therefore the conclusions based on a small number of victims' reports could be misleading. Different forms of environmental crime cause different damages which lead to different victims and even those can be hidden for decades. Using data from ICVS studies should be done only under the condition of awareness about the mentioned defectiveness and under the condition that environmental crime is one of the questionnaire topics.

Green criminology is an empirical science that can and is using comparative studies to understand and explain environmental crime more detailed and accurately. Comparative criminological and criminal justice studies of environmental crime are rare. The importance and the benefits of comparative criminological studies are very important for the further development of the environmental crime field and green criminology as mainstream social science. The scope of comparative green criminology and criminal justice is wider than the search for the causes of environmental crime (Beirne & Nelken, 1997). Comparative surveys of environmental crime are important because they allow (Howard et al., 2001: 189-190):

- 1) theoretical development and testing of criminological and other (social) theories in the field of environmental crime and green criminology;
- 2) advance comparative environmental crime analysis;
- 3) environmental crime data explosion;
- 4) (environmental) crime policy development; and
- 5) globalization and comparative studies of environmental crime and criminal justice.

Nevertheless, comparisons between countries in the form of comparative criminological surveys are important (Meško, 2010: 31), especially currently in the field of environmental criminality. Next to the comparison of crime data sets, the transfer of knowledge, ideas and concepts itself and their understanding and implementation in a society can be crucial. The main focus of comparative criminological surveys of crimes against the environment is to know the impact of social, cultural, political, economic, technological, migration, educational, naturalistic, military and other impacts on the differences in attitudes towards environmental crime, law enforcement response to environmental violations and the overcoming of obstacles posed by the lack of relevant knowledge in countries, where green criminology is developing. Besides, comparative criminological studies are important for further development of green criminology and the gathering of additional knowledge about environmental crime. Especially in the undeveloped national fields with the lack of knowledge and experiences. The desired objectives of such survey are often an understanding of deviant behavior against the environment in the chosen country and assessing the performance of the national criminal justice system. The transfer of knowledge about environmental crime remains the main aim of the comparative criminological survey. Comparative green criminological and criminal justice studies enable a comparison of environmental crime and related phenomena between countries. It helps green criminologists to identify similarities and differences in environmental crime patterns, to understand and to explain the causes for and consequences of environmental crimes. For this reason, comparative studies should be more often used in comparisons of environmental crime forms, green criminology findings and environmental justice responses between two or more countries. This is done in the present dissertation when based from and compared to foreign data, knowledge and findings about the field of environmental crime and green criminology in Slovenia are formed.

2 Environmental crime

Environmental degradation and destruction became a part of modern societies with developing economic systems. What is more, we live in a globalized, constantly changing society and consequently the forms of environmental harm, known also as environmental crime, are changing too. Society is facing the disparity between technological development and comfort, through which it tries to mitigate for a clean environment that ensures a quality life to people and their children in the long-term.

Although we are facing the lack of previous criminological endeavors in the field of environmental criminality, there is no need to ‘jump to conclusions’. Criminological discussions about environmental crime refer to interrelated questions, e.g. how this crime is committed, how it is measured, explained, prevented, regulated, and punished, among others. The answers to these questions are among others expected to be provided by criminology. Meško (2010) raised several key questions about crime, offenders and punishment that can be transferred into the field of green criminology and environmental crime. Therefore, we can raise the following questions: What are the reasons that people commit crimes against the environment? How severe punishment has to be, so that people will avoid causing environmental harm, violence, and committing environmental crimes? Could the degree of penalty be a factor of preventing environmental criminality? Is environmental crime a social or an individual phenomenon? Is environmental crime a psychological, biological, social or an economical phenomenon? Has the economic factor an extra important influence on environmental crime?

All these questions will be the guiding thread through this and all other chapters of the dissertation. The objectives of this chapter are to reduce the differences between the various definitions and lessen the lack of universal definition of environmental crime in general. An analysis of the forms of environmental crime, based on a review of the situation in Slovenia, formed in the phenomenological scheme, is presented. The present chapter covers the concept and meaning of environmental crime, especially the etiology and phenomenology of environmental crime in Slovenia. The criminological

theories, dealing with environmental crime, are described and analyzed. Different examples of previous studies and research experiences are presented, especially cases from the Republic of Slovenia. In the end, most important cognitions are summarized.

2.1 Concept and meaning of environmental crime

Over the last four decades, the protection of natural environment continuously climbed the rankings of public and state interest and priorities. Countries have adopted laws and taxes and set up police and other agencies with different mandates and guidelines that should face the problems of environmental degradation (Brack, 2002: 1), depletion and destruction. Since classic crimes are no longer interesting (profitable enough) to criminals, the number of other forms of crime (computer crime, corruption, environmental crime, organized crime, cyber crime, etc.) increased. With the increase of these forms of crime, ‘new’ issues appeared.

Beside the disagreements about the terminology (ecological, environmental or green crime), problems have been caused by different criminal-political concepts, because the interests of states regarding environmental criminal law can be (very) different.²² Also the typologies of social politics in (post)-industrial societies are different and in today’s globalized world it is almost impossible to avoid the international dimensions of life, which restrict the independence of forming politics of environmental protection in some countries. Undoubtedly environmental crime in modern time signifies one of the greatest challenges for legal theory and practice, criminal law legislation and, more broadly, criminology, sociology, ecology, criminal investigation, victimology, crime prevention, etc. As affirmed by White (2009: 25) the concept of crime itself is ambiguous and contentious. Researchers (Beirne, 2007; Brack & Hayman, 2002; Burns & Lynch, 2004; Carrabine, Lee, Plummer,

²² While modern countries with their established economic systems tend to protect the ecological system through criminal law, in less developed countries and other countries in transition environmental (economical) crime is *de facto* a legalized form. In most of the legal systems of these countries there are environmental criminal acts and environmental criminal law, but none of them are enforced by competent authorities. Modern criminology in such cases speaks about 'normalization of the criminal' (Selinšek, 2006: 223).

South, & Iganski, 2004a; Clifford & Edwards, 1998; Emery & Watson, 2004; Pečar, 1981; Halsey & White, 1998; Levy, 1994; Lynch & Stretsky, 2001; South, 1998; Situ & Emmons, 2000) have long argued over which acts or omissions causing environmental harm ought to be criminalized, and how best to ascertain which social harms should be defined as wrong.²³ Al-Damkhi, Khuraibet, Abdul-Wahab and Al-Attar (2009: 118) emphasize that labeling environmental destruction as a crime is a strong step, dependent on the established legal framework in each separate country.²⁴ Beside differences in professional terminology, the term environmental crime or term offences against the environment have been used in popular journals, magazines and newspapers to describe acts that cause harm to the natural environment (Clifford & Edwards, 1998: 6). The problem that occurred today is that different, similar terms continue to be used without clear, universally accepted definition or specific identification of the activities to which they are referring. The agreement about a basic definition of environmental crime is necessary. This would not only eliminate the problem of misunderstanding and misinterpretation, but would also enable easier work for the competent authorities, academics and other interest groups.

When talking about environmental crime, we are talking about very different phenomena, which is hard to be combined in a single universal definition. Individual reasons for such situation are (Pečar, 1992; Hannigan, 1995; Žnidaršič-Kranjc, 1998; Kanduč, 1999; Situ & Emmons, 2000; Dvoršek, 2001; Pličanič, 2003; Selinšek, 2003; Dobovšek & Goršek, 2007):

- 1) environmental criminality is related to technical development and progress, therefore new forms of environmental crime are continually produced;

²³ Criminology is founded upon the idea that constitutes ‘crime’ as a profoundly social process (crime is defined differently in different countries) and a ‘criminal’ is not made until they have been apprehended, prosecuted and convicted of an offence (law reform ensures that what is criminal today may well be legal tomorrow, and the opposite).

²⁴ In Slovenia this process is clearly evident in the increasing number of environmental protection regulations, especially the growing number of articles and paragraphs in chapter 32 of the Penal Code of the Republic of Slovenia (KZ-1, 2008, 2009, 2011) that covers the field of environmental protection.

- 2) environmental crime is very diverse all around the world (it is inherent to each individual, country, economic system, environmental and biological systems, etc.);
- 3) environmental crime is a complex phenomenon, so its investigation is usually lengthy and complicated;
- 4) environmental crime is difficult to detect (not significant visibility of the offender);
- 5) the collectivity and the anonymity of the victim leads to the rather abstract and vague perception of damage;
- 6) offenders of environmental crime are often linked to the rest of the world, which means that in addition to domestic, foreign legal standards should be considered;
- 7) for such environmental crime offenses frequency, unstoppability, poor measurement and social apathy, which further complicates the detection and punishment, are typical;
- 8) certain environmental crime acts are often committed during the performing of a profession or economic activity and abuse of trust (the acquisition of financial gain - the environmental white-collar crime);
- 9) in the field of ecology, the boundaries between legal and illegal are often vague (circumvention of the environmental threats to the legal order of the country);
- 10) environmental justice tackles different issues in different countries (e.g., environmental racism, organized crime involved in thefts of natural goods, etc.); and
- 11) international environmental law is an imperfect system for the protection of the environment, because it is sometimes too broad and vague, or it depends on national interests elsewhere.

Based on the above reasons, it is easier to understand the occurring differences in the description and definition of environmental crime. Comprehension of environmental criminality differs among societies, and different definitions of environment, environmental harm, and environmental crime have developed. Environmental crime, like other sorts of crimes, is not

an exclusive legal term. With its research other sciences and branches are also occupied, which gives it a multidisciplinary character. Besides, if we want to speak of 'environmental crime', the individual must acknowledge some kind of specificity in the act or omission that makes it distinctly relevant to environmental considerations (White, 2009: 25). Therefore, much of the dispute over what gets defined as environmental harm, and in particular what ends up in the legal statutes as a '*crime*' *per se*, is present. Nowadays, environmental crime is being taught within numerous scientific disciplines. Pečar (1981: 40) notes that environmental crime is an environmental intervention which is every permanent or temporary act or resigning process, which has a negative influence on the environment, people's health and on exploitation and use of natural goods.²⁵ Years later Pečar (1988: 286) emphasized that environmental crime results from selfishness, which is determined by the need for profit along with human adoption and control of nature. He characterized the pollution of nature and the environment as devaluation of the environment, called 'ecocide' - intentional destruction of the living environment.

Environmental crime is frequently characterized in very broad terms that can sometimes be completely different (Clifford & Edwards, 1998: 7), especially if the terms are not supported by examples or offering concrete definition. What is more, the international community increasingly considers the right to basic environmental integrity for a fundamental issue of self-preservation and self-determination (Al-Damkhi et al., 2009: 118), which undoubtedly influences and reflects on the offered definitions of environmental crime. The last is demonstrated in the analysis and comparison of existing definitions, as shown below.

²⁵ For example: building, changing, working, abandoning and removing of buildings and devices and material consumption, semi manufactures, products and energy; waste processing and elimination of waste and creation of energy; emissions into water, air or soil, waste disposal and other influences on the environment; transport and handling with dangerous substances; damaging or destructing natural values; reduction of biological diversity; other activities, which mean risk and danger to the environment (Pečar, 1981: 40).

Dini (2007) defined environmental crime as involving the already illegal production and/or distribution of goods and services (e.g., illegal trade in wildlife, trafficking of ozone-depleting substances, illegal transport and trade of hazardous or radioactive waste, illegal fishing and poaching, timber logging, etc.). For Clifford (1998) environmental crime is an act which is committed with an intention of damaging or causing damage to the ecological and biological systems due to ensuring business or personal benefit. Like Clifford (1998), deriving from legal perspective, Situ and Emmons (2000) claimed environmental crime is actually a 'creation' of environmental legislation, because behavior, however threatening or aggressive, which does not violate the legislation, is not a criminal act. Thereby the law determines what will be defined as environmental crime. But on the other hand, such situation doubts the reliability of the legislative branch of authorities and the state as the most responsible for organizing this field of expertise. Furthermore, Situ and Emmons (2000: 3-4) defined environmental crime as a forbidden act or omission, which is against the law and therefore a subject of criminal prosecution and sanctions. This procedure is harming or threatening human physical safety or health, as well as the environment itself. Similarly, Gibbons (1994) defined environmental crime as an intentional or well-considered criminal act, which results in actual and material damaging of water, environment, air, soil or countryside.

On the other hand, environmental crime is by many authors classified (Kanduč, 1994; Croall, 1992; Reid, 2004; Dobovšek, 1997; Sutherland, 1949; in Sutherland & Cressey, 1974; Poveda, 1994) under white-collar crime²⁶ or business crime²⁷ (Situ & Emmons, 2000; Siegel, 2001).

The above-described definitions place Sutherlands' (1949) definition of crime into a new direction for defining, because they face the individual, who is not

²⁶ White-collar crime is defined as breaking the law by an individual or a group during work times in another way respected and legitimated employing and business politics of the society (Coleman, 1989).

²⁷ Business crime is an intentional act or giving up something that should be done, which breaks criminal law committed by an individual or a group in a corporation organization to its own benefit (Reid, 2004: 250).

only the victim, but also the offender. It can be concluded that the continual changing and creating of new forms of environmental crime still influences the changing and completing of definitions and that differences between legal and sociological definitions of environmental crime are shown. Furthermore, a special feature of environmental crime reflects two real victims - people and the environment.²⁸ 'Environmental victimity' is very similar to economic and other business criminality, where there are many victims with significant damage in general. Although, when this damage is divided among thousands of victims, it does not represent a special sacrifice for every individual (Pečar, 1981: 42). All this makes the problem of defining the term of environmental crime and green criminology even bigger. The problem of the agreed definition has its basis in different comprehension of environmental crime. Such differences are transferring and continuing in criminality division which is defining the legal protection of the environment and creating the possibilities for incomplete procedures within criminal justice systems.

The problems of defining the term of environmental crime (and also other related terms) most frequently come from numerous different theoretical approaches to defining the terms. The reasons for disagreements in defining the term of environmental crime are varied; from theoretical and abstract differences to political concepts due to different interests of individual countries. In modern sociology, where criminology is classified, classical and modern approaches of defining the terms are in the forefront. With the incrimination of phenomena against the environment, a new field of expertise was born for criminology. This field differs from past research work, because it is about a new deviation, which threatens the specially secured goods in a special way, and it has a different causality as well (Pečar, 1981: 41). Criminological discussions about environmental crime refer to the question, how this criminality is shown in real life, how it is measured, explained, prevented, regulated, sanctionized, etc.

²⁸ Situ and Emmons (2000) warn that such victimization of sometimes large group of people or even inhabitants of the whole region is hidden and quiet, and sometimes it can remain undiscovered for decades. The environment, which is the 'victim', is usually a public property (parks, rivers, lakes) or sources, where there is no private demand (air, groundwater, soil).

In the past, when talking about environmental crime, we could talk about 'elite criminality' to a great extent, where powerful individuals and economical and other organizations are included (Kanduč, 1997: 13), in which the environmental crime as such contains very different forms of harmful activities, whose motive is a desire for material enrichment. Today, everything is turning back to an individual. Harmful actions, which are carried out against the environment by a single individual, can be insignificant, but when two million of such activities are summed up, the whole phenomenon gets a new meaning.

The sociological definition extends the term environmental crime beyond a definition of criminal law. The term criminality and therewith (partly) also the term (environmental) crime extend to unsocial behavior in general (behavior, which is in contradiction with the valid behavioral norms, but it is not necessarily punishable) (Žnidaršič-Kranjc, 1998: 201). From the sociological point of view every deviant behavior could be classified as environmental crime that is not in accordance with the environmental protection norms, which refer to the behavior of subjects in a certain natural environment.

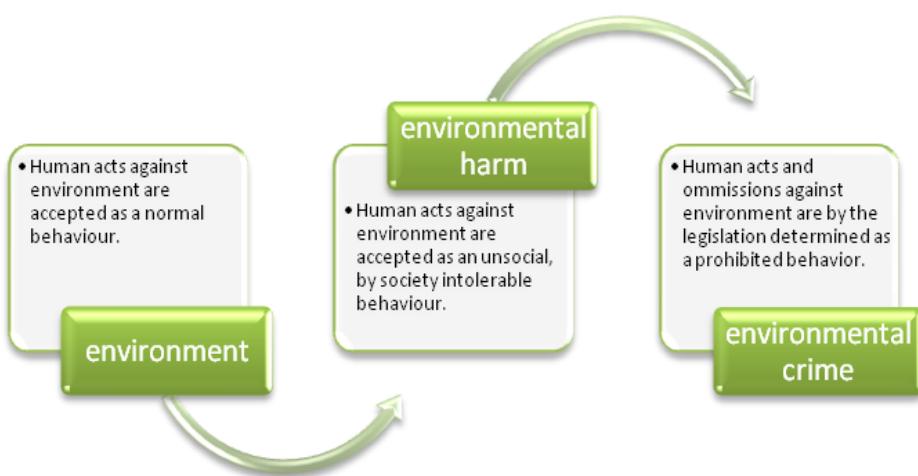


Figure 1: From a natural environment to environmental crime - the changes of the process of a human behavior towards the environment (through history).

The limits between environmental harm and environmental crime is determined by national (very rarely international) environmental protection

legislation, accepted by the government (or with other words by the society, because the government is generally elected by the citizens). The described process is schematically presented in Figure 1 above. The scheme presents the process of changes in human behavior towards the natural environment, which is still ongoing in some countries; i.e., acts prohibited by the penal law for decades are still 'normal' in some countries, unregulated behavior in other countries (e.g., gas emissions, waste disposals regulation, in factory production polluted water releases in the rivers, logging regulations, etc.).

Defending the sociological definition of crime, White (2009: 1) stresses that for many people and experts the term environmental crime is best described not in terms of 'legality' but in terms of new concepts of environmental justice. For him environmental harm can be conceptualized in the aspect of three broad approaches to the comprehension of environmental issues: conventional criminology,²⁹ ecological perspectives³⁰ and green criminology.³¹ For White (2008a), environmental crime is harm against the environment that is being perpetrated across the globe, although its intensity and form varies depending upon specific regions and specific populations.

The definition of environmental crime should be simple, clear and understandable. Only that way the definition can be broadly acceptable (i.e., unified) and possible to use for the purpose of comparative studies. In this respect, Clifford and Edwards (1998) warn that an extremely broad definition is not useful for purposes of analysis, especially comparative studies, because everything can be included in it. They suggest that one of the objectives of defining environmental crime is to make reasonable comparisons possible and for this reason the definition has to be broad enough to preclude meaningful

²⁹ Conventional criminology refers to legal conceptions of harm as informed by laws, rules and international conventions. According to White (2009: 2) the key issue is the legality and the division of activities into legal and illegal categories.

³⁰ Ecological perspectives refer to ecological wellbeing and holistic understanding of the interrelationship between species and environments. White (2009: 2) stresses that sustainability and the division of social practices into being destructive from the perspective of environmental sustainability is crucial.

³¹ Green criminology according to White (2009: 2) refers to justice conceptions based upon notions of human, environmental and animal rights and egalitarian concerns. Key issue is weighing up of different violations or harm within the context of environmental justice.

distinctions. The more researchers and experts know about environmental crime, the more surveys they conduct, the better their suggested concept (i.e., definition) of environmental crime will be. Besides, we can avoid undesired misunderstandings by giving the examples of phenomena we talk about. After analyzing the sociological (criminological), philosophical and legal concept of environmental crime in the USA and abroad, Clifford and Edwards (1998: 25) offered their definition of environmental crime:

An environmental crime is an act in violation of an environmental protection statute that applies to the area in which the act occurred and that has already identified criminal sanctions for purposes of police enforcement.

Despite the strong influence of both definitions of crime, narrow legal definition and wider sociological definition of crime, the classification of the environmental crime forms, the comparison and the argumentation is more logical, if based on the legal frames. Both fields are close connected, because the influence of the sociological definition of environmental crime continuously reflects in the constant changing of the environmental protection legislation and growing number of the environmental crime forms, defined by criminal (i.e., criminal acts) and other legislation (i.e., offences). As already mentioned, the field of environmental crime is 'vivid' and constantly changing, and reciprocal influence of both definitions is just one of the issues. From everything written so far, it is possible to sum up a following definition of violations against the environment:

Environmental crime is every temporary or permanent act or resigned activity, determined and defined as deviant by the (inter)national legislation, which causes any form of harm (an artificial change, worsening, burden, degeneration or destruction) to one or more of eight elements (air, water, soft soil, mineral materials, human species, animal species, plant species, and microorganisms) that compound the natural environment or interrupt the environments' natural changes. The violator could be anyone or every one of us (corporations, companies, groups, individuals, state, etc). Environmental crimes' special characteristics are victims, because besides or directly through the environment (biotic and abiotic natural elements) it harms people as well.

If we summarize all above presented descriptions and examples, environment

is threatened by numerous diverse risks, which are to a high degree the work of human beings. When dealing with environmental crime, we face explicitly the incriminations, which are directed against the environment, and consequently the human; fundamental human values and human life. They are not only harmful to humans directly, but they destroy everything that is essential for human's survival. Because of this, as a consequence or contrast to human anthropocentrism³², ecocentrism³³ developed. The human is positioned within the environment. Together with other living beings the human forms a part of an interconnected system, in which both survival and quality of life are dependent and determined by material conditions and the particular relationship to other living beings (Pličanič, 2003). Thus, as the concept of environmental crime developed, so did different definitions. Environmental crime, like other types of crime, is not an exclusive legal concept. Also other science and professions deal with the examination of environmental crime, which gives it a multidisciplinary nature. Environmental crime is a subject of studies in ecology, criminology, sociology, criminal investigation, psychology, victimology, crime prevention, biology, geography, and others. Therefore, different aspects influence on the proposed descriptions and definitions. We are aware that the proposed definition of environmental crime is just one among many, but we believe it combines important parts of the several past definitions and for this reason represents specified upgrade. In addition it is a working definition that is applied in the present dissertation.

Different scientific disciplines and professions are trying to get answers to many questions by studying environmental crime and through discussions. As part of their knowledge they try to define the basic concepts and logically classify them. Although unintentionally, this easily leads to different conceptions of the same things which can create duplications and confusions.

³² Anthropocentrism refers to a human-centered view of the world that puts man at the center of the world and declares it a reality and a maximum value or belief that man is master of nature and that therefore animals, plants and the inanimate world can be ruthlessly exploited and destroyed (White, 2009; Heckenberger, 2009; Plut, 2004).

³³ Ecocentrism refers to the belief according to which man is part of nature and is therefore obliged to handle animals, plants and the physical world respectfully and burden it only moderately (Heckenberger, 2009; Plut, 2004).

It is necessary to bear in mind the possibility of overlap or duplication and to try to avoid this in any additional definition. Life-threatening characteristic or consequence of environmental crime is increasingly in the forefront. Learning about and awareness of the potential consequences together with strict penalties are just some of the possible solutions for prevention of environmental crime. Damage caused to natural environment remains one of the main objectives of the present dissertation; therefore forms, causes, origin and development of environmental crime are presented on the following pages.

2.2 Phenomenology and etiology of environmental crime

Throughout history different theoretical approaches developed through which researchers and scientists substantiate their suggestions, explanations, theories and definitions. The issue of environmental crime first appeared in the field of geography and biology, and after that sociology come closest to describing and explaining environmental crime. Only later, when sociology separated from criminology, scientists and researchers began to talk more often about environmental crime. Because of the wide range and importance in Great Britain a new branch of criminology as a science, called green criminology,³⁴ soon appeared. The development of environmental justice³⁵ has gone its own way, which is now sometimes featured as a weakness and points to the need to share the results and findings of other sciences (sociology, ecology, criminology, geography, etc.), in order to form common solutions.

While studying specific phenomena we need to look and search in several different directions. The study of the environmental crime has to start at the

³⁴ In the 1990s Lynch (1990) first introduced the term ‘green criminology’ to criminological discussions, regarding criminological studies of environmental crime, which was undertaken by elites.

³⁵ “Environmental justice is an approach to the conceptualization of harm within green criminology. It refers to the distribution of environments among population in terms of access to and use of specific natural resources in defined geographical areas, and the impacts of particular social practices and environmental hazards on specific populations (e.g. as defined on the basis of class, occupation, gender, age, ethnicity). The concern is with human beings at the centre of analysis and the focus is on human health and wellbeing and how these are affected by particular types of production and consumption” (Heckenberg, 2009: 13).

beginning, at the cause, origin and then the process of development of appointed phenomenon. For this reason, we use etiology and in addition phenomenology.³⁶ For social sciences, different approaches to the study of reality are typical, while different authors use different criteria (Mitar, 2000: 35). Before each division it is necessary to define the criterion or criteria that will be the basis for the classification first. In a structured analysis of available resources and databases, we chose to analyze the data using only one of the selected criteria. Once upon a time, criminologists used as a criterion in the distribution of environmental crime the accusation of the rich and powerful (known as white-collar crime), but over time they focused also on the individual as the perpetrator of environmental crime (the employee). With development and progress significant new forms of environmental crime as well as new type of offenders occur, such as church and local communities with light pollution, noise pollution and the issues of waste management.

Each theory offers a variety of criteria for the classification of environmental crime, since a problem of their research is still at the forefront. They share a common target(s), but are still importantly different in terms of:

- 1) perpetrator of the crime against the environment;
- 2) act or modus operandi;
- 3) victim or victims;
- 4) consequences that flow from it (short or long-term, (ir)reversible);
- 5) laws, authorities, and organizations (covering an area in which they intervene); or
- 6) methods and taking or not taking measures of various organizations and institutions (non-governmental, national, supranational, global).

Due to all above-mentioned differences, precise analysis of the selected forms of environmental crime is desired, promising more exact and reliable results.

³⁶ Meško (2010: 41) defines criminal etiology as research of human nature, motives, state of mind, social conditions and circumstances, economical factors, etc. On the other side, criminal phenomenology deals with forms of phenomena, structure, structural changes and the dynamics of criminality, so that it studies the appeared forms of crimes and criminal behavior. Finally, it forms the statements about personal and environmental factors as motives of criminality.

Although, arising from the legal perspective, White (2010b: 365) divides approaches to the study of environmental crime into three main groups:

- 1) socio-legal analysis of existing environmental legislation to determine the specific branches of law, the role of law enforcement agencies, and the experiences (positive and negative) in the process of using criminal law against environmental offenders (White, 2008b; Del Frate & Norberry, 1993; Gunningham, Norberry, & McKillop, 1995);
- 2) analyzing the regulatory strategies (responsive regulations) used to improve environmental performance (Ayers & Braithwaite, 1992; Braithwaite, 1994; Gunningham & Grabosky, 1998); and
- 3) analyzing existing environmental legislation, following the idea of fundamental social transformation and supporting the idea of wider definition of environmental harm as used in the already known legal definition (Snider, 2000; Boyd, Chunn, & Menzies, 2002; Lynch & Stretsky, 2003).

Moreover, the immense distinction in understanding (and definition) of environmental harm and environmental crime generally caused by (national) legislation led several criminologists (Lane, 1998; Halsey, 2004; Plumwood, 2002; Halsey & White, 1998; White, 2008a; 2009) to look for a more 'appropriate' definition of environmental crime (and harm) beyond the legal framework. On the other side of the spectrum is the philosophical approach to the study and analysis of environmental harm where environmental crime is included. Different philosophical perspectives help to shape the definitions of crime (White, 2008a: 10), whereby environmental crime is no exception. As emphasized by White (2008a; 2009) ecophilosophy³⁷ has the major impact on criminological definition of the crimes against the environment. In ecological philosophy humanity has obligations to nature (e.g., animals, plants, rivers, oceans, mountains and other parts of a biotic and abiotic world). Smith and Smith (1998: 99) warn that for this reason human beings have to be extremely

³⁷ Ecophilosophy is a philosophical approach which emphasizes ecocentric values and ethical behavior towards the natural world. The aim of ecophilosophy is to explore a diversity of human nature interrelationships. Its' practice is centered deep into values, the nature of the world and the self (Drengson, 1999: 110-111).

cautious, before embarking upon any ‘project’ that could affect (harm) the ecosystem(s). Its’ influence is presented in the Figure 2 below. Arising from the ecophilosophical perspective of natural environment, White (2007; 2008a: 10-12) described three philosophical approaches to the relation between the nature and the human being (i.e., the ‘social’ and the ‘natural’ world(s)):

- 1) *anthropocentric or human-centered perspective* (emphasizes the biological, mental and moral superiority of humans over the nature);
- 2) *biocentric or species-centered perspective* (takes humans as simply another animal species in the natural environment that have the same moral worth and obligations as any other species); and
- 3) *ecocentric or socio-ecological centered perspective* (refuses to place humanity either above or below the rest of the nature, but emphasizes the human explicit responsibility to ensure sustainable production that does not exceed the ecospheric limits of nature).

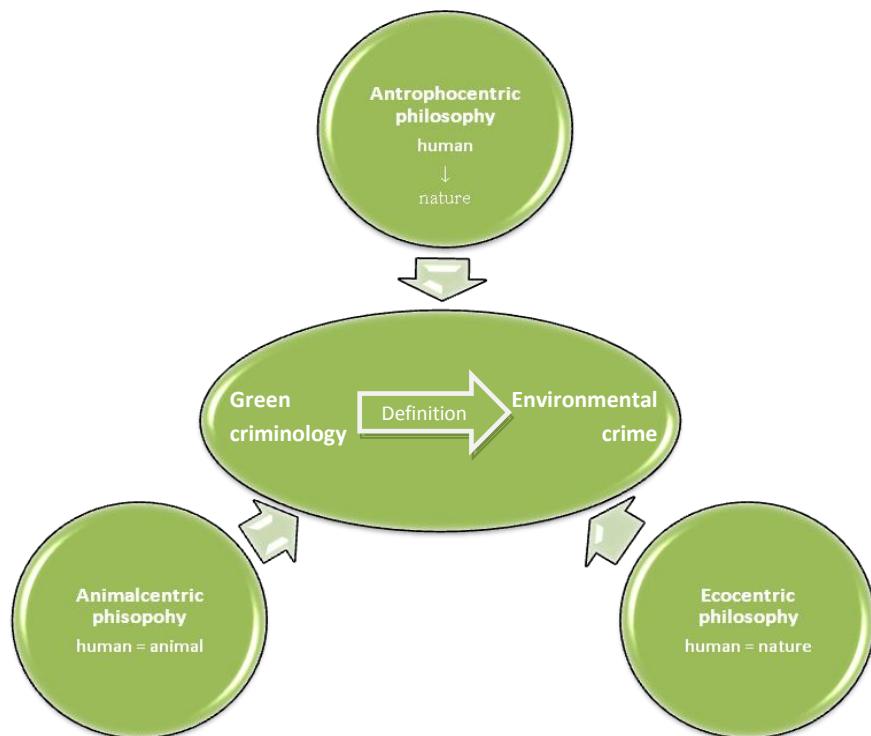


Figure 2: Impact of ecophilosophy on criminological definition of environmental crime.
Source: summarized after White (2008a: 10-12).

In White’s (2010b) opinion, approaches to the study of environmental crime are not exclusive and can be used simultaneously. As interdisciplinary approach is typical for responding to environmental issues, White (2010b: 336)

stresses that a variety of legal, economic and social strategies (also political, cultural, security and other strategies have to be taken into consideration) will be necessary to change human behavior into environmentally-friendly manners. From the other point of view, philosophical approaches enter the balance in this part of the study of environmental crime. In this process of studying and analyzing crimes against the environment, different classifications are formed (as shown in the continuation). Due to the fact that different countries have different legislation (White, 2010b: 336), unique approaches to deal with environmental crime and different classifications of environmental crime are formed, as explained in the next chapter.

In this dissertation, we use the socio-legal analytical approach to the study of environmental crime. The ecocentric philosophical perspective of the relation between the environment and human is applied in the analysis of the data and the classification of the forms of environmental crime into the phenomenological scheme in the case of Slovenia.

2.2.1 Phenomena, structure and classification of environmental crime

In the beginning, the classifications of environmental crime and its' forms were simple and noncomposed. Pečar (1981: 36) based on etiology when divided environmental crime into corporate environmental crime and environmental crime of the individual. Sutherland (1949; in Sutherland & Cressey, 1974) and Siegel (2001) classified environmental crime among the white-collar environmental crime and corporate environmental crime. Carrabine and colleagues (2004b) divided environmental crime in two groups: 1) *primary green crimes* (crimes that result directly from the destruction and degradation of the natural environment caused by man, e.g., air pollution, deforestation, crimes against species and animal rights, water pollution etc.); and 2) *secondary or symbiotic green crimes* (crimes that result from the flouting rules that seek to regulate environmental disasters (e.g., state violence against oppositional groups that includes the destruction of natural habitats, hazardous waste and organized crime).

More detailed and precise classifications of environmental crime occurred only at the turn of the 21st century. Development is going forward and 'new' forms of environmental crime have emerged. In such manner Situ and Emmons (2000: 45) based their classification of environmental crime on the groundwork, which determines *who* the perpetrator of environmental crime is. The authors distinguish four types of environmental crime:

- 1) *corporate environmental crime* (industrial pollution, toxic waste disposal, risks in the workplace, environmental pollution, etc.);
- 2) *organized environmental crime* (organized crime and hazardous waste, threats to animal and plant species, etc.);
- 3) *environmental crime by the government* (atomic and nuclear testing, military hazardous waste disposal, military operations, etc.); and
- 4) *environmental crime by the individual* (waste segregation, illegal dumps, etc.).

Arising from the geographical perspective, Tranter (2004), similarly as Mihalič (1993) and Šinkovec (1986), distinguishes between the 'built' environment (human habitation and residency) and 'natural' environment (wilderness or everything that is not part of the human environment). Following Tranters' (2004) idea, White (2008a: 98-99) combined Crook's and Pakulski's (1995) and Curson's and Clark's (2004) public perception of environmental issues into three different types of environmental harm:

- 1) *brown issues*, which are defined in terms of urban life and pollution (e.g., air pollution, pollution of urban stormwater, pollution of beaches, pesticides, oil spills, disposal of hazardous waste, etc.);
- 2) *green issues*, which are defined in terms of wilderness areas and conservation matters (e.g., acid rain, habitat destruction, loss of wildlife, forests logging, ozone layer depletion, toxic algae, invasive species due to human transport and colonization, water pollution, etc.); and
- 3) *white issues*, which are defined in terms of science laboratories and the impact of new, clean technologies (e.g., genetically modified organisms, food irradiation, in vitro process, cloning of species, genetic

discrimination, environmentally-related communicable diseases; pathological indoor environments, animal testing etc.).

From the review of previous classifications of environmental crime we can conclude that any attempt to address environmental issues from a criminological perspective must be conscious of the complexities of the studied subject. In the last decade, the problem of the definition has turned up around the concepts of ‘harm,’ ‘crime’ (White, 2008a: 89), and the concept of ‘victim’. Furthermore, White (2008a: 91) emphasizes that it is important to distinguish between *specific instances of harm*, normally existing in the natural environment (e.g., fire caused by lightning; by earthquakes and volcano eruptions destroyed ecosystems, etc.), *harm arising from imperfect operation* (e.g., accidental pollution spills), and *systematic harm*, created by normally sanctioned forms of activity (e.g., clearfelling of forests; pollution spills caused intentionally or because of human negligence, etc.). The first form of harm is just harmful, while the second two forms are harmful and criminal, as defined by law, and thus subject to social control.

Each type of environmental crime presents its own type of perpetrator by its individual characteristics, each containing various levels of risk to the environment and people, and each is determined by a combination of different criminological theories. In addition, we have to be aware that many corporations are involved in legal and illegal activities with legal transactions (Watson, 2005: 211). For example, the waste disposal company can be involved in legal and illegal disposal of waste, while the latter means more profit. In this and similar ways environmental organized crime has become increasingly widespread over the recent years. Representatives of companies and corporations often cooperate with organized criminal groups, which take care for the ‘disappearance’ of ‘corporate’ waste. Instead of paying large sums of money for the legal disposal and destruction of hazardous waste, organized crime groups charge much less for the illegal disposal of this waste. The only link between them is the financial transaction for the performed work and this is often hidden and fragmented.

Environmental crime is developing and changing in parallel with the technological development and progress of mankind. Nowadays we often read about transnational environmental crime. Results of the criminological studies (Situ & Emmons, 2000; Siegel, 2001; Faure & Visser, 2003; Elliott, 2009) show that criminal organizations involved in environmental crime are not surprising any more to the public. It also seems that corporate environmental crime is an inevitable consequence of business. When the authority, which is empowered to protect the environment, is the perpetrator of the crime against the environment, people are particularly outraged (Situ & Emmons, 2000: 83). This may indicate a very important factor in detection and reporting of various forms of environmental crime and should not be neglected in future studies.

The increasing number of articles, studies and publications shows that the criminological research of environmental harm and environmental crime is growing. The perpetrators of the environmental crime and reasons for their behavior have awakened the interests of the criminologists. In Florida, Ross (1999) conducted a study which tried to develop a common understanding of corporate crime with hazardous waste. She focused on the individual perpetrator, the organization or company, and on the environment in which it operates. The results showed there is a greater likelihood that the violations of legislation in the field of hazardous waste management will occur in the case when we deal with a larger organization and when the level of awareness of the problem of the hazardous waste management by the higher management is low. The likelihood of violations increases when the lack of adequate training of staff in the field of hazardous waste management exists and when employees perceive the legislation as inadequate and incomplete, and its implementation as excessive (Ross, 1999).

Similarly, McKendall (1990) investigated corporate environmental crime and tried to find out whether it is possible on the base of internal company factors (e.g., complexity and degree of centralization in relation to two forms of violations against the environment and violations of employees in company

and business ethics culture) to assume or predict frequency of violations. The results showed organizations with more complex structure and which are more decentralized have the greater number of violations against the environment. No significant correlations between the ethical culture in the corporations and other variables, especially not the forms and the number of violations were detected.³⁸

Simon (2000) focused on the area of white-collar crime, whereby he checked the samples of the environmental crime among the biggest multinational corporations in the U.S. and in the rest of the world through the use of a survey. The analysis showed that environmental crime represents only a part of the total sample of criminal activities taking place within a political economy dominated by large companies and representatives of stakeholders of a higher grade. In addition to corporate crime (most commonly associated with waste disposal), environmental crime is also connected with organized crime (dumping of toxic waste and infiltration into the waste processing activities) and corruption (representing the petrochemical, oil, automotive and electrical industries). It is also closely linked to the crime of the government or the country as the perpetrator of environmental crime (abuse of official position, disposal of toxic and radioactive waste without proper reporting and control, military industry).

From everything written so far can, it can be concluded that no matter which approach or perspective or what kind of their combination in study and analysis of the various crimes against the environment we apply in our work, in the end the theory has to correspond to practice, otherwise the purpose of applicability is not met.³⁹ Constant changing of the forms of environmental crime is also reflected in its' classifications and represents a need for

³⁸ Significant interactions between the complexity of corporate structure and corporate culture were found, on which is to a certain extent possible to predict the likelihood that the company has violated environmental laws.

³⁹ “Systems of classification are essential to the process of identifying and responding to environmental harm. Crimes against nature can be conceptualized in abstract of philosophical terms, but eventually it is important to ground analysis and action in relation to actual concrete events, incidents and trends. This involves defining environmental harm and exploring the various dimensions pertaining to it” (White, 2008a: 87).

continuous monitoring, updating and revising of existing forms of environmental crime as a creation of new classifications. The environment represents an inter-connected system, so the acts of environmental crime are interwoven. Despite the fact that each form of environmental crime has its own particularities and is defined with a different, unique combination of (criminological) theories and consequently affects different victims, we cannot draw precise boundaries and avoid mutual interaction and influences. The classification of environmental crime in the so-called schemes, in addition to the organization and transparency, also offers the ability to compare forms of crime on the local, national or international level. They can also be used in dealing with environmental crime, especially preventing it.

Various attempts of schematic classification of environmental crime largely offer similar proposals. In this regard it should be noted than the difference in perception of the same phenomenon or different detail breakdown of each occurrence raise a sense of greater diversity and increase the sense of multitudes of environmental crime phenomena, than it actually is. Like people play different roles in their life, individuals can become the perpetrators of several different types of environmental crime. To be completely honest, however, man as an individual stands behind every action of environmental crime, because no corporation is able to commit crimes against the environment by itself (they are legal entities, which are managed and operated by physical persons - humans).

For a useful and reasonable classification of different forms of (environmental) crime systematic classification by the chosen criteria is very important. The classification of the forms of environmental criminality that have been detected in Slovenia by police, the environmental inspection agency and public prosecution is presented below. Using the socio-legal analytical approach to the study of environmental crime the ecocentric philosophical perspective of the relation between the environment and human was applied in the analysis of the data and the classification of environmental crime forms. The presented classification is divided according to the criterion

who has committed a criminal act, i.e. *offender*. Based on a review of resources and databases, we made a transparent picture of the division of environmental crime forms in Slovenia, which is partly similar to the previously described classification of Situ and Emmons (2000). In Slovenia, the accessible information on the forms of environmental crime can, according to the criterion of *who* is the perpetrator of the individual act of environmental crime, be formed in the following classification:

- 1) *environmental crimes of an individual* - Although we talk about small, they can be equally damaging actions resulting from a lack of socio-cultural values and traditions and reflect the personality of the individual. The profit imperative, though very small, cannot be completely excluded. These crimes are illegal waste dumps in the woods, directing waste water from household septic tanks in the village ditches, (conscious) improper use of pesticides and fertilizers, trafficking of rare plant and animal species, road (and other) traffic, and other human actions that are environmentally harmful, which are committed from the reasons of human comfort and prestige;
- 2) *environmental crimes of the rich and powerful*, which includes corporate environmental crime, white-collar environmental crime, occupational crime and illegal industrial pollution (illegal dumping of toxic waste, improper storage of toxic waste, the risks in the workplace in mines and factories (asbestos, mercury, etc.) release of toxic substances in factories, etc.);
- 3) *environmental crimes of particular groups*, which comprises harmful acts against the environment caused by each group with its business and management (societies and the local communities by organizing various musical events and parties that cause noise or result in improper separation and disposal of waste; a church or local communities with lighting of church and cultural buildings; some sports clubs, such as motorcycle, aircraft and hang gliders club, causing noise and air pollution; small businesses or productions, such as small cars landfill sites or small businesses with improper storage or handling with these materials, or hazardous spills of harmful materials, etc.);

4) *environmental crime by the state or the ruling authorities* - In Slovenia this form of environmental crime is rarely present in the actually visual form (military operations, etc.). It is much more potential in the form of omission of the act, when the State, as owner or supervisor 'overlooks' the violations and knowingly endangers its citizens (e.g., hazardous emissions exceeded substances in deprived areas or major cities, where the State is ignoring the present situation).

It is necessary to stress two dimensions or forms of environmental crime which could be allocated according to the criteria of space and modes of operation. We refer to international and organized environmental crime;⁴⁰ both are often referred to as transnational environmental crime. Both can occur together with different forms of the environmental crime enumerated above. Because of the specificity, this type of crime requires a separate discussion.

Environmental crime occurs when individuals or corporations intentionally violate environmental laws and regulations because of profit and power. When these activities lead to cross-border or global environmental impacts, they can be characterized as international or transnational environmental crime (Brack, 2002: 143). In the last decade the scope of international environmental crime has expanded, but environmental crime remains one of the many areas of organized crime activities. Watson (2005: 207) notes that a large part of environmental crime is highly organized and high-profit activity of organized crime. Since the perpetrators of environmental crime can generate significant profits with minimal risks, the area is definitely attractive to organized crime groups (i.e., 'business' opportunities). Organized crime groups pay particular attention to specific criminal activities in environmental crime, which include: illegal disposal of waste, illegal advertising and criminality associated with rare or wild animal and plant species. Situ and Emmons (2000: 69) describe the typical criminal

⁴⁰ In recent years organized environmental crime has become increasingly widely present, since environmental legislation changed and organized crime has adapted to it. The organized environmental crime occurs when it comes to the infiltration of organized crime groups into the economic sphere, or when the organized crime 'combines' with the corporate environmental crime with one and only purpose, to generate profit for both (Bačić, 1999).

organizations such as corporations, which have infiltrated into a multitude of environmentally sensitive industries, and now exercise a significant proportion of environmental crime acts. Everywhere around the world the problem of hazardous waste disposal controlled by the organized crime stands out. The waste trafficking is one of the most profitable ‘businesses’ at the moment.⁴¹ In the case of environmental crime, organized crime groups focus particular attention on specific criminal activities (Brack & Hayman, 2002; Elliott, 2009; Schmidt, 2004; Watson, 2005; Situ & Emmons, 2000):

- 1) illegal trade in animal and plant species;
- 2) illegal trade in ozone-depleting substances, hazardous chemicals and harmful pesticides;
- 3) illegal transport and trading of various types of toxic, radioactive and other hazardous waste;
- 4) illegal, uncontrolled and unreported fishing;
- 5) illegal logging and trading of wood (when it is harvested, transported, bought or sold in contravention of national legislation);
- 6) biological piracy and transport of controlled biologically or genetically modified materials;
- 7) illegal disposal of oil and other wastes into the seas and oceans; and
- 8) illegal exploitation of raw mineral materials and fuel smuggling in order to avoid paying taxes and to avoid the control of carbon emissions.

A specific and increasingly common form of environmental crime, which involves large corporations and even countries, is the so called 'migration of dirty industries' from the home countries. There environmental standards have risen and become more strict, so they transfer the companies to developing

⁴¹ A prime example of such operations (and power) is a garbage disposal problem in Naples, controlled by the Italian mafia Camorra and illegal hazardous waste disposal in Campania, controlled by the Italian mafia 'Ndrangheta. In 1980, organized crime was deeply involved in the waste disposal business in New York and elsewhere in the U.S. An extensive campaign by the competent authorities successfully identified and punished more than 500 involved members of old Italian Mafia families (Carter, 1999: 5). Not a decade later Mafia ‘successfully’ moved and used this *modus operandi* on European ground.

countries (this includes countries in transition) where development of environmental protection legislation is still in progress.⁴²

Elliott (2009), as an expert on organized environmental crime, points out that the environmental crime has rapidly expanded and become transnational, when the organized criminal groups took the advantage of economic liberalization and globalization of the world economy. The result was an increase in frequency and volume of cargo and shipments, reduced border control, and easier transfer of funds through the global financial and banking systems, which offered more opportunities for so called 'money laundering and transfer of the profits into legitimate businesses and enterprises. And as with any other 'businesses' of organized crime, the criminal networks expanded to the leaderships of large corporations, companies and political leaders in organized environmental crime as well.

The extent of environmental crime in Slovenia is small when compared to other offences.⁴³ The percentage of the organized crime in the approximately 145 crimes against the environment per year is relatively low, but nevertheless Slovenia is no exception. Various forms of organized environmental crime were detected. Results from the analysis of the statistical data show that the Slovenian agencies most often deal with the following forms of organized environmental crime:

- 1) illegal trade in animal and plant species;
- 2) illegal trade of ozone-depleting substances, hazardous chemicals and harmful pesticides;
- 3) dumping, illegal transport and trading of various types of hazardous or toxic, radioactive and other wastes;
- 4) illegal felling and trade in timber;

⁴² There are frequent relocations of heavy industries to third world countries from the developed West and East, and Europe is no exception (e.g., Eastern Europe, Balkan region).

⁴³ Although in the Republic of Slovenia the police detect an average of only 145 environmental crimes a year, which is not an excessively high number (actually it is very small number compared to traditional crime (e.g., thefts and robberies), where the average number is around 58,500 crimes a year (Policija, 2000; 2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011)), but still also this group of crime deserves the same rate of dedication and the same technical competences of the investigators.

- 5) illegal disposal of oil and other wastes into the sea; and
- 6) illegal exploitation of mineral resources, where most of these excavation of materials is done without the appropriate licenses and opencast mining.

For a better and more understandable presentation of the discussed forms and connected issues of environmental crime, the classification in Slovenia of detected forms of environmental crime is presented as a phenomenological scheme in Figure 3 below. The presented phenomenological scheme is a classification of forms of environmental crime detected in Slovenia prepared on the basis of written sources analysis and databases review. Only further, more detailed research and analysis of each group of environmental crime forms will reveal a clearer picture of the phenomenon of environmental crime in Slovenia. This classification presents a base or starting point for a deeper and broader view of the existence, facts, and research in the field of environmental crime in Slovenia.

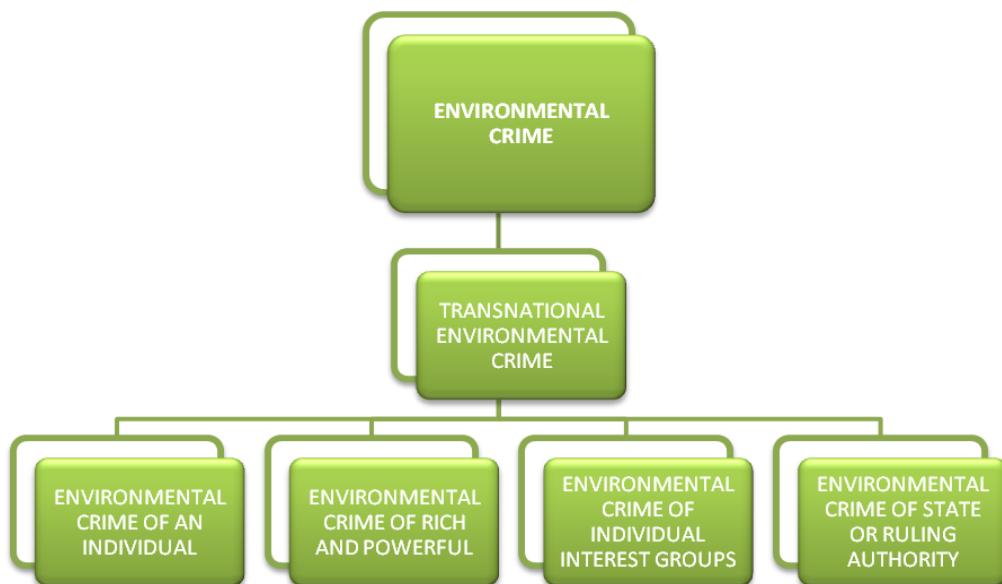


Figure 3: Scheme of forms of environmental crime detected in Slovenia.

The use of only one criterion in the presented scheme has demonstrated to be positive and enabled a clear picture of the classification of the environmental crime forms. Furthermore, it was evident throughout the analysis that sometimes it is necessary to combine two or more criteria (e.g., transnational organized environmental crime). What is more, only clear and dismembered

basic concepts and definitions can be a firm basis for the proposed solutions and attempts to improve the current situation in the field of environmental protection. When studying and dealing with the phenomena of environmental crime we need to be aware of ongoing changes and progress of society and its technologies, which will reach out to the field of environmental protection and create new forms of environmental crime. Since it is impossible to fully predict what will happen, it will be necessary to cope with them promptly when they arise. Therefore, the research in the field of environmental crime needs to continue and expand. Using the descriptive and analytical studies of different forms of environmental crime and selected combinations of different selected units and levels can lead to deeper insights and knowledge. One way to study the phenomena of environmental crime is the in-depth analysis with the use of particular criminological theories, as shown in the next chapter. The application of criminological theories enables the research of specific characteristics of environmental crime forms, the study of motives and circumstances, human nature, social, economical and other factors that influence (i.e., contribute) on the possibility that crime against the environment will occur. On the basis of such analysis in combination with the method of induction the classifications are done and the causes and origins of environmental crime can be estimated and foreseen.

2.3 Environmental crime in the light of criminological theories

The different theoretical approaches developed throughout history have formed the basis for researchers and scientists to prepare their proposals, explanations, theories and definitions. Starting with the historical perspective, the issue of environmental pollution, first appeared in the area of geography and biology and later ecology. From the perspective of social sciences the environmental issues were first discussed in the field of sociology, this is why systems theories are the closest and most widespread.

From a historical perspective, geographic determinism in the 18th and 19th century was the first that explained the development of the human society as a product of natural forces (Barry, 1999). Buck's (1936; in Hannigan, 1995)

geographic theory of social changes was followed by Huntingtons' (1968) modernization theory. He tried to prove different connections between climate and health as well as energy and mental processes. Nature entered the sociological discourse through Darwin's (1809–1882) concept of evolution, natural selection and survival, which led to the development of biology-ecology explanations, anthropology, and biological determinism. The latter attributed the primary role in individual and social development to the culture of neglecting the physical environment and biological factors (Benton, 1991). Almost a century later, in the 1970's, environmental sociology formed as a branch of sociology, while so-called 'green movements' arose in Europe and spread throughout the Netherlands and United Kingdom to other parts of the old continent (Hannigan, 1995). Criminology developed simultaneously and incorporated new theories and definitions into environmental crime field. What is more, sociology, as the 'mother' to the respectively older sister of young sciences offered the basic (sociological) theories.⁴⁴ They were transformed, completed and widened with the development of each individual theory. The issue of environmental crime was included in their explanations by the following (criminological) theories. The first were the socio-biological theories, which include ecological theories, naturalism theories and green sociological theories. The theory of radical or critical criminology, which originates from Marx's and Engels' revolutionary ideas, is next. As very big opponents of environmental pollution, they warn about the unstoppable increase of environmental crime. In 1940, Phelan (1940; in Emery & Watson, 2004) introduced the theory of choice (Emery & Watson, 2004), which was additionally widened by Beck (1999) in his risk society theory. In the end, we have to mention Becker's (1968; in Emery & Watson, 2004) economic profit theory, in which he used mathematical models to explain modern ecological problems. In continuation, the theories mentioned above will be presented in

⁴⁴ Sociological theories have two dimensions: descriptive and prescriptive. From the descriptive point of view, the theory describes the society and offers certain explanations for social phenomena, events, problems and changes in the society. The prescriptive dimension next to the explanation what a society is also explains what the society could be (Barry, 1999: 10). The relation between the society and the environment includes several different relations: physical, social, economic, political, moral, cultural, epistemological, philosophical and dynamic interactions between the society and environment (Kirn, 1985). These manifold relations clearly show that no discipline or approach can capture the entire complexity of the relation environment - society (i.e., human towards environment).

detail, whereby the main focus of the discussion will be the positions of theories on environmental crime, because many of the above-mentioned theories also address other issues in conjunction with environmental crime.

2.3.1 Socio-biological theories and environmental crime

In the 1960's, society experienced modernization, which had a considerable impact on environment. Clifton Wharton (1926; in Lash et al., 1996), an agricultural economist, warned about special characteristics of agriculture respectively farming and its connection to climate, land and other impacts. He emphasized the importance of the 'natural environment' (Lash et al., 1996). Later on, the Marxist sociology prevailed, which saw the environment as diverting from the need for class struggle. Even where the seriousness of environmental destruction was confirmed, left-oriented criticism focused on relations between social classes, power and social crises, while simply ignoring factors that were more closely linked to the environment (Hannigan, 1995: 10). Marxism gradually started to dominate the sociological theory, which led to further exclusion of ecological topics and sociology issues.

Only in the 1970's did American sociologists focus more on the environment and established a national sociology association which included an emphasis on environmental sociology. An abundance of essays on the environment followed and environmental sociology spread to Canada, Europe and elsewhere. A political force formed in Europe under the influence of 'the greens'. Many of the early works on ecology topics dealt with environmental movements and the support for environment protection. Great Britain was the main source, followed by the Netherlands, Sweden, France and Germany. New ecologic paradigms introduced an ecocentric approach to the environment. In the 1990's, environmental sociology became only one of sociology specializations in Europe and elsewhere around the world (Hannigan, 1995: 10-12). It was overtaken by other scientific disciplines, although they often cooperate with it, summarize it or upgrade its basic findings.

The repetitive, continuous problem of sociologic research in the area of ecology and environmental issues was the definition of *what* the main object of the study actually is. The new human ecology focused on the interactions between the physical environment and organization and the behavior of the society.⁴⁵ Hannigan (1995: 13) stated orientation on reasons for environmental destruction and the occurrence of environmental awareness and movements as the main reasons for this situation. The movements focused more on immediate reactions and settlement of the consequences of environmental pollution than on discussions of theory and theoretical approaches. In the explanation of reasons for the widespread environmental destruction on the planet, two primary approaches were presented: the so-called *environmental explanation* as part of Catton's and Dunlap's model of competition among environmental functions⁴⁶ and the *political-economic explanation* as part of a concept of socio-ecologic dialectics and treadmill of production of Alan Schnaiberg (2002).⁴⁷ Both approaches see the social structures and social

⁴⁵ Buttel (1987; in Hannigan, 1995: 13) defined five key areas of studying environmental sociology: 1) new human ecology; 2) environmental friendly behavior, values and conduct; 3) environmental movement; 4) technological risk and risk assessment; and 5) political economy of the environment and environmental policy. Only a few of these areas were really widespread and based on adequate theoretical foundations.

⁴⁶ The environmental explanation of environmental destruction originates in the human ecology field. Human ecology was the main source from which Park (1952: 83; in Lash et al., 1996) transferred his ideas to the human population. Human development and industrial pollution destroyed the biotic balance and tore up the chain of survival and distribution of tasks. Hannigan (1995: 14-15) warns that human society and human ecology differ from plant and animal ecology. The human society is contrary to the rest of nature organized on two levels: the biotic and cultural. This view on the relation between nature and society stresses the exceptional characteristics of mankind (inventiveness, creativity, technical capabilities, etc.) rather than its common characteristics with other species. It prefers the impact of social and cultural factors to bio-physical and ecological determinants. It also belittles the links with nature and the dependence on nature and stresses the human capability to dominate and control it (Lash et al., 1996; Schnaiberg & Gould, 1989). What is more, this perspective of the relationship between human and environment can be compared to White's (2008) anthropocentric perspective. They both emphasize the biological, mental and moral superiority of human over the nature.

⁴⁷ The preceding political-economic explanations are very clear on who they blame for the destruction of the environment: the modern industrial capitalism and its search for wealth, power and profit. This leads to the conclusion that ecological issues are fundamental questions of the social class in which corporation and the state are united in their opposition to ordinary citizens (Hannigan, 1995: 18). Following the connection of the environmental explanation with the human ecology of the Chicago school, we see that it is drawing inspiration from the writings of Marx and Engels in the 19th century. They were the only ones, who were marginally concerned about environmental degradation. Their analyses of social structure and social changes became the starting point for different modern theories on environment and others (Kirn, 1985: 10-11). Marx and Engels were disturbed by the anthropocentric orientation of man and the assumption of dominance over nature, especially due to technological progress in capitalism and its constant exhaustion of nature merely for

changes as reciprocally related to the bio-physical environment and stress the urgency of its preservation.

Within the framework of environmental sociology, Schnaiberg (2002) provided a very influential explanation of the relation between capitalism, the state and environment. Based on the Marxist political economy and neo-Weber sociology, he described nature as the source of contradictory relations between economic expansion and environmental disintegration (Hannigan, 1995: 19; Schnaiberg, 2002). For Schnaiberg (2002), political economy of environmental problems and politics are organized within the structure of modern industrial society, which he calls the *treadmill of production*. This represents a constant need for the economic system to make profits by the creation of consumer demands for new products. This means the ecosystem will expand to a point where it exceeds its physical boundaries of growth or load capacity. One of the pertinent tools of the system is advertising (Hannigan, 1995: 19-20).⁴⁸ From time to time, the state realizes the need for limited environmental intervention with the aim to prevent the complete exhaustion of natural resources and to emphasize its legitimacy for the public. With the enforcement of ecology and environmental policies, state expresses its concern and commitment to the preservation of nature. On the

profit. To a certain extent, Marx supported the humanization of nature, because he was against extreme interferences to the detriment of nature (Hannigan, 1995: 19). Individual sociologists (Schnaiberg & Gould, 1989; Lash et al., 1996; Barry, 1999, Beck, 1992; Carrabine et al., 2004a; Hannigan, 1995) warned that the humanization of nature could lead to an extreme situation, such as the destruction or extermination of species dangerous to mankind. The environmental explanation of the relation human - environment and the political-economic explanation can be compared to two other perspectives of White (2008a); the biocentric and ecocentric perspective. They emphasize the human explicit responsibility to ensure sustainable production and not to exceed the ecospheric limits of nature, because the human is just one of the equal elements of the nature.

⁴⁸ Schnaiberg (2002) described the 'treadmill of production' as a 'complex self-perpetuating mechanism', in which politicians respond to environmental loss created by the capitalist intensive economic growth by adopting political decisions that promote further economic expansion. The author perceives a dialectic tension in developed industrial societies as a consequence of a conflict between the self-perpetuating treadmill of production and demands for the safeguarding and protection of environment. He defines this conflict as a conflict between the useful utility (for instance, the value of preserving current unique plant and animal species) and exchange utility (for instance, the industrial use of natural resources). When environment protection appears as an important topic on the political agenda of individual governments, the state has to increasingly balance its dual role as the promoter of capital accumulation and economic growth and the role of the environmental regulator and defender (Schnaiberg & Gould, 1989: 68-70).

other hand it (often silently and covertly) supports and cooperates with reproducers, which are ambitious and susceptible to the exploitation of forces of capitalist production and accumulation. The state thus again reaffirms its commitment to strategies for the promotion of economic development (Hannigan, 1995: 20-21). Schnaiberg (2002) warns about the occurrence of the transfer of industrial production to third world countries. Not only that the price, including also the costs of production, is lower than compared to domestic production, but it also fulfills the requirements for clean environment in the home country. On the other side, the image is completely different. Opening up markets in third world countries at first has many positive impacts and benefits for the local residents, but also develops schemes in these areas which demand expensive infrastructure of roads, water power plants, bridges, etc. They are paid by the owners of corporations (developed countries), and individual safety criteria are often ignored. Such actions cause massive ecologic damage in the form of floods, destruction of rainforests, pollution.

The political economic explanation has an advantage in locating current environmental problems in the discrepancy of man-constructed political and economic systems as a set of the conflict of functions supported by human ecology. This brings it closer to the main current of sociology. All theories and models, including Schnaiberg's model, originate from the Marxist theory. The political-economic approach was also criticized, because it summarizes a monolithic view of the state as an environmental offender. Hannigan (1995: 23) stressed that politics and public officials should be seen as representatives of different political positions, the statements and actions of which are not always compatible.

Schnaiberg's (2002) theory of 'treadmill of production' is one of the rare theories that uses the anthropocentric approach to environmental harm and logically explains the causes of the environmental crime as something inevitable. In this way socio-biological theories tackle the dual role of the

state; a promoter of the environmental justice and environmental protection acts and activities and a violator of the environmental protection legislation.

2.3.2 Critical criminology and environmental crime

Kanduč (1992: 103) describes radical or critical criminology as 'criminology of everyday life', which deals with phenomena that endanger fundamental human goods (health, life, free use of time, etc.) and rights originating from the motto of the French revolution '*liberté, égalité, fraternité*'. Different theoretical impacts can be discerned in the development of radical criminology; ranging from conflict - critical - radical - Marxist criminology to psychological criminology (Kanduč, 1994: 103). Critical criminology originates from the radical tradition of the sociological thought. It sees the human (his growth, power and development) as the measure of all things, because Marx was the first to see radical as to grab an issue by its roots and the root for a human is man itself. Critical criminology has two main dimensions: 1) to determine the 'problem' from the point of view of man; and 2) to study the problem in the social context of man (Kanduč, 1994: 114). The main criminal-political problem of the critical criminology is power, which is dispersed unequally and differently. It is also the reason that numerous harmful occurrences (structural violence, economic, political, environmental crime, etc.) are not incriminated and prosecuted as well as often perceived as 'normal' (van Swaanningen, 1997; Kanduč, 1992: 103).

Critical criminology places in the forefront the fundamental human goods (life, health, conditions for existence), which to a large extent depend on the normal or actual healthy living environment. The essence of radical or critical criminology declares that people are entitled to these goods and they belong to people. Radical criminology turns critical when these rights are violated or encroached. This often happens with the so-called occurrence of differential power in the criminal environment (white collar crime, crimes by individuals holding power, structural violence, crimes without victims, organized crime) (Kanduč, 1992: 110). Environmental crime can be classified into several of the above-mentioned forms of crime. Crime at first originated from the

exceptional power of wealthy businessmen in a society, but it widened and changed, which is the subject of future divisions and discussions of the radical-critical criminology. Once again, the correlation with the White's (2008a) anthropocentric perspective of relation between the human being and nature is possible. Only with a small difference, because in this case, the rich and powerful are the real environmental crime offenders acting as superior over the nature and the middle class. The workers in the factories once were a part of nature (ecocentric and biocentric approach), but now due to the long hard work for their survival, they cannot be a part of it anymore.

2.3.3 The rational choice theory, the profit theory and environmental crime (the rational polluter model)

Environmental crime arises when environmental standards are violated and a lack of environmental legislation occurs. It also happens when there is a discrepancy between legal norms and their implementation and realization in practice. Despite a strong increase and widening of environmental protection legislation in the last couple of decades, the majority of organizations that commit acts of environmental crime are not prosecuted or punished. Even if they are punished, the fines are usually insignificant and derisive. That is why organizations apply the rational economic approach and violate the legislation and continue with the pollution. The proscribed and implemented fines are a smaller expense for them than environmentally-friendly production. Their managers therefore adopt rational decisions and turn into *rational polluters*, because they weigh 'costs - benefits' of the criminal act and the proscribed fine.

Rational choice theory proceeds from the hedonist presumption that the individual is driven (at least subjective rational) by the choice of comfort and avoidance of pain. Cornish and Clark (1986: 1-2) define the individual as a subject of limited rational choice. According to rational choice theory, the offender acts with purpose or aim and is more or less careful (cautious). The theory is reminiscent of the economic explanations of criminal behavior,

whereby the economic explanations of the Chicago criminal school⁴⁹ are the most influential in modern criminology. The latter defines the offender as 'homo economicus' (economic or economical), which tries to maximize comfort (rational utility maximizing) and is thus susceptible to stimulus (incentives and disincentives), which encourage or discourage him from criminal activities. Economists do not see any pathological problems in delinquency and define criminal behavior as a form of economic activity, which the individual pursues due to reasons that are the same as the reasons why non-criminals pursue legal economic activities⁵⁰ (Kanduč, 1999: 225-228; Hayward & Morrison, 2005: 75-76).

Since organizations apply the rational economic approach, they violate environmental legislation and continue with pollution, because the proscribed and executed fines represent a lower cost than environmentally-friendly production. Cohen (1992), Posner (1998) and Spence (2001) called such rationalism in criminal behavior *the rational pollution model*, whereby they stress that the simplest solution is to raise proscribed fines and their thorough implementation. The rational polluter model originates from the economic theory. Rational environment polluters (perpetrators of environmental crime) follow the same economic logic as Phelan's (1940; in Emery & Watson, 2004) robber⁵¹ in his rational choice theory. Potential offenders weigh marginal (border of marginal) benefits from the performed work with environmental damage caused by pollution against marginal costs (which are the proscribed fines or prison sentences). Organizations (companies, corporations, etc.) can

⁴⁹ The first sociology department in the U.S. was established at the University of Chicago in 1892 and scientists focused on merging the findings of research on criminal statistics. The expression *Chicago School* denotes a collection of different socio-psychological and urban sociology theories. Its main starting point was that people are social animals and that the human life is a consequence of the social environment. Cultural values and pointers of the human behavior are exclusively the result of factors of the social environment (Meško, 2010; Kanduč, 1999; Pečar, 1981).

⁵⁰ Gary Becker (1968; in Emery & Watson, 2004) wrote about the essence of economic understanding of criminal behavior that an individual commits a criminal act, if the anticipated benefit surpasses the benefit, which he would receive if he used his time and other resources for other activities. Individuals turn into criminals, because they have a different cost - benefit assessment and not because their basic motivation is different from the motivation of others (Jeffery, 1993: 335; in Kanduč, 1999: 228).

⁵¹ Phelan (1940; in Emery & Watson 2004) based his theory on the example of a robber, who as with every other economic subject 'weighs' the benefits and costs for the (criminal) act he plans to commit.

also be rational polluters, if they follow the marginal principle and want to maximize profit or (in any other way) attain the equalization of marginal profit with marginal costs. The environment will be cared for only if pollution represents a cost for the organization (cost respectively fine) that is higher than the profit (benefit from pollution) (Emery & Watson, 2004).

Rational choice theory, which refers to a so-called rational polluter, only provides a partial explanation of organizational behavior and did not turn out to be an appropriate basis for proposals of legal change. The results of the research revealed that the aspect of the explanatory power of legitimacy must be considered for a better comprehension of the theory of rational behavior, because the wish for the consideration of social legal norms and the positive image of a company are very highly esteemed values. With regard to the rational choice theory and the 'calculations' of the mathematical model of a rational polluter, we can summarize that the most efficient and also cheapest solution is to increase fines in the legal environmental protection and to provide for their consistent implementation. With the model of rational choice polluter various forms of environmental crime can be explained (e.g., environmental crime of the individual, environmental crime of the specific interest groups and environmental crime of the rich and powerful). As stressed above, we have to be aware that this is only a partial explanation and possible prediction, because each case was influenced by different factors, therefore has to be studied and analyzed separately.

Becker (1968; in Emery & Watson, 2004), as in the economic approach, applies probability although he speaks of 'optimum fines'. Cohen (1992) summarized Becker's profit theory and formed a somewhat simplified model. The model originates from the presumption that fines 'should be' equal compared to the network of social costs caused by crime, divided by the probability of discovery. Emery and Watson (2004: 745) compared Becker's theory (1968) and Cohen's mathematical model (1992) to marginal analyses

related to information and the neo-classical or Marshall theory⁵² (Marshall, 1966). They confirmed the analytical explanation of behavior by economic theories, but warn that their practical applicability could be limited. Some organizations do not pollute although the probability of discovery is low. Similar to rational choice theory, the profit theory is based on the presumption that companies (their leaders) always try to maximize profit (especially level out marginal costs with marginal profits). Detailed analyses showed that other costs and factors prevent the maximization of profit to organizations. It is evident that rationality is limited under these circumstances (Emery & Watson, 2004: 746); therefore the in-depth study of the chosen case has to be done. The presumption of the maximization of company profit limits the applicability of the above-mentioned model, but nevertheless provides several good ideas and useful starting points in the context of political decisions and supplementing legal regulations in conjunction with the settlement of problems of environmental crime. The profit theory derives from the anthropocentric philosophical approach to environment and is the best choice to explain the corporate environmental crime and/or white-collar environmental crime (i.e., environmental crime of the rich and powerful).

2.3.4 The theory of social risk and environmental crime

Sociologists Beck (2001), Giddens (1997) and Bauman (2005) theorized about modernity and consequently about society, which is the result of modernity. Next to establishing the positive consequences of modernization, they also dealt with anomalies, which are a product of modernization. Ulrich Beck (2001) stressed that the modern society is a *risk society*, in which distress is hierarchic and smog is democratic. The complexity of societies widens and

⁵² Marshall (1996) with his theory of equilibrium and studying the forces that determine the supply and demand sets the foundations of today's modern bourgeois theories - the microeconomics of market relations. According to Marshall (1996) the force acting from behind the demand for some goods is marginal utility. This is a utility that is by buyer attached to the last unit of the desired goods. The utility is in correlation with a need or a desire. The needs cannot be measured directly but only indirectly through external phenomena, with which the needs are expressed. For those cases that are of importance for economics, the rate is found in the price which someone is willing to pay someone to meet his needs. This price is called price of demand (Marshall, 1966: 78).

deepens social possibilities, but also the risks (Beck, 2001). Risks are not an invention of the new age, they are characteristic of all societies - even pre-modern ones. In his work, Beck (2001) refers to the risk society. Risks were for the most part individual in the past, but an individual no longer has the possibility to withdraw or distance himself from the risks of the modern society today, because danger knows no borders. With the trend of globalization of the society, globalized risks developed because the society is organized to respond to risks. Giddens (1997) believes the society bears too many burdens and is too concerned about future (and safety), which gives rise to the idea of danger.

Developing the theory of risk society, Beck (2001: 27-29) assigns different characteristics to risks, which are produced by societies at the highest development levels. Environmental harm and consequently endangered (risk) society is on the top of the scale of the modern risks:

- 1) Risks completely avoid the direct perception capabilities of mankind (for instance radioactivity or harmful substances in air, water and food). They can be detected or not only by science with specific instruments. The consequences for the most part do not appear immediately and the future will show how powerful they are.
- 2) Modern risks include a *boomerang effect* and sooner or later also endanger those, who create them, initiate them, or carry them. The transfer of heavy production to the third world over the long-term will not protect developed countries from its consequences, because they get back the products that were produced in third world countries.
- 3) Modern risks represent *big business* for the economy. Risks, which modern societies create on their own, at the same time, represent a store of infinite potentials of these same societies. Risks represent the never satisfied needs and are ideal for economic exploitation (we never live as healthy to attain the health ideal; we must always do or buy more to get closer to this - always elusive - ideal).
- 4) Risks are attributed to the post-modern man; they are *almost always attributed to society*, as we simply cannot avoid them.

- 5) Risks have considerable political potential, because their consequences do not affect only nature and mankind, but the breakdown of markets, the reduction of capital, opening of new markets, judicial producers, loss of reputation, etc., can take place. Due to possible disasters, considerable changes in the relationships of social power can occur.⁵³

Throughout history, mankind constantly changed its living environment with the assistance of different technologies. Contrary to natural disasters, which are according to Beck (2001) the products of non-human or supernatural forces; environmental pollution, environmental destruction and environmental devastation are caused by mankind. Natural sciences confirm and prove connections between natural disasters which take place due to a destroyed natural balance and destruction of the environment. Giddens (1997) states that modern risks are the product of human activities called production risks. He connects them to human disasters, like the accidents in Tschernobyl, Love Canal, Ajka, Fukušima etc., which shook the social confidence of modern projects and raised doubts about the good intentions of industry, government and individual experts.

Both Beck (2001) and Giddens (1997) stress the importance of knowledge as an antonym to wealth, because rich people have different resources that enable them to divert risks, which poor people cannot. They went even further in their discussion and emphasized that knowledge is not important either if the person is not aware or is not acquainted with the existence of risk. We can also relate their conclusions to the environmental crime issues and the current social risk caused by it. When averting or overcoming such risks, knowledge and access to information is especially important, but they also often depend on the economic status. Although, deriving from the sociological perspective (i.e., explaining the relations in the society and relation of society towards the environment), the theory of risk society is the only one among the collected criminological theories that can be used to explain all four basic groups of environmental crime forms, presented in the

⁵³ As an example of positive sanctioning, the promised subsidizing of organizations, which decide efficient energy use and the use of renewable energy sources, can be mentioned.

Figure 3. With the aspect of globalized society, the theory of risk society covers also a transnational environmental crime.

An individual lives in a society of risks and decides on a daily basis what to do and how much to risk for it. It is undoubtedly true that the economic status determined different predispositions of an individual and it does matter to whom and in which part of the world an individual is born. Residents of the city quarter in Love Canal in the U.S. certainly would not have settled in the area if they knew they would be living above buried hazardous waste. The fundamental human right to be informed is placed in the forefront and the role of the media reporting is brought to the debate. Unfortunately the right to be informed is often violated in covering up such environmental crimes and their consequences, if investigative reporters or other agencies are not faster and more successful in detecting the criminals. The wish for profit and comfort of violators and their accomplices, related to Becker's (1968) profit theory, presented below, often prevails to the detriment of society and individuals.

2.3.5 Legitimacy theory and environmental crime

In conjunction with the rational polluter model, some scholars (Cohen, 1992; Spence, 2001; Emery & Watson, 2004) presented several alternatives, which can be used or included into the explanation of environmental uniformity: the theory of cultural differences,⁵⁴ the theory of political economy,⁵⁵ routine activity theory⁵⁶ and the legitimacy theory.⁵⁷ In the context of environmental

⁵⁴ The theory of cultural difference is focused on the micro elements of people's lives and communities, trying to explain the differences between the specific social groups and cultures (Erickson, 1986)

⁵⁵ The theory of political economy tries to explain the influences and correlations among the political institutions and the economic system. General topics include the influence of elections on the choice of economic policy, monopoly and market protection, the political business cycles and institutional corruption, and redistributive conflicts in fiscal policy including the politics of delayed reforms in developing countries (Alesina & Perotti, 1994).

⁵⁶ Routine activity theory is derived from rational choice theory and for it a crime is normal behavior and depends on the opportunities for committing crime; i.e., if there is an opportunity and a target is not protected enough, and if the reward is worth it, offender will commit a crime (cost-benefit) (Cohen & Felson, 1979).

⁵⁷ Legitimacy theory stresses that organizations can only continue to exist if the society in which they operate perceives that the organization is operating within the bounds of a value system acceptable to society (Dowling & Pfeffer, 1975).

pollution and conditions of explanatory power, the legitimacy theory is the most useful. The theory is based on Weber's (1954; in Emery & Watson, 2004: 747) development part. This approach offers an important explanation on why organizations want to remain within the legislative framework of operations. The theory assumes that organizations exist in conformity with approval of society and the 'social contract'. If the organization violates this social contract, survival is endangered and the organization is 'punished' by the society (as happened in the case of Lafarge Cement in Trbovlje). If the organization wants to operate and exist, it needs the consent of the society. The organization is thus facing four potential possibilities (Emery & Watson, 2004: 748):

- 1) the organization preserves the *status quo* - it operates in conformity with the regulation and tries to change the social comprehension of the organization through education and informing;
- 2) the organization cannot change the social comprehension of the organization, it can try to change the way in which its presentation of operations is described and harmonize it with the social comprehension;
- 3) the organization tries to change social expectations from the organization through education and informing; and
- 4) the organization changes its operations and harmonizes them with the society.

Organizations develop a divided comprehension of reality (Scott, 1999). They are under the influence of the external environment in the form of laws, regulations and judicial protection, and the most important, the public opinion of the involved endangered social groups. All of this affects their comprehension of reality.⁵⁸ Around the world and in Slovenia there are numerous examples, when the public opinion or the reaction of a social group

⁵⁸ Savage, Bagnall and Longhurst (2001: 26) exposed several fundamental reasons why organizations try to operate in conformity with legitimacy: 1) since it is important or necessary for their long-term survival; 2) legitimacy does not originate from economic success or legitimacy, although it is closely related to both; 3) legitimacy is associated to the identification of an organization in the society (social control) and also depends on social and political support; 4) and legitimacy is a granted status, always controlled outside of the organization (is more recognizable when it is absent) (Emery & Watson, 2004).

(e.g., civil initiatives and NGOs) has an impact on the treatment of irregularities related to environment pollution by an individual organization or even prevent the beginning of its operations (e.g., Lafarge Cement, Kemiplas, Tenetiše, Mežiška dolina, Salonit Anhovo and other).

To summarize the overall review of theories, which tried to provide an explanation of environmental crime, we can establish that all theories and models, including Schaniberg's (2002) 'treadmill of production', originate from the Marxist theory. The social risk theory can to some extent also be related to it through industrial development and progress. The economic explanation with the model of competitiveness of three basic functions of the environment very clearly presents the growing problem of covering up and the increasing lack of 'free' untouched environment. The political-economic explanation has an advantage in locating current environmental problems in discrepancy of man constructed political and economic systems. Such an approach was also criticized, because it was summarized as a monolithic view of the state as an environmental polluter; we believe that the criticism is not often justified. The theories of radical or critical criminology place in the forefront the fundamental human goods, which to a large extent depend on a 'clean' living environment. These are goods man is entitled to and which belong to him. It is why radical criminology becomes critical, when these rights are infringed. Although the rational polluter model only partially explains the organizational behavior and its inadequate assumption for legislation, it also has certain value for comprehending the activities of polluters and the formation of environmental crime acts. Environmental crime appears when standards - social and statutory - are violated⁵⁹ (Emery & Watson, 2004). Individual criminological theories and models try to provide a framework for such crimes and the appropriate fines (the fines definitely have to be increased). Profit theories are based on the assumption that companies always try to maximize profit. The proven limitation restricts their applicability. Nevertheless, they offer individual starting points in the context of political decisions and amending legal regulation related to the settlement

⁵⁹ Since the law of environmental protection is relatively new and still developing, it is sometimes complex and complicated.

of problems of environmental crime. For the current conditions, Beck's (2001) theory of social risk is the most useful; an individual takes risks every day from the day of birth until the day he dies.

The discussed review about criminological theories that cover the field of environmental crime can be presented in Figure 4, where all reviewed theories are annotated to the particular forms of environmental crime arranged in groups and in scheme, presented with Figure 3 on page 72.

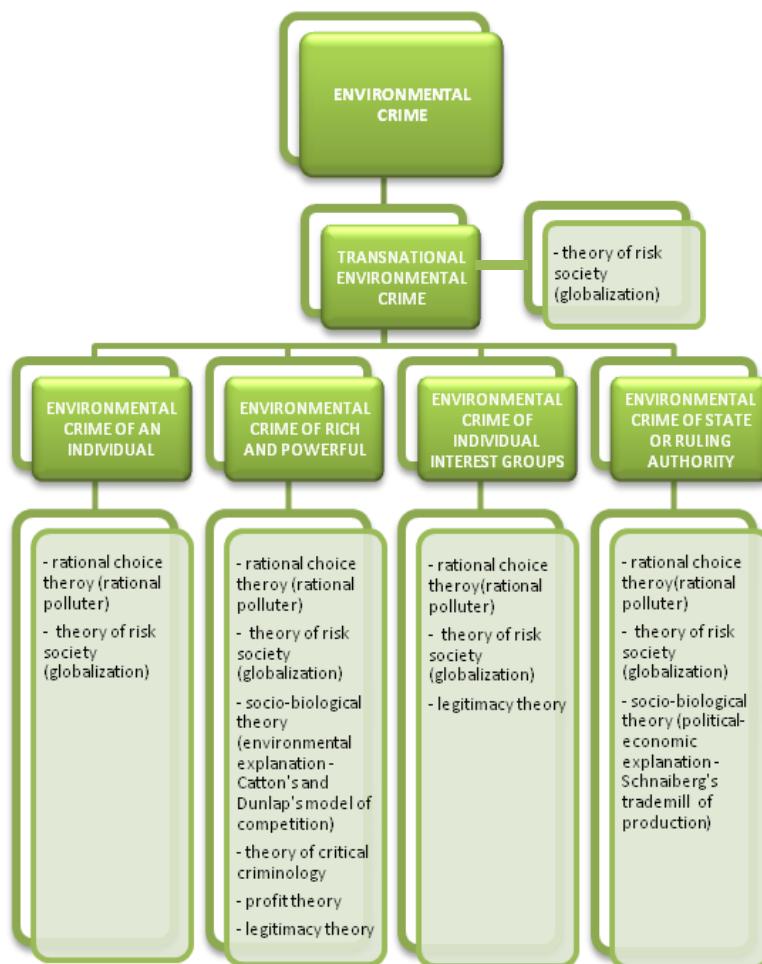


Figure 4: Criminological theories in the environmental crime scheme.

From Figure 4, it is evident that most criminological theories are dealing with environmental crime of the rich and powerful, which is also the most frequently committed, the most environmentally unfriendly, threatening and destructive form of environmental crime, at least in the eyes of the public masses. The problem represent its links with organized crime, and off-field

cooperation between corporate environmental crime and organized environmental crime (e.g., transnational waste trafficking, illegal waste disposal, transnational trafficking of protected animal and plant species).

As emphasized throughout the analysis of criminological, debates on environmental issues within the area of sociologic, political, economic and biologic theories reflect the presence of a lack of certainty (e.g., the existence of contradictions between social development and progress and environmental issues).

Social and political discussions on environmental problems attribute a considerable normative weight to these problems. In all areas of studying the issue of environmental crime, especially with theories, the growing need for connections and mutual cooperation of different scientific and expert areas is evident. The consideration and incorporation of environmental limits and parameters of collective human activities must be considered.

As already derived from the anthropocentric (human-centered) perspective, the analysis of the types of environmental crime showed that the environment for the human in majority of cases represents a way to make a profit (e.g., use of natural resources, poaching) or to avoid the costs prescribed by the state or the society (e.g., illegal waste disposal, toxic substances releases). This is confirmed also by the dominance of criminological theories dealing with the interpretation of the crime of the rich and powerful, in other words, corporate and white-collar environmental crime (e.g., profit theory, socio-biological theory, legitimacy theory, rational polluter theory, theory of critical criminology).

Deriving from the etiology of the environmental crime, it is possible to conclude that the primary and main cause for committing crime against the environment is human nature related to past anthropocentric attitude towards the environment. The origin for the committing environmental crime lies in the nature itself, because the environment represents the resources for the survival and the opportunity for profit (or to avoid the costs).

Furthermore, the primary motives for environmental crime are profit and human development. Environmental crime occurs under the influence of the social conditions and circumstances (i.e., environment as a resource for survival) and economical factors (i.e., environment as a resource for profit) in the nowadays modern globalized society with the developed industrial system and oriented in market economy.

However, the non-harmonized comprehension of the same concept still represents a big problem. Different authors use different terms for the same form of deviation against the environment. Due to the lack of harmonized terms and a common, internationally acknowledged definition, problems on all other levels of treatment, punishment and prevention of such crimes arise. Before moving to an integral discussion on environmental crime, a brief outline of the environmental crime as a form of security threats is done. The theme seems important, especially in relation to providing security, and is therefore worthy of our attention.

Crimes against the environment are not only dangerous to the environment and people; they represent a more important aspect of the threat to national security. These threats are merely consequences of the irresponsible human behavior and illegal interferences in the environment. Nowadays, more attention is focused on the relationship between environment and security. From the national point of view about the relationship environment - security the question about the direct and (or) indirect influence of the environment on the national security is crucial (i.e., environmental threats can cause a demolition of the environmental dimension of national security). Grošelj (2007) emphasized the possibility of direct and indirect influence of the environment on national security (e.g., environmental harm directly affects national security or directly affects the citizens' life, their property and welfare, and this way indirectly threatens important national values). In the discussion about the influence (direct or indirect) of environmental crime on national security the following cognitions were taken into consideration:

- 1) Prezelj's (2010) division into natural,⁶⁰ intentional⁶¹ (e.g., crime) and unintentional⁶² threats to security;
- 2) Romms' (1993) classification of the environment, energy and natural resources in the group of non-military threats to national security;
- 3) Grošelj's (2007) placing of environmental threats to security among the major aspects of threats to national security;
- 4) Homer-Dixon's (1994) warning about the danger and possible consequences of environmental deprivation;
- 5) in the dissertation presented definition of environmental crime;
- 6) Homer-Dixon's (2004) list of six crucial environmental security challenges⁶³; and
- 7) the basic model of a structure of an natural environment from eight elements.

We can conclude that environmental crime can and does influence national security. Environmental crime has an indirect influence on national security when causing environmental harm, environmental destruction, and devastation (i.e., direct influence to environment).⁶⁴ Ways to cope and deal with the problems of environmental security threats are different. They also include the studies of the discussed area of environmental crime. It would be

⁶⁰ Natural threats arise from floods, earthquakes, landslides, volcano eruptions and other natural disasters (Prezelj, 2010: 149).

⁶¹ Intentional or deliberate threats are: crime, terrorism, sabotage, malicious action and other attacks, information attacks and war (Prezelj, 2010: 149).

⁶² Unintentional threats occur when errors during the use of technology, system failures and accidents occur (Prezelj, 2010: 149).

⁶³ Homer-Dixon (1994: 6; 2004: 266) ranks security challenges to: 1) the effects of greenhouse gases and the associated climate changes; 2) shrinking of the ozone layer; 3) degradation and loss of farm land; 4) degradation and destruction of forest areas, 5) absorption and lack of drinking water; and 6) overfishing.

⁶⁴ The country and its security, among other things, are dependent on the environment (citizens need the environment to satisfy their basic needs, e.g., air, water, food) and some elements of the environment as the 'natural and energy sources'). These parts of national security are inseparably connected to the environment and dependent on it, therefore the national security system is in charge also for the protection of the environment and preservation of natural resources. Environmental crime harms the natural environment and causes environmental deprivation and destruction. The crucial natural elements for the citizens' existence and the existence and operation of the state are destroyed (e.g., polluted, extinct natural and plant species, damaged, destructed) or just partly damaged. They are no more useful and sufficient natural and energy sources or for the citizens' survival vital environment. Therefore, it is possible to assert that environmental crime with its acts of harm and destruction of the natural environment represents a threat to national security.

correct that all major decisions on the national level would be based on preliminary analysis of the situation and individual drills, but unfortunately this is often not the case. Slovenia, for example, confirmed (with the relatively low number of studies) environmental threats against the (national) security of the Republic of Slovenia.⁶⁵ The main problem of environmental crime is that it usually does not directly affect the safety of the individual, society and country. Indirectly the actions or consequences of environmental crime disturb the balance in the environment and thus threaten the safety in a particular area in the country or beyond. Everything written so far points to the conclusion that environmental crime is an increasingly important and dangerous threat to security, which belongs to the group of environmental threats of national security. As such it should not be treated only as form of crime but as a potential security threat.

When responding to above-described environmental issues, the role of green criminology stands out. Green criminology represents very important bond between the criminological justice system, its' parts, other sciences and all other interested parties. Its role is very important for it combines different scientific knowledge and experiences, when dealing with environmental issues. How the evolution of the beginnings of green criminology in Slovenia and abroad happened, and what its findings are, are the subject of the next chapter.

⁶⁵ Review of the Slovene Co-operative online bibliographic system and services database and Social science data archive database revealed the existence of only ten carried out and completed research in entire or a limited area of the Republic of Slovenia (partially covering the areas of environmental threats to (national) security, like Slovene public opinion surveys).

3 Green criminology

Environmental crime is a problem of modern society. No other field of environmental issues includes such a wide range of natural and sociological sciences as well as such a large number of experts. Global extensions of environmental degradation are slowly but persistently breaking into every sphere of human life. And it was these extensions that brought mankind to reach for legal regulations and sanctions in order to protect the environment and prevent it from further unscrupulous mass exploitation and destroying. Criminology is one of the first social sciences, which reacted to the increasing ecological problems.

Janez Pečar, an eminent scholar of Slovenian criminology, highlighted the issue of environmental crime⁶⁶ in 1981 and pointed out that mankind is faced with problems. The price of human development and progress is often paid by nature; therefore humans more frequently reach after the protection of nature and especially the environment in which he lives. Many sciences contribute to the conservation of nature. Therefore the question of the role of criminology in these efforts occurs. What is the role of science, which deals with human deviant behavior? Pečar (1981) believes that criminology has a double role in the case of deviance against the environment: 1) it explains the phenomena that have already been criminalized, and against which the society reacts; and 2) deals with social phenomena and events that are becoming much more important than they are considered to be as a natural and disruptive behavior. Criminology drafts and makes notes for the society about the need for an appropriate reaction. Environmental crime is a new form of deviance and for this reason presents a new field of activity for criminology.

In the present dissertation, environmental crime is understood to be by the legislation defined act or resigned activity, which causes any form of harm to

⁶⁶ Sutherland (1949; in Sutherland & Cressy, 1974) has tackled the problem of environmental crime in his discussion about white-collar crime, but records on the separate discussion about environmental crime as special form of crime in that period were not found.

the natural environment or interrupts its' natural changes. Green criminology was formed from a discussion about environmental crime. In other words, green criminology is a study that researches deviations against the environment and violations of the environmental protection legislation. It is especially interested in reasons for committing environmental crime, caused consequences and responses of the society, as presented and discussed in the present chapter. At first the historical development of green criminology from the very first beginnings in the late 1960s' till today is presented and its achievements emphasized. After the historical review, the concept, meaning and subject of green criminology are discussed. Due to its importance, the problem of a unified definition of green criminology is treated separately and in the end the new definition is offered. The past criminological endeavors in the field of environmental crime and the present research challenges and analysis are combined with the important ascertainment in the concluding discussion.

3.1 Development of green criminology through history

The concept of criminology is as old as criminology as a science (Kostantinović-Ilić, Ristanović, & Kostić, 2009: 46). Critical criminology is, in addition to ecology and sociology, one of the first sciences to warn about environmental harm (it started as environmental pollution) and the existence of environmental crime. Humanity has after World War I and even more after World War II until the present, witnessed a complex development and progress, which have influenced the changing of society as well as on changing of criminal actions. The environment is so specific and important to people and their survival. What is more, the consequences of the environmental harm can be drastic, such as extinction of plants and animals, people getting ill and others. The very beginnings of opposing environmental devastation by environmental sociologists and radical criminologists until today the environmental crime has become the topic of everyday discussions, as well as a topic on international conferences and symposiums, discussions and meetings of political leaders. Nevertheless, it is also the reason for originating a special branch of criminology, named green criminology.

Environmental crimes are often called 'green crimes'.⁶⁷ To be 'green' in society today means more than just the values and attitudes towards environmental protection, because it represents the political stance, the economic market sales slogan or attempt to label products as green-friendly healthy foods (e.g. 'natural' 'home made', 'healthy and environment friendly'), etc. These factors bring elements of political ideologies and other trends to the field of scientific research, which has a negative influence on the work of criminologists and reduces the neutrality of the research work. Nevertheless, green criminology was formed from discussions about criminological studies about environmental crimes and with it connected 'green' issues as shown below.

3.1.1 Origins in the 1960's

Environmental crime is a relatively new field of research within criminology. Clifford (1998: 10) sets the beginning of the development of green criminology to the period around 1970s. Opinions about the beginnings and the beginners of environmental crime are different. Koser Wilson (1999: 155) stresses that criminologists showed their interest about the environmental crime at a time when environmental politics included criminal sanctions as a part of a criminal-legal system. In other words, beside the environmental movements, not before the development of environmental law the interest of criminology for such incriminations against the environment and its inhabitants raised. Development of environmental law in individual countries has different historical foundations, which is the reason why a precise definition of the initial development is not so easy to get. In the United States, we register this phenomenon and the development of the environmental law from the end of World War II and the great expansion of the environmental laws in 1970. In Europe, environmental law developed very quickly, especially in Great Britain. This historical review leads us back in the end of 19th and in the 20th century when the first laws about the environmental protection in the

⁶⁷ The so-called 'green crimes' are often defined as social constructions, influenced by social environments and social relations in modern society where two groups are important: corporate actors and environmental legal activists or organizations, where gender, race and class inequalities must be taken into consideration (Lynch & Stretsky, 2003: 218).

individual European countries and around the world were formed (Šturm, 1996: 176). Beside the internal legal regulations of environmental protection within individual countries, the need of cooperation with other countries occurred (bilateral, multilateral and regional agreements). The answer to all this was the first world conference about the environment⁶⁸ in 1972 in Stockholm. A few years later, in 1980s, the environmental issues moved to the political spheres, followed by the change of the legislation, which is still in the process of changing.

The development or the beginnings of green criminology does not coincide fully with the development of environmental protection legislation. The literature review reveals two different directions of the development of green criminology. Criminologists often form their definitions about the subject of their study (i.e., crime) in two ways (Halsey & White, 1998: 345): 1) the legal-procedural approach determines the parameters or the characteristic of criminality or it defines, which actions are legally not allowed (forbidden), so that it originates from the practical work that is legally defined; 2) the social-legal approach defines those cases as criminal, which can be defined in current criminal-legal regulations or even not (morally not allowed actions). In other words, we separate the strictly legal and sociological-legal approach. When defining the field of action of criminologists both approaches need to be taken into account. Especially when it is about researching green criminology as a young branch of criminology, whereby still a lot of unanswered questions appear. The problem is finding an agreement on the definition of green criminology and environmental crime as its subject of research. All this has up to now among other reasons (a new and undeveloped branch of criminology, unclear separation line between sociological and natural sciences, invasion of

⁶⁸ The countries' representatives adopted the *Declaration on the Human Environment*. Besides the internal legal regulation of environmental protection, the countries wanted to cooperate with other countries on a bilateral, multilateral and regional level, and with the Stockholm declaration the basic principles of reactions of the countries when protecting the environment were formed and the starting-points and basis for further development of the international law of the environment were set. This conference is famous for the principle *sic utero tuo ut alinem non laedes*, which means that the countries have a sovereign right to use its natural resources according to its politics of environmental protection and are responsible to ensure that activities under their competence and control do not cause any damage to the environment of other countries outside their borders (Kiss & Shelton, 1991).

new ideas and theories)⁶⁹ resulted in quite little interest of criminologists for the field of environmental crime and its withheld or sometimes even from the public hidden thinking about these problems.

Articles, monographs, and other publications about green criminology and green crimes were up to the last five years very rare. Lynch, McGurin and Fenwick (2004) and Lynch and Stretsky (2007) were very critical about the lack of (criminological) research of environmental crime. They described the articles about the research of the new and poorly known forms of criminality as actually nonexistent. The given critic was also determined by the study of Zilney, McGurrin and Zahran (2006). On the contrary, in the last decade we witnessed a great turnover in the interest of criminologists about the field of environmental criminality as well as an unbelievable increase of the number of researches and publications in the field of green criminology. Zilney and colleagues (2006) researched how frequently criminology is present in publications in the field of environmental justice. By choosing nine key words⁷⁰ in collaboration with experts⁷¹ of the field of green criminology the scientists reviewed the primary base of Social Sciences Citation Index publications, to which they also added the base of Social Sciences Abstracts and the base of Criminal Justice Abstracts. The review contained more than 1725 magazines and 50 social disciplines from 1970 to 2003. The results have shown that in the period of more than 30 years only 10 scientific publications in the field of environmental criminality were published, which is a surprisingly low number and it is clearly evident in the Figure 5 below. The

⁶⁹ From the very beginning of research in the field of environmental crime and green criminology the criminologists are facing the problem of defining the field. In connection with this Halsey and White (1998: 346) stress the importance of the definition of the field of criminological research of environmental crime forms. This is a base for all further research work. Moreover, in the field of environmental crime we come across many 'normal social actions', which are from the societies' point of view or an individual group of society morally wrong at first, but with time these actions become legally not allowed. Once a 'normal' action is now legally strictly regulated and defined and in most cases forbidden (e.g., burning of waste in the back yard, fertilization and sprinkling of fields etc.), and for its violation sanctions are prescribed. Beside that we are witnessing constant changing of the environmental protection legislation in the field of environmental crimes and threats.

⁷⁰ Environmental racism, environmental justice, environmental injustice, environmental equality, environmental inequality, green criminology, eco-criminology, environmental crime and environmental criminal acts.

⁷¹ Michael L. Lynch and Paul B. Stretsky

study has shown the lack in representing criminology in the field of environmental issues and crimes.

In the past nine years, from the last year that was captured in the study until now (2004-2012), we are witnessing a great change in criminologist's interest for the field of environmental crime, as well as an unbelievably increased number of publications on green criminology.

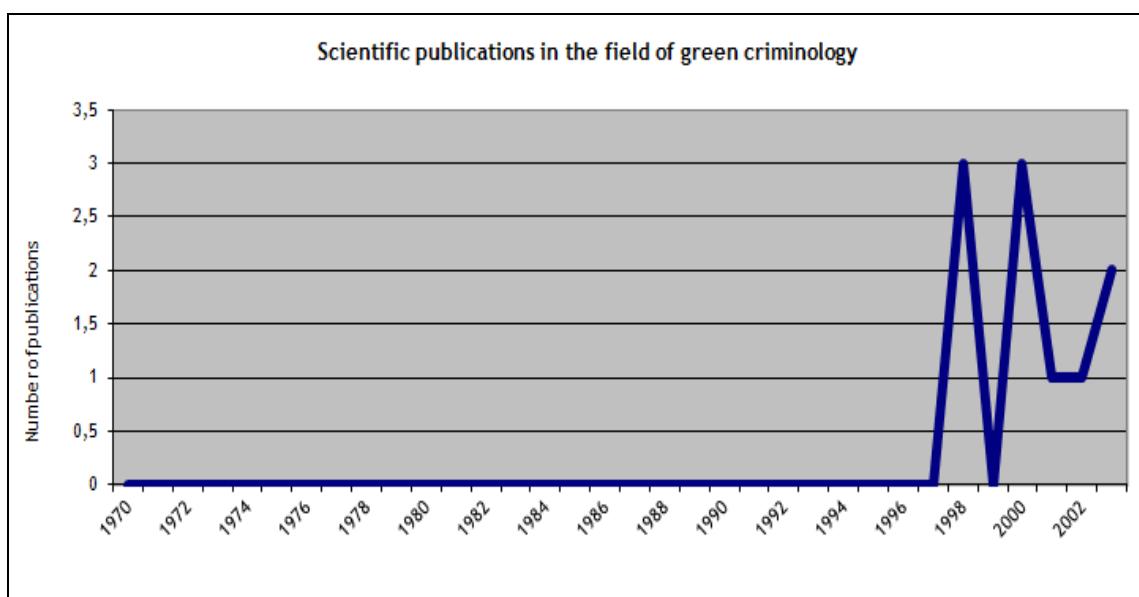


Figure 5: Number of scientific publications in the field of green criminology from the study of Zielney and colleagues (2006).

To further study how much the increase was in comparison to the study of Zielney and colleagues (2006), the study should be repeated, continued and even expanded. But the most important is that environment was placed in the centre of the academia debate.

3.1.2 Eco-critical criminology

If we look back in history, deviations against nature were evidenced in the 1960s by critical criminologists. They were first that defined deviations against nature as environmental crime. The critical criminology originates from a radical tradition of sociological thought. For this thought man (his growth, power and development) is the measure for all things, as Marx said, to be radical it means to grab a thing at its origin, which means inside a

human being. Basic human benefits as life, health, existence conditions (e.g., air, water, fertile soil) are set in the forefront because they are very much dependent on the normal or healthy living environment. From the critical criminology perspective, it is obvious that these are the things to which people have their rights (i.e., these things belong to them). Therefore the radical criminology becomes critical when these rights are violated.

As a part of white-collar crime, deviations against the environment appeared which led to the result that such forms of criminality were subject to the critical criminological thought. This thought originated at first from a huge power of rich businessmen in society, but until today it changed and expanded. It is the objective of further divisions and discussions of critical criminology. The power is arranged differently and irregularly, and is also the reason that numerous 'dangerous phenomena' (e.g., structural violence, economic, political and environmental crime) stay unincriminated (Kanduč, 1992: 103; van Swaanningen, 1997). This remains the most important political problem on the agenda of critical criminology. Even today, the centre of critical criminology is still the human being.

Criminologists could not understand the biological-ecological dimensions of the researching incriminations because of their sociological direction; therefore they focused on the conflict in the relation of human - environment (Koser Willson, 1999: 155). A branch of critical criminology was formed which Commoner (1990), Ehrlich and Ehrlich (1991) and also Lynch and Stretsky (2007) call the *eco-critical criminology*. The objective of its research is divided from the human to the environment as a whole, where the victim of incriminations against the environment is not only the human being, but also the environment. In contrast to the critical-criminological approach, the eco-critical criminological approach includes the analyses of the non-human nature, what bears witness about ecocentric aspect of environment. Nature is not only being observed from the humans' point of view as a source of raw materials and dumping holes, but from the aspect of natural science, where a human being is only a part of the natural ecosystem. Lynch and Stretsky

(2007) annotate to the eco-critical criminology the search of causes of the environmental problems in political and cultural viewpoints of a life of an individual. Besides eco-critical criminology (later incorporated to green criminology) includes analysis of destruction or damage of nature, which influences on plants, animals and humans.

After Sutherland (1949; in Sutherland & Cressey, 1974) and Lynch (1990), the history of green criminology reached the discussions of Albanese and Pursley (1993) as well as Frank and Lynch (1992), who define environmental crime as a part of corporate criminality. Their definition is connected to or gets its origins from Sutherlands' (1949) definition of the white-collar crime, in which he warned about the different forms of deviations against the environment. Koser Wilson (1999) stresses that the definition of white-collar crime is based on this perspective of critical criminology. Also Lynch (1990) in his first definition of green criminology connected environmental crime to the consequences of modern industrial capitalism (corporate environmental crime) and placed it this way in the frames of the critical criminology. Over time, the development of the field continued.

3.1.3 Environmental sociology and philosophical perspectives

Other sources of the development of green criminology are individual criminologists (Halesy & White, 1998; White, 2003; Lynch & Stretsky, 2003; 2007; Zilney et al., 2006; Clifford & Edwards, 1998; Carrabine et al., 2004b; South, 1998) who attribute to environmental sociology, environmental movements, or philosophical tendencies and their viewpoints of society. In the 1970s, American sociologists focused on the environment and founded the Americen Sociological Association a part of which included environmental sociology. This was followed by numerous essays on the environment and environmental sociology expanded to Canada, then to Europe and beyond. In Europe a political force has formed under the influence of 'green'. A large number of early works about the ecological topics addressed ecological movements and speaks for the environmental protection. The leading country was Great Britain followed by the Netherlands, Sweden, France and Germany.

The new ecological paradigms brought in the ecocentric manner to the environment. In the 1990s, environmental sociology has become one of the sociological specializations in Europe and other countries (Hannigan, 1995: 10-12). Some other sciences and scientific disciplines were quicker, although they cooperate with it often, copy from it, or upgrade its basic comprehension. As in the case of green criminology, in environmental sociology the problem of defining *what* is the main objective of the research and (sociological) research in the field of environmental issues occurred. Hannigan (1995: 13) focused on causes of the environmental destruction and the phenomenon of the ecological consciousness and movements as one of the main reasons for this. The last ones have focused on immediate responses and solving the consequences of environmental pollution rather than discuss about theories and their manners. The formed line of separation is important for the development of green criminology.

The discussions about the theories led to searching for different connections between the human and the environment. Halsey and White (1998) added the philosophical aspects to the sociological viewpoints on the threats to the environment. They are convinced that the way of humans' comprehension of the world had an important influence on the development of criminological research of incriminations against the environment and green criminology. For authors the main elements of the three philosophical directions are important to represent the directions in science: anthropocentrism, biocentrism and ecocentrism. The concept of the human from the above mentioned philosophical directions appears to Halsey and White (1998: 348) as an important part for the development of the green criminology. They gathered the most important characteristics of the discussed directions, classified and compared them, as shown in the Table 2 below.

From Table 2 is evident that the anthropocentric comprehension of humans and the environment caused an accelerated development of a biocentric and especially ecocentric comprehension of the environment, especially by viewing the relationship between humans and the environment amidst fighting against the maximization of one's own interests and economic successes.

Table 2: Philosophical perspectives on the environment and human: anthropocentric, biocentric and ecocentric perspective.

	Anthropocentric philosophy (human-centered)	Biocentric philosophy (species-centered)	Ecocentric philosophy (socio-ecological centered)
Conception of natural environment	Instrumental use	Intrinsic value	Dialectical relationship
Conception of human beings	Biologically, mentally and morally superior to all other entities	Morally and ethically equal to all other entities	Socially and ethically responsible for the integrity of non-human entities
Ideological basis for activity	Self-interest	Biotic-interest	Socio-environmental interest
Main objective of social world	Maximization of economic freedom in commodity production and consumption	Self-realization based on Gaian biological and ecological concern	Meeting of collective human needs by maintaining eco-systemic stability
Structure of decision-making	Highly centralized organs of power	Reliance on expertise	Participatory democracy
Primary indicator for human well-being	Economic success	Spiritual awareness	Socio-ecological well-being
Favored environmental strategy	Sustainable development Economically efficient use of resources	Righteous management Mass preservation of wilderness	Bioregionalism Ecological balance
Type and role of environmental laws	State-administered laws informed by principles of liberalism and neo-classical political economy	Centrally administrated laws informed by the idea of moral equivalence of all species	Communally-administered laws informed by bioregional concerns and related to wider global conditions
Socio-environmental outcomes	Deepening social inequality Extensive ecological problems	Maintenance of social inequality No significant ecological problems	Social justice Ecological sustainability

Source: Halsey and White (1998: 348).

Halsey and White (1998: 367) stressed that it is about the dimensions which have an important role in understanding the relationship between the human and the environment. This relation cannot be neglected when defining crimes against the environment; it is important to develop the ecological comprehension of the caused criminality and its control. In other words, all three directions had an important influence on the development of the green criminology. Due to the anthropocentric relationship of humans to the environment, we are facing such forms of criminality. However, the biocentric and the ecocentric relationship towards the environment form the further forming and development of the green criminology. White (2008a: 24) combines three viewpoints in his discussion about the threatening to the environment: ecocentric, animalocentric and humanocentric. It follows that the philosophical directions in science had an important influence on forming and are still influencing the development of green criminology. At this point

the most important viewpoint is the relationship between the human and the environment; i.e., human towards the environment.

Over time, we faced the split in environmental sociology, which caused the formation of two different 'factions'. Opposite to the theoretical discussions, many environmental movements have formed and their goal was the immediate response and solving the consequences of incriminations against the environment. They also wanted to prevent further illegal and intentional destruction of the environment. The environmental problems are actually social problems. The aspect of solving these problems from the sociological perspective is totally different from that of the protectors of nature, i.e., biologists, physics scientists and others. As stressed by King and McCarthy (2005), many environmental problems appeared (and are still appearing) due to changes in humans' deciding and social structure. This exposes the mutual influence of nature and society even more and the social responsibility for solving the problems. Besides, the public and academic awareness has grown in the existing environmental problems and so has our understanding of their complexity. This is also shown in the publications of numerous (environmental) sociologists. They have examined a wide field - from the environmental racism to the so-called 'monkey-wrenching'. The complexity of the relationship between nature and society was the focus of many environmental sociologists; for example Allan Schnaiberg (1998) with the concept of the 'treadmill of production', Karl Marx and his followers with the critics of capitalism, oft-cited Ulrich Beck (1999) with the concept 'risk societies' and others. White (2003: 485-486) speaks about the responses to the threatening the environment. The responses were analyzed and divided on the basis of their different classification into those. Each are in accordance with the current environmental legislation and are focused on using the criminal sanctions against the perpetrators of environmental criminality. Those, instead of the criminal sanctions set the regulating strategies in the forefront with the goal to preserve and improve the current situation in the field of environmental protection (Meško, Bančić, Eman, & Fields, 2011). Only the first group of responses could be connected to the development of the green

criminology, although both groups belong to the field of Helsey's and Whites' (1998) biocentric and ecocentric concept of the relationship between the human and the environment.

Environmental sociology as a source of green criminology could be connected with Sutherland's (1949; in Sutherland & Cressey, 1974) definition of the sociology of law as a part of criminology. As a result, there is a tight connection between sociology and criminology which is especially expressed in researching the environmental problems. In some areas it is very hard, almost impossible, to draw a clear line between the environmental sociology and green criminology. It is shown in the discussions of green criminology as a new branch, because its development was intertwined with the field of environmental sociology. From the beginning of the 1970s to the 1990s parallel to the sociological interest for the environmental problems the criminological approach has developed. It is not so clear when exactly, but it is certain that the influence of the philosophical directions in science and the huge swing of persisting and rebellious environmental movements and associations had a great influence on the focused interest of classical criminology for the environmental problems and faster development of green criminology as a branch of a social science about crimes.

From the analysis above, sources originate from two directions within the development of green criminology. The first comes from critical criminology with the Marxist relation towards the environment. Over time an eco-critical criminology is formed, which focuses on the political and cultural viewpoints of life of an (rich) individual. Today eco-critical criminology is only a part of green criminology. The second one comes from sociology or a later formed environmental sociology. Within the sociological research of the society and the relationship of an individual towards the environment, research of environmental legislation and actions occurred as a part of sociology of law. Its expansion ended in the phenomenon of green criminology as an individual discipline. If summarized, all three presented directions of development: 1) *radical-critical*, 2) *sociological-theoretical*, and 3) *sociological-philosophical*,

which was at first called environmental, is today known as green criminology. This was only the beginning of the development of new branch of criminology, which leaves many unanswered questions and faces constantly with the question 'why' of the social development and technological progress. This also continues in the era of globalised modern society in the 21st century.

3.1.4 Green criminology at the beginning of 21st century

Environmental problems in the field of criminology represent a totally new perspective; therefore there is a need of new theoretical tools and practical suggestions. South (1998) warns that in the 21st century relevant criminology needs to be aware of the meaning of the environment. It needs to include the intellectual width and the reserved part of the field into which it will be capable to classify the fields of environmental, human and animal rights and their threatenings. From the ecocentric point of view a human being is among other animal and plant species as well as microbes and fungus a part of a perfect natural cycle, without which it would be impossible to survive. Therefore it is necessary that we treat all living beings equally from the sociological point of view (i.e., socio-ecological perspective). Criminology needs new ideas and new directions.

Criminologists form their own definitions of environmental criminality in two ways: 1) *the legal-process approach* defines the parameters of damage according to the procedures, which are determined by law; and 2) *the sociological-legal approach* determines the damaging according to the practice of harmful examples, which can be classified into the framework of the current criminal legislation. Due to the emphasized duality of criminological approach, suitable analyses of the environmental harm demand for the criminological interest to also expand outside the mainstream of the comprehension and legal definition of the action (which is harmful to the environment). South (1998) connects the criminological research of the field of environmental crime with Becks' theory of social risk (1992) and exposes the importance of changes or adjustment of criminological theories to current progress and changes as well as prohibited actions against the environment. In

the area of environmental issues, criminology is faced with interdisciplinarity in researching and investigating different deviant phenomena against the environment. South (1998) believes that it is important in the development of the so-called 'green agenda' that criminology recognizes the limited use of natural resources and their incompetence of resource renewal. Furthermore, criminology has to follow the global and socioeconomic trends, which have a great influence on social sciences. For South (1998) this is also a part of social risk, therefore criminology in the future should have an intellectual width and a legal space to be able to research the environmental, human and animal rights as an inseparable and connected field of expertise. This happened with green criminology in the 21st century. Green criminology is even more intensely focused in the formulation of basic terminology and at the same time expanded its field of study. This confirms the dominance of the sociological perspective of environmental crime. The latter is reflected in the legal regulation of environmental protection as the number of legal orders, that define the environment, is increasing and their field is expanding.

There continues to be an ongoing debate about the appropriate terminology to be used. Moreover, criminologists are dealing with vivid and constantly changing phenomenon that influences the changes of criminology as such (White, 2008a: 3):

The link between environmental issues and criminology finds its expression in environmental or green criminology, itself a development that has arisen from advances and concerns from outside the field as such. In this relatively new area of research and scholarship the concern is to stretch the boundaries of mainstream criminology to accommodate issues of global significance, while also utilizing the insights of conventional to illuminate ways in which to understand and to respond to environmental harm.

After facing the problem of terminology and distinguishing between the terms environmental criminology and green criminology, White (2008a: 8) defined green criminology⁷² as "*the study of environmental harm, environmental laws*

⁷² At first, White (2008; 2009) used both terms, environmental criminology and green criminology, together at the same time or both terms in succession, one after another, to avoid confusion and opposition.

and environmental regulations by criminologists". He tried to expand the research field of green criminology with the introduction of philosophical perspectives; anthropocentric, biocentric and ecocentric approaches to environmental harm. White (2008a: 14) notes that green criminology could be divided regarding *who or what the victim of environmental criminality is*. A closer look reveals that White's (2008a) suggested division of green criminology is based on three predominating theoretical directions: 1) *environmental justice*;⁷³ 2) *ecological justice*;⁷⁴ and 3) *species justice*⁷⁵ (presented by Halsey and White (1998) in the previous chapter).

Deriving from the key problem areas of environmental harm: 1) climate change; 2) waste and pollution; and 3) problem of biodiversity (White, 2008b) and the need to expand a range of environmental issues, especially due to the increase of various transnational organized environmental crime, White (2009; 2010a: 6) began to discuss *ecoglobal criminology* as a framework or paradigm within criminology. For White (2010a: 6) "*ecoglobal criminology refers to a criminological approach that is informed by ecological considerations and by a critical analysis that is worldwide in its scale and perspective*". The research agenda of ecoglobal criminology is based on the fact that new typologies of harm have to be developed and that a multidisciplinary approach has to be used for the study of environmental harm. Ecoglobal criminology defines different forms of environmental harm as 'criminal', though they may not be considered illegal in conventional terms (White,

⁷³ *Environmental justice* is a distribution of the environment or environments among people under conditions of approaches and use of specific natural resources in certain geographical areas and influences certain social customs and ecologic risks for certain populations (risks due to race, employment, gender, age, etc.). In other words, in the centre of the analyses is the human being, his health and well-being as well as how these two aspects are affected due to certain forms of production and consumption (White, 2008a: 15-16).

⁷⁴ *Ecological justice* is a relation of human beings in general towards the entire living nature. It includes the interest for health of the biosphere and even more specific for plants and beings, which also live in this biosphere. The main concern of the ecological rights is the quality of the whole environment of the Earth and the rights of other beings (especially animals) to live free in a world with no torture, abuse and destruction of habitats (Smith & Smith, 1998: 223).

⁷⁵ *Species justice* is the third part of green criminology, with which individuals want to include respect of animal rights within a wide perspective of equality of all living beings. The phenomena of discrimination of 'non-human' animals especially step out, because people consider them as inferior to themselves. Tortures and abuses of animals because of the human benefits have been a well known story for a long time (Beirne, 2007).

2010b: 6). White (2010b: 7) further argues about the need to shift the analytical and methodological focus toward global issues and international concerns, and therefore emphasizes three approaches of transnational research: 1) *global*;⁷⁶ 2) *comparative*;⁷⁷ and 3) *historical approach*.⁷⁸ The global approach focuses on globalization of the modern society as a far-reaching process within which environmental harm can be traced all over the world. The comparative approach uses a comparative focus to study environmental crime in two or more countries and regions in relation to each other. The historical approach is based upon historical appreciation of social changes and differences (White, 2010b: 6-7). Besides that, White (2010a: 17) persists that the analysis of environmental harm from criminological perspective must incorporate elements of ‘ecological consciousness’ - awareness about how human acts influence changes of the environment.

As mentioned above, under the sociological perspective regarding environmental crime, the field of study of green criminology is broadening what is evident also from the completely new suggestions in the field of criminology. Historically, it is more often to see the new naming of criminology in the expert literature, where the field covers the problems of deviations against the environment. Individual criminologists (Herbig & Joubert, 2006; Halsey, 2006; White, 2008a; Gibbs, Gore, McGarrell, & Rivers III, 2009) speak about a totally new branch of criminology, where the field of interest merges at least partly with the field of green criminology - *conservation criminology*. The term was used for the first time by Herbig and Joubert (2006).⁷⁹ Conservation criminology (the so-called criminology of environmental protection) is a social science, which uses the interdisciplinary

⁷⁶ The global approach refers to transnational harms, processes and agencies (White, 2010b: 7).

⁷⁷ The comparative approach refers to differences between national states (White, 2010b: 7).

⁷⁸ The historical approach refers to epochal differences in modes of production and global trends (e.g., social and systemic differences over time) (White, 2010b: 7).

⁷⁹ Herbig and Joubert (2006) proposed a distinctive criminological field for environmental crime, rejecting the use of the term ‘green criminology’ (used to refer to an interaction between motivated individuals and the surrounding social, economic, legal, and physical environment) and recommended the term *conservation criminology*. In order to promote the identification of the parameters for conservation criminology, ‘conservation crimes’ must be set within existing and commonly used crime categories, such as: white-collar crime, corporate crime, organized crime, invisible crime, and property (economic) crime.

as well as the multidisciplinary research approach to understand environmental criminality, as well as threats and risks that are connected to it. It offers integration of criminology with natural resource disciplines, other social science disciplines, dealing with environmental threats, and risk and decision sciences. What is more, it encourages examination of political, cultural, economic and social influences on the definition of environmental crime (Gibbs et al., 2009: 2).⁸⁰ The focus of conservation criminology begins with assessment of environmental risk⁸¹ (Gibbs et al., 2009: 8). Its' framework combines knowledge of three disciplines: 1) criminal justice and criminology; 2) risk and decision analysis; and 3) natural resource conservation and management. Gibbs and colleagues (2009: 11) emphasize that cooperation of these disciplines can address various environmental risks that occur at their intersection. The conservation criminology stimulates the scientific study of natural and human systems to maximize the sustainability of humans, animal, plant and other species, habitats and ecosystems (Gibbs et al., 2009: 16). This field of expertise includes researching criminality towards the environment and other activities, which represent the threats to the environment. Criminology of the environment protection deals with a more focused area within the whole field of environmental problems, such as animal rights, abuse and cruel handling with animals, ecological ethics and protection of environmental rights and eco-feminism. That means that it deals with the dynamics and connections between people and nature (i.e., living and dead nature) and its resources. The conservation criminology does that with comprehension of the environment as a victim, and the comprehension, in which threatening of natural resources interferes with or influences the borders of acceptable changes in natural environment in connection with any

⁸⁰ Gibbs and colleagues (2009: 2) concur with Herbig and Joubert (2006) that conservation criminology identifies the core theme of the discussed environmental area of study. Contrary to the narrow focus of study on just a narrow specific dimension of the natural environment, conservation criminology encompass wildlife, pollution, people and other dimensions that are often considered to be mutually exclusive. The term 'criminology' implies focus on issues of crime and compliance, therefore, conservation criminology is the study of environmental risks at the nexus between humans and natural resources that involve issues of crime, compliance and social control (Gibbs et al., 2009: 2-3).

⁸¹ The concept of risk implies some level of uncertainty regarding the outcome of a particular decision or action. Therefore, criminal or illegal activities that have already caused environmental harm should not be referred to as risks. The domain of conservation criminology includes both types of activity (Gibbs et al., 2009: 10).

kind of natural resource (animals, plants or natural resources) or their group. From this point of view, conservation criminology is called science of researching criminality against the natural resources. It includes research of all intentional or inattentive human actions or manipulation, which has a negative influence on the living and dead natural resources of the Earth, which results in a seen or unseen damage of natural resources. Conceptual frame of conservation criminology includes connecting criminology and criminal law, management of preservation and managing of natural resources, risks and deciding, because this is a research approach, where the primary goal is research of the deviations against the environment, the secondary goal is the environmental protection and the public informing and improvement of the practice based on proofs in procedures of environmental criminality and other threatening of the environment. Gibbs and colleagues (2009: 16-17) believe that conservation criminology can enrich the knowledge base of theories, methods and governance about environmental issues by moving towards a more generalizable theory and beyond limitations of a single discipline.

The development of green criminology, as described above, could be presented on a time scale. The scale, which Carrabine and his colleagues (2004b: 314-315) summarized after Harrison and Pearce (2000), is complemented with important dates from the above description of the historical development of green criminology and with the division of the development of criminology after Paul Rock (1994) and Newburn (2007). The important milestones in the development of green criminology in Slovenia are added. They will be discussed in the section that follows.

Table 3: Time scale of the development of green criminology and its classification into the frames of the historical development of criminology.

until 1500	Natural processes of the development and extinction of plant and animal species; ice ages, epidemics etc.
1500-1760	Capitalist growth and ecological expansion in Europe cause decreasing of individual resources and exhausting the soil, causing the first demographic movements and ecological transformations of some parts of America.
1500-1750	Ur-criminology - the origin of criminological thought The first beginnings or better to say the introduction to criminology represents a large unorganized number of observations, discussions and presumptions of different writers (from writers of theatrical plays and priests to pamphlet writers, essay writers, journalists and medical doctors, lawyers and judges, journalists, prison chaplains and magistrates), whose interest was stirred from prisons and prisoners, thieves and beggars. These individuals introduced practical and experimental interest for the problems of

	<p>criminality, criminals and prisoners. The most ‘common-sense’ or better to say on theory based explanations of crime (i.e., anomie theory, labeling theory, control theory) have its origins in this period. In that period crime was a moral matter. Ur-criminology was something special, because it was a part of an uncultivated tradition and incomplete development (e.g., “<i>ur-criminologists did not profess to be academic teachers or researchers of knowledge about crime</i>” (Rock, 1994: xiii). Ur-criminology is a start of criminological thought, a specific discourse, which “<i>represents a form of a common sense about criminality and morals, with which the academic criminology competes</i>” (Rock, 1994: xiii).</p>
1760-2000	<p>Industrialization, urbanization, ecological expansion and colonization caused great pollution of air, water and soil, loss of huge wooden areas (e.g., rain forests), first extinction of animal and plant species due to human actions and the appearance of global warming; environmental movements got stronger and expanded predomination of Marxist viewpoints.</p>
1750-1830	<p>Philanthropy and the emergence of criminology Not earlier than at the end of the 18th century the first signs of the scientific criminology were recognized. Slowly they crystallized out of the ur-criminology as a part of a larger process of institutionalization of the criminal justice systems in Europe as well as in North America. The beginnings represent the groups of reformation of law, prisons, shelters and courts of justice that actually represent so called collective life of criminology (e.g., identity, sense of past and place in the world, recognizable membership and meetings, common language, agreed methods of communication and ‘new’ ideas). In the process of reforms the ‘civilized attitude toward crime’ has been adopted in the form of a system of policing, a system of fair trials and a system of correctional institutions.</p>
1830-1880	<p>Criminology and the administrative state The era of the new governing authorities and legally founded rationality of new politics brought the increasing base of knowledge of the new group of experts, based on the collection of reports, accounts and numerical information. The country met statistics and included it for use of numeric facts in its decisions. From 1830 on people prepared the official statistics in police, in courts and criminal institutions in England and Wales and they published it in annual reports. The society represented a huge field of forces and phenomena as the subject of precise measuring and forecasts for the criminologists. This was especially true for crime. In that period criminology became distinctive, a specialized study with its own subject of research - institutionalizational and administrative focused science (the field of social control increased). It is about the so-called pre-Lombrosian phase of criminological (re-)searching of causes for crime. The first men, who named themselves as ‘criminologists’, were medical doctors and psychiatrists, who worked in prisons, shelters, medical schools, and lawyers and judges, who investigated the deviant individuals within their work.</p>
1880-1900	<p>Criminology as an academic pursuit Till the end of the 19th century enough was done to convince people about the beginnings of criminology as a special discipline, which considers the world from a totally different perspective, and is accessible for divide itself from the practical work of direct following of prisons and asylum. The results show us that the word criminology was first used around the year 1850, but it was generally used after 1890 when criminology begun to be taught at the universities. Under the influence of Cesar Lombroso criminology focused on measuring, comparing and classification of the types of deviant individuals. The purpose of the criminology was to be a positive science, devoted to the goal of changing (decreasing) criminality and crimes. In the development of criminology different directions appeared: classical criminology, positivism and criminology (biological positivism, psychological positivism (learning theories, cognitive theories, Eysneck’s biosocial theory), Durkheim and criminology (anomie theory), later strain theory, Chicago School, cultural and subcultural theory, interactionism and labeling theory, control theories (reckless’s containment theory, neutralization and drift theory, social bond theory, Gottfredson and Hirschi’s general theory of crime, Tittle’s control-balance theory), radical and critical criminology (Marxist criminology, American radicalism and criminology, radical criminology in Britain), realist criminology (left realism and criminology, right realism and criminology) and feminist criminology (early criminology and female offender, contemporary feminist criminology).</p>
1900-1950	<p>Development of environmental protection law: <ul style="list-style-type: none"> - The end of 19th and 20th Century in Europe; - Between the I. and the II. World War in the United States of America. </p>
1960-2000	<p>Institutionalization of criminology After 1959 the great development of criminology starts, which was marked by the critical mass of ambitious and energetic young scientists, who rather cooperated with each other than move back to the ‘invisible school’ of development of criminology, and herewith won the durable social and intellectual independence. In 1980s in Great Britain specific surveys about criminality (British Crime Surveys) occurred, known as so-called victimization surveys. Criminology became institutionalized (the combination of scholars and government willing to fund research on social problems). At the end of 1980s and in the 1990s criminology was fulfilled with the combination of empiricism and deviation from theories. It also became more determined, but not necessarily defensive. In this period criminology mostly focused on education and research. Criminologists became ‘<i>fauts de mieux</i>’, who by increasing the number of students and by qualifying other professional experts as well as searching for financial subventions try to find the resources for their own research in hope that this would become a new niche on the student market. The development of different directions continued. Institutionalization have influenced on the different directions inside the criminology: new sociology of the deviance, contemporary classicism (rational choice theory, routine activity theory, situational crime prevention), late modernity, governmentality and risk (the transition and late modernity, Foucault and governmentality, risk and new culture of control, assessing governmentality - new penology and risk), modern feminist criminology and other theories.</p>
1970-	The beginnings of the sociological research of threats towards the environment and the phenomenon of

	the first origins of environmental criminology. At the end of 1960s the critical criminology warns about the meaning of a healthy natural environment and starts to work deeper with the environmental criminality. The beginnings of the environmental justice with the Warren County case in North Carolina.
1972	The first world conference about the environment in Stockholm, where the Declaration on the Human Environment was adopted.
1980s	Environmental problems move to politics. Forming of green criminology as a form of a radical or critical criminology and the phenomenon of the eco-critical criminology .
1981	The first Slovenian text about the green criminology and ecocide - Pečar (1981) .
1990	Final forming of green criminology. Lynch (1990) as first brings in the term green criminology , which becomes the synonym to the term environmental criminology. 1990-1991 a new branch of the critical criminology forms: eco-critical criminology .
1998	First scientific publications of green criminology in the worlds' bases and first international network of criminologists. Beirne and South (1998) as first collected various criminological work about green issues (e.g., environmental justice, animal abuse, green criminology, crimes against the environment) in a special issue of Theoretical Criminology. Later Halsey and White (1998) include beside the sociological also the philosophical viewpoints on threatening to the environment and the relationship between humans and nature. Henceforth, the real cooperation and development of green criminology in the national and international level begun.
2000-	Criminology in 21st century. Criminology has experienced huge development and growth over the past that reflects in its global network of criminologists, popularity and enrolment in under- and post graduate educational systems and in forming of criminal justice politics and national criminal justice systems. In the present period, criminology is an independent social science. It is a discipline that that continuous to develop and grow, especially with emerging of the forms of crime and topics (e.g., cyber crime, environmental crime, economic migrations, etc.) that need to be studied. Today, criminology keeps the theoretical basis but is becoming more applied and connected with the experts and professional service fields. Furthermore, the multidisciplinarity of the criminology and its' cooperation with other sciences is increasing. Funding of the criminological study is just one of the issues in the present era of the globalized modern society and among criminologists there is a huge debate if criminology is a public good or a private interest and which direction should criminology follow.
2004	Halsey (2004) starts the debate for pro and against 'green' criminology , based on discussion of Lynch and Stretsky (2003) about the meaning of green from various criminological perspectives. Overview of recent works on environmental crime and regulation demonstrated the majority of scholars are imbued by quite problematic ideas how best to envisage the nature of environmental harm (Halsey, 2004: 833).
2006	Introduction of the conservation criminology by Herbig and Joubert (2006).
2008-2010	A new beginning of the criminological investigation of environmental criminality in Slovenia and first scientific publications from the field of environmental criminology of the Slovenian researchers in home and foreign bases.
2008	Introduction of the eco-global criminology by White (2008a).
2009	Introduction of the conservation criminology framework by Gibbs, Gore, McGarrell and Rivers III (2009).
Today (21 st cent.)	Climate changes, lack of drinking water and some other goods, clearing of forests, spreading of deserts, exhaustion of soil, oil spill and spilling of other toxic substances from factories, toxic waste, acid rain, nuclear risks, technology development and new risks parallel to the development and accelerated development of environmental criminology and other criminological directions as well as their researching of human threats, damages and destroying of the environment.

Source: summarized after Rock (1994), Harrison and Pearce (2000), Carrabine et al. (2004b), Newburn (2007) and Meško (2010).

Table 3 shows a clear and evident picture of the course of the development of green criminology as a whole, which is classified in the frame of the origins and development of criminology as a science. The development of green criminology originates from the late 1960s and the beginning of 1970s. In spite of developments over the last four decades and of the formation a new branch of criminology, we are facing the lack of clearly defined terms, definitions and suitable criminological theories. Such condition makes the further development difficult and prevents any kind of in-depth criminological research; the problems appear already when defining the basic terms of green

criminology. Through history three directions of green criminology are identified (radical-critical, sociological-theoretical, sociological-philosophical), which later combined under what is known as green criminology. We are still developing this new branch of criminology. The review reveals different influences of other sciences; obstacles, with which criminologists are still facing today; defectiveness that needs to be abolished and a huge importance of consensus and of accepting one unified definition. Despite the fact that in every country the development of green criminology went its own way, the main objective remains the same; deviations against the environment.

The historical review of the development of green criminology confirms the statement of White (2008a: 9) that its development in the past four decades brought to new interests, concepts and analytical techniques. The reason for such condition is the increasing awareness of the reality of the problem of degradation and destroying of environment and the consequences, which threat the humans (White, 2003) and the increase of importance and interest of the traditional criminology for such activities. The connection among the natural and sociological sciences in the field of environmental issues is becoming generally accepted and the same goes for the multidisciplinary approaches to solving and researching this field. With time we are witnessing bigger and more positive changes in connection with green criminology. The anthropocentric comprehension of human and the environment caused the development of the biocentric and especially ecocentric comprehension of the relation between the human and the environment. The biocentric and ecocentric relation to the environment led to further development of green criminology. It can be concluded that the philosophical directions in science had an important influence on forming and are still influencing the development of green criminology. Similar changes were also detected and have influenced on the development of green criminology in Slovenia, as shown below.

3.2 Development of green criminology in Slovenia

At first, not much could be written about the development of green criminology in Slovenia. The one and only work from the end of 20th century in this field of expertise reaches back into 1981, when Pečar (1981) tried to warn about the new forms of criminality in his attempt to define the terms environmental crime and green criminology. He offered the etiologic classification of the known forms of environmental crime in Slovenia, defined the role of criminology and sciences related to it, and emphasized the tasks of controlling institutions. Despite the published forecasts about the future, the interest in green criminology subsided. In the Slovenian criminological environment the key problem was an incredibly low interest of criminology and criminologists for environmental crime and the field of green criminology. This review shows a rapid development in environmental protection law on one hand and an extremely low interest of Slovenian criminologists for researching the incriminations against the environment. Only in the past few years are we witnessing the renewed discussion about green criminology as a new scientific discipline within criminology in Slovenia.

Only since 2007 could we follow the renewed development (i.e., continuation) of the green criminology in Slovenia. First, endangered animal and plant species, due to high profits in their trafficking, has attracted the interest of researchers (Dobovšek & Goršek, 2007). In 2008 the first analysis of detected environmental crime forms and their classification in the phenomenological scheme was introduced (Eman, 2008). In 2009, green criminology perspectives and research challenges concerning crimes against the environment in the Republic of Slovenia were presented (Bučar-Ručman, 2009; Eman and Meško, 2009). More recently, comparative criminology perspectives of crimes against the environment (Eman, Meško, & Fields, 2009) have been emphasized. Organized environmental crime (Eman, 2010a; Odar & Dobovšek, 2011) and especially international waste trafficking issues (Klenovšek & Meško, 2011), occupied criminologists the most in 2010 and 2011. Furthermore, the debate about criminological perspectives on the threats to the environment (Meško, Dimitrijević, & Fields, 2011), Slovenian environmental protection policy

(Sotlar, Tičar, & Tominc, 2011) and situational crime-prevention measures (Meško, Bančič, Eman, & Fields, 2011) were presented.

The literature also reveals that researchers in Slovenia have begun to contemplate several environmental (crime) issues:

- 1) whether environmental crime represents a threat to security (Fritz, 2011; Mitar, 2011; Ivanuša, Banutai, & Podbregar, 2011; Eman, 2010);
- 2) what are the phases of the procedure of environmental crime scene investigation and if special investigation teams are needed (Dobovšek, Praček, & Petrović, 2011);
- 3) how the media about report abenvironmental crime (Eman & Meško, 2011a); the nature and extent of the psychological impacts of a polluted environment on humans (Areh & Umek, 2011);
- 4) types of justice protection for the environment (Rakar & Tičar, 2011; Eman & Meško, 2011b); and
- 5) the ways in which Geographical Information Systems may be used to identify environmental crime hot spots (Eman, Meško, & Ivančič, 2011).

From all above-described arises that we can talk about a new formed branch of criminology in Slovenia. Compared to Great Britain, the United States and Australia, green criminology in Slovenia is still at the beginning phase, approximately two decades behind. Undoubtedly, the course of development of green criminology in Slovenia, from its very beginnings, is occurring much faster than in the countries mentioned above. Slovenia is, in terms of its' interest for the environmental crime and the development of green criminology, somewhere on the border. Slovenian green criminology can be placed between the group of Central European countries, like Germany, Italy and Austria, which develop this field very focused and planned, and at the top of the group of transition countries, like Hungary, Croatia, Bosnia and Herzegovina, and Macedonia, which only discuss the possibilities or are at the very beginnings of the development of a new branch of criminology.

To Zielneys' et al. (2006) study similar situation is evident from the historical overview of the development in the field of green criminology and the number of publications in Slovenia. In January 2012, a survey was conducted reviewing the Slovene Co-operative Online Bibliographic System & Services base, which contains all published works in Slovenia. The survey used the same 9 key-words that were used in the survey from Zielney et al. (2006).⁸² The review contained all publications in all social disciplines in Slovenia from 1970 to 2011. The results of the historical overview of publications in the field of green criminology in Slovenia are presented in the Figure 6 below.

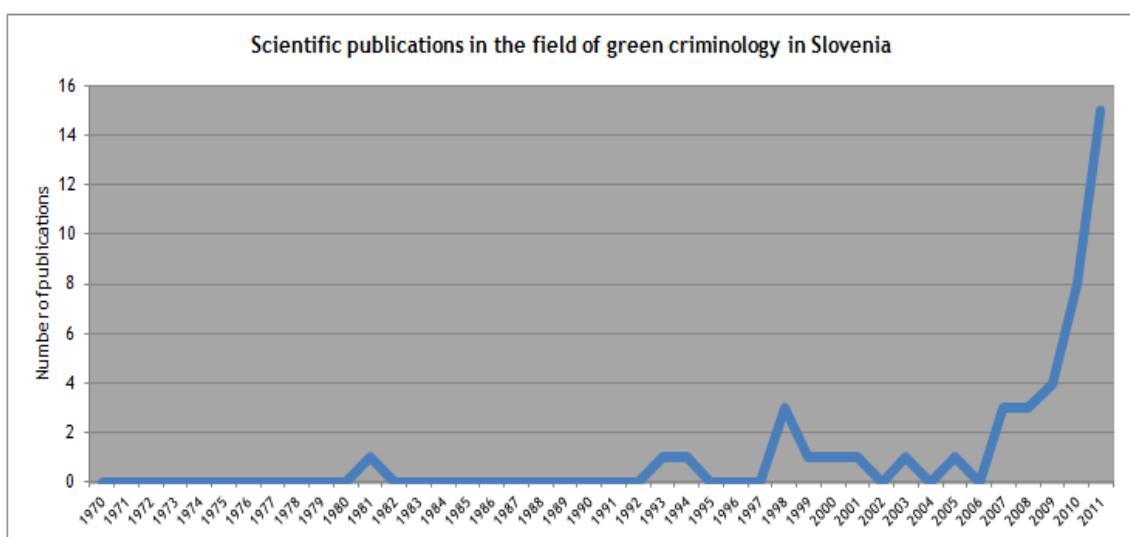


Figure 6: Number of scientific publications in the field of green criminology in Slovenia in 1970-2011.

As already mentioned, the key problem in the Slovenian criminological environment represents a small interest of criminology regarding the phenomena of environmental crime and the field of green criminology. Despite Pečar's (1981) predictions for the future, the interest on green criminology died away. But on the other hand, in the population of only two million citizens, this is not so surprising. Only in the past few years we can follow the renewed development of the green criminology in Slovenia, in detailed explained above in the review of the historical development of green criminology. The 'new' beginning of criminological studies in this part of

⁸² The key-words were used in English and Slovene language and the double results (the same article at Slovene and English key-word) were considered only once.

Europe has joined the global discussion about environmental crime, perpetrators and victims.

3.3 Concept and meaning of green criminology

With the incrimination of the phenomena against the environment a new field of expertise was born for criminology. This field differs from previous research, because it is all about a new deviation, which threatens the specially secured goods in a special way, and it is about a different causality as well (Pečar, 1981: 41). In the 21st century, traditional criminology must be aware of the meaning of the environment (South, 1998: 225) and should be able to classify the perspectives of the environment and human in it (i.e., all living beings are equal). Due to the difficult and long process of moving from anthropocentric to ecocentric perspectives of the relation between environment and human criminology was incredibly slow in responding (Lynch & Stretsky, 2007: 266) to the environmental issues (e.g., harm, crime). The required reorganization within its research and redirection from strict classical to new forms of criminality, such as environmental crime, was discovered rather late. Lynch and Stretsky (2007) believe that now it is time for criminologists to begin treating environmental issues seriously and start cooperating with other sciences, whereby green criminology could be a way and a method for renewed cooperation of natural and sociological disciplines.

In theory, attempts to define the new branch of criminology are rare. White (2008a: 8) makes a point that green criminology fundamentally refers to researching of environmental incriminations, environmental legislation and environmental activities on the part of criminologists. The field of interest of green criminology includes certain incidents and events, often inside of the defined geopolitical field to the questions of global dimension.⁸³ The green

⁸³ The field of research in green criminology covers (South, 1998: 214): 1) pollution and its regulation; 2) corporation criminality and its influence on the environment, health and safety at work; 3) organized criminality and corruption in connection with the illegal dumping of toxic materials; 4) influence of law enforcement and army on the environment and population; 5) damaging land and water ecosystems; and 6) police handling of perceived criminal acts or violations. In modern era of constant changes and development of new forms of environmental crime are appearing. The list of South's (1998) environmental phenomena, which belong to the field of criminological research of the environmental crime, could be

criminology represents more than just a simple discussion about the environment in general and about what is necessary to do for its conservation and protection (White, 2003: 484). Within the frame of green criminology research about certain trends, phenomena and other environmental issues are necessary. At this a multidisciplinary approach and cooperation of different disciplines is inevitable (South, 1998), especially cooperation between sociological and naturalistic fields.⁸⁴ White (2007) includes the conceptual analyses as well as pragmatic interventions on different fields and also includes the multidisciplinary strategic approach (economic, legal, social and ecological evaluation). Such an approach contains organizational analyses as well as an investigation of successful practices in the field of controlling methods, methods of evaluation, implementation of the legal legislation and education.

White (2007; 2008a; 2010a) included and in his works presented very precise description of forms of environmental crime and the field of green criminology. Despite this, he still insists that the theoretical frame of green criminology is hard to define. White (2008a: 27-28) adds to green criminology a lot of dimensions and ideas as well as the contents of many different sources, disciplines and aspects. The main purpose of this branch of criminology is to investigate the nature of threats and damage to the environment, which includes different perspectives that differ among themselves. He included them in defining the tasks of green criminology:

- 1) identifying the changing definitions and types of environmental criminality and interpreting the ways of analyzing the socio-legal concepts and frames of researched environmental phenomena;

expanded by: 1) systematic clearing and plundering of forests; 2) (conscious) incorrect use of spray chemicals and fertilizers in agriculture; 3) smuggling and dealing with rare plant and animal species; 4) incorrect storing of toxic waste or their illegal export into the third world countries; 5) light pollution; 6) criminal act of resigning obliged handling, when the country as an owner or supervisor 'overlooks' violations of the environmental legislation and consciously threatens its own citizens because of gaining profit; etc.

⁸⁴ White (2008a: 29) emphasizes the urgency of cooperation of criminology with phytology, zoology, geography, geology and other natural and sociological sciences.

- 2) identifying the different types of environmental criminality with the analysis of the studies of individual cases and forming the useful typology of environmental criminality;
- 3) answering the question of what consists the environmental criminality from the legal, ecological, sociological, criminal investigation, national-safety aspect and aspects of many other disciplines;
- 4) researching the nature of regulatory mechanisms and mechanisms of the social control of threats towards the environment with the intention of protecting it; and
- 5) researching the nature of the relationship between the environmental changes or changes in the environment and the process of criminalization.

White (2008a: 14) divides green criminology with regard to *who or what is the victim of environmental criminality*. The suggested classification of green criminology is connected with three predominating theoretical directions: *environmental*, *ecological*, and *species justice*, where also the aspects of responding on threats or damages or destroying the environment come from. All three approaches to the study of environmental crime, which also influence the formation of the definition and subject of green criminology, are presented in the Figure 2. Environmental, ecological, and species justice are based on three philosophical approaches of the natural environment: anthropocentric, ecocentric and animal-centric philosophy. Loyalty to different philosophical directions is also shown in forming the definition of green criminology and environmental crime, which is evident in works of Robert D. White (2003, 2004, 2005, 2007, 2008a, 2008b, 2009, 2010a, 2010b) and already described changes of green criminology.

Carrabine and colleagues (2004a: 316) stress that green criminology needs to reappraise more traditional notions of criminality and deviance and start to examine the role that society plays in generating environmental degradation and destruction. Lynch and Stretsky (2003: 233) note that green criminology points towards the logical necessity of choosing the distinction between a

green approach and more widely accepted methods of investigating the specific forms of environmental crime, thereby calling into question the rationale for green criminology itself. Therefore, Heckenbergers' (2009: 14) definition of green criminology is prevailingly short and clear:

Green criminology broadly refers to the study by criminologists of environmental harms, environmental laws and environmental regulations. Within green criminology the three broad approaches to the conceptualization of environmental harm are environmental justice (main focus is on humans), ecological justice (main focus is on the environment) and species justice (main focus is on animals).

Over time, new definitions of green criminology appeared. White (2008a) discusses engaging with the climate changes and social conflicts, in which he especially stresses the meaning of research program for *ecoglobal criminology*. Ecoglobal criminology includes the basic criminological way of research and critical analyzing of environmental problems. Research of environmental crime and issues and studies of the perpetrators from the viewpoint of searching the answers to certain questions about human respondent to environmental issues and threats⁸⁵ are very typical for it. White (2008a; 2009) brought the content of green criminology, which is based on Sutherland's (1949; in Sutherland & Cressey, 1974) definition of criminology and deals with the environmental crime on the basic level, to the world level and classified the ozone hole, hotbed effect and warming all over the world and climate changes among the forms of environmental crime. *Conservation criminology* was proposed as a second new definition of green criminology and uses the multidisciplinary approach - emphasizes integration of criminology with natural resource disciplines and other social science disciplines. Conceptual frame of conservation criminology includes connecting criminology and criminal law, management of preservation and managing of natural resources, risks and deciding, because this is a research approach, where the primary goal is research of the deviations against the environment, the secondary goal is the environmental protection and the public informing and

⁸⁵ These questions are: How do we explain and respond to the worlds' development? How does it influence our declaring for environmental threats? How do we ensure the protection of human rights and the so-called rights of animals and plants? How do we understand and accept the power and interests that express modern tendencies of the discussions?

improvement of the practice based on proofs in procedures of environmental crime and other threatening of the environment (Gibbs et al., 2009).

Everything that has been written about green criminology by now could be summed up in a short definition:

Green criminology is a social study that uses multidisciplinary and interdisciplinary approach at research of the environmental crime, environmental harm, environmental legislation, environmental regulations, environmental protection measures and public responses to caused violations. Green criminology is much more than just a discussion about environmental issues. It is based on critical criminological conviction to defend environment as one of the basic human good and human right. The research agenda of green criminology is based on the assignment to study the known forms of deviant⁸⁶ behavior against the natural environment. Green criminology observes the dynamics between the human and the natural environment, especially human behavior and acts towards one or more elements of the natural environment. It is interested in a human as a perpetrator of environmental crime, environment and human as victims of the environmental crime and possible crime-prevention methods of the environmental crime.

An historical overview of the development of green criminology confirms White's (2008a: 9) statement that the development of green criminology in the past 20 years had led to new interests, concepts and analytical techniques. Such increasing awareness of how serious the problem of degradation and destruction of the environment and herewith the consequences, that threaten humans, are, is the reason for this condition (White, 2008a). We also witnessed the increasing importance and interest of traditional criminology in such events. The connection between the sociological and naturalistic sciences in the field of environmental issues is becoming generally accepted; the same goes for the multidisciplinarity of approaches to solve and research environmental issues. Over time we witness larger and more positive changes in connection with green criminology. More discussions about *why, how and in what way* green criminology has developed and *when* it emerged, take place.

⁸⁶ The term deviant means legally defined and generally, socially, morally unacceptable handling of the environment (or other subjects or objects).

It is about a new branch of criminology, which in the last decade develops much faster than other criminological and other disciplines. It expands the field of its research so fast as the forms of environmental criminality change. Despite the rapid development the individual yet undecided fields and unanswered questions remained, which prevent the further development of a new branch and force it to solve the 'old' challenges first before starting to search and solve the new ones. It is worth remembering what White (2003: 293) pointed out: "*An individual cannot choose a certain environmental problem and expect from it that it would naturally meet all the aspects of criminological theory and practice.*" In the real world, the situation is the opposite; green criminology adapts to the emerging phenomena of deviations against the environment.

3.3.1 Not environmental, it is green criminology

In the past decade we witnessed numerous discussions of criminologists about how to name a branch of criminology, which deals with researching the criminality against the environment as a social and individual phenomenon. Since 1990, discussion among criminologists about naming the branch of criminology, which studies environmental deviations, has taken place. Initially there are two suggestions: environmental criminology and green criminology. The discussion about the suitability of this naming scheme, beside the already existing unintelligibility, fueled new resistance, especially among British, American and Australian criminologists, which makes a normal development of this rather new branch of criminology even harder.

The reason for the present problem of defining the 'green criminological' field derives from a huge distinction between what is officially defined as harmful to environment from the aspects of criminal and civil law (Figure 1). Another reason derives from a distinction about what, from the environmental point of view, represents the greatest source of threats to the environment (Halsey and White, 1998). When defining the field of operation of the criminologists we should take this into account. Especially when it is about the field of teaching green criminology - young branch of criminology, where numerous

unanswered questions still appear. Besides the problem of a unified definition of green criminology and environmental crime as a subject of teaching of green criminology, a notable subject of debate is also the development and especially the origin of green criminology as a branch of important sociological scientific discipline. All this has among other reasons (new and undeveloped branch of criminology, invasion of new ideas and theories etc.) resulted up to low interest of criminologists for the field of environmental crime and their 'silent' thinking about certain problems. Halsey and White (1998) expose the influence of the three philosophic frames regarding the relation of humans toward the environment, which need to be taken into consideration when forming definitions of environmental crime. Already mentioned and described, anthropocentric, biocentric and ecocentric aspects of the relation between human and environment are mostly different. Nevertheless, all three have an important influence on the definition of environmental crime as well as green criminology. Therefore they need to be taken into account in future legal discussions about decrees of environmental protection as well as in the field of social control. In other words, the reason for dealing with environmental crime is the anthropocentric relation of humans towards the environment. In the last period, prevailing biocentric and ecocentric relations towards the environment represent further formation of green criminology.

The definition of the field of criminological research of environmental crime forms is very important. Halsey and White (1998) stress that exactly in the field of environmental crime or better to say threats to the environment, beside the legally defined criminal acts we also come across many 'normal social actions', which at first are morally wrong from the society's or an individual social group's point of view, but with time they are put on a list of legally prohibited actions. Once a 'normal' action is now legally prohibited and sanctioned, which is challenging for the green criminology. Halsey (2004) points out that green criminology does not have a glossary, which is needed for the transfer over the concepts of a modern theory about damaging and repairing. Furthermore, when criminologists deal with the term 'green', they

inevitably also express a part of political and environmental directions. He insists that the term 'green' should be eliminated from criminological discussions, because it does not properly include the personal and intergenerational processes and processes between different ecosystems, united and interweaved in different scenarios. He stays critical and extols the fact that the green criminology misunderstands its role and extent of thinking and writing about the actions in the world; he exposes the problem of the excessive anthropocentric approach to the discussed problems of environmental crime, where the human being is still in the forefront.

Besides the problem of the unified definition, the problem of different meanings and understanding of the same term occurs. When talking about green criminology, it is necessary to distinguish between two important namings of criminology, where it usually comes to incorrect interpretation and understanding. The problem of 'changing' the meaning of the terms green criminology and environmental criminology⁸⁷ is present. This naming does not represent such a big problem in Slovenia as it does in English speaking countries, where the term 'environmental criminology' has two different meanings. A non-expert the field of criminology could translate the term alternatively completely wrong. The Slovene translation could be green criminology and environmental criminology, in which one distinguishes two different branches of criminology. Green criminology, in the past also known as environmental criminology, represents the branch of criminology that deals with researching criminality against the environment and connected phenomena. Lynch (1990) was the first to use the term green criminology. Green criminology, which studies crimes against the environment, was formed from the discussions regarding environmental harm and criminality. Environmental criminology is also a branch of criminology, which in contrast

⁸⁷ Environmental criminology deals with researching special (physical and social) determinations of patterns of criminal behavior. One of its Pioneers, C. Ray Jeffery, by using behaviorism, brought forth a model of preventing criminal behavior with re-forming the exterior space (or 'environment') (Kanduč, 1999: 328). Brantingham and Brantingham (1981) stress in environmental criminology the marking of criminal spaces on maps. Likewise, environmental criminology is closely connected with situational criminal prevention.

to the green criminology, deals with researching special determinations of criminal behavior patterns (Kanduč, 1999) and situational crime prevention.

The theoretical frame of green criminology is hard to define. White (2008a: 14) is clear and brief: “*There is no green criminological theory as such.*” A clear definition is very rare and lack of an exact framework of green criminology is one of the reasons, which make a successful research of green crimes harder. The most often used is critical criminological theory and the most evident is Heckenberger's (2009: 14) definition of green criminology that defines it as the study of environmental harm, environmental legislation and regulations from the anthropocentric, biocentric or ecocentric perspective.

It is important to identify all the key scientific disciplines which encompass the field of environmental crime and define the frames of cooperation and multidisciplinary approach of green criminology to solve individual environmental problems and define their ways. At the same time it is necessary to consider the frames of development of the green criminology worldwide, but nevertheless it is necessary to pay attention to special features (i.e., local, regional and national level), that are most important for our environment. Rock (1988: 68) stressed that criminology needs new ideas and directions. From this point of view rationalization of green criminology in terms of deviation from loud environmental movements and a detailed reflexion about legalization of individual legal norms and more specific definition of its' field of research is necessary. In other words, green criminology has to be seen as much more than just a study about deviations against the environment and violations of the environmental protection legislation, especially their reasons, caused consequences and responses of the society. Due to the lack of adjusted terminology and commonly accepted internationally acknowledged definition problems on all other levels of discussion, repression and prevention of environmental crime are appearing. The lack of a united definition presents an additional problem in studying environmental crime and the resulting consequences, as discussed below.

4 Environmental protection legislation, environmental victims and environmental crime prevention

“Where prevention fails the effects on people and their environment may be irreversible.”

Carter (1996: 10)

According to Sutherland (1949; in Sutherland & Cressy, 1974) and Meško (2010: 23) criminology contains research of law formation (formation of norms, laws and other sub-law acts), breaking law (etiology and phenomenology of deviant phenomena), and social response against the offenders (informal and formal responses).⁸⁸ Due to this reason alone, criminology includes research about the formation of social norms, causes for violating the social norms, research of phenomenal forms of violations of the penal code and other legal acts (Meško, 2010: 23-24). Criminological studies have an impact on the formation of the criminal legislation. It is important to know that changing the individual behavior is the only way to respond to environmental problems (Camacho, 1998: 221-222) and criminologists do play an important role. But the solution of contemporary environmental problems is not just more restricted environmental protective legislation. On the contrary, it lies in redefining our relationship to nature in general. Unfortunately our culture, values, and perceptions regarding nature need to be reexamined. People have to exchange the anthropocentric with the eco-centric perception of the natural environment and have to move from reactive to proactive (i.e., preventive) behavior towards the environment. What is more, the role, how to prevent activities harmful to the environment, is attached to criminology, because it was criminology that realized humans can neither conquer nor control the nature (Seis, 1996).

The present chapter deals with three important parts of environmental crime field: 1) the environmental protection legislation, emphasizing the importance and the role of the criminal justice system; 2) victimology of environmental crime, trying to identify the forms of environmental victims

⁸⁸ Criminology includes studies of criminal jurisdiction in the broadest view: police - public prosecution - court of justice; institutions for executing criminal sanctions and preventing criminality (Meško, 2010).

and classify them upon different criteria; and 3) environmental crime prevention, one of the less complicated, generally less expensive and most effective forms of proactive respond responses to environmental harm and crimes. As in each chapter of the present dissertation, examples, research findings and experiences of criminologists about the discussed themes are presented. The conclusion offers a debate about all discovered cognitions.

4.1 Environmental crime and criminal law

The complexity of development has influenced the evolution of society and criminal activity. Since the natural environment is so specific and important for human survival, individual's incriminations are much more significant in the case of environmental crime. The causes and solutions for the criminalization must be found in the individual itself (how far is human willing to go in the threat against himself). During the slow internalization of environmentally kind and protective global values, the fundamental objective of the progress is becoming a balanced, sustained and sustainable economic development. From the criminal justice perspective the non-compliance of the law, the inconsistencies in the identification, trial, and the unjustified gentleness in assessing the irresponsible behavior towards the environment and the perpetrators of environmental crime are crucial environmental issues. The result of such a situation is the obstruction of environmental awareness, weak, discriminatory, selective, and often discretionary reaction to phenomena of environmental crime that shake confidence in the authorities and the legal protection of citizens. Due to secrets and heavy environmental crime detection, such perpetrators, and especially victims of environmental crime, are difficult to determine which makes the legal procedure even more difficult.

Criminological studies of environmental crime has not covered only the attempts of determinations, classifications and definitions, but also conducted research. The results of criminological analysis of empirical studies on the impact of criminal sanctions in environmental pollution and crime, made by Faure and Visser (2003) are most interesting. Their study results

showed that in most cases the daunting impact of criminal sanctions for acts of environmental crime is low. The reason for this is not seen in the assumption that the criminals would not behave as rational offenders desiring to maximize the benefits of profit. On the contrary, since environmental crime in most cases is the result of corporate behavior. For this reason the behavior of white-collar crime matches with the Becker's (1968) profit model;⁸⁹ contaminants weigh the cost versus profit potential. Another example is the saving of large sums of money, where the polluter (i.e., company owner) does not invest money in buying expensive water treatment plants, but in the 'rental' of a criminal organization. This crime group illegally disposes the toxic waste instead of the owner, which is for him much less expensive. Such conduct could be regarded as abandoning obliged conduct. Faure and Visser (2003: 8) discovered that the low probability of detection of the committed offence combined with relatively low penalties and fines increases the use of rational polluter model on one hand and pessimism about the effectiveness of environmental protection legislation on the other.

Environmental protection in Slovenia slowly followed the changes, overall development and progress of society. The State became aware of the importance of protecting and conserving the natural environment and, therefore it also connected it to the criminal legislation. The numerous activities of legal, criminal justice and criminological experts are evident in the constant adjustments of the legal environmental protection sources. Problem solving and sanctioning of violations of environmental protection is based on a combination of administrative, civil and criminal law (Meško et al., 2011: 49). Selinšek (2003: 652) notes that the latter is even more limited, and the reason for this is its principle of *Ultimo Ratio*.⁹⁰ Criminal law in the environmental protection area is regarded as necessary; today at the international level, the need to protect the environment through criminal law

⁸⁹ This kind of rationalism in criminal behavior Becker (1968), Posner (1998) and Spence (2001) determined a *rational model of pollution*, emphasizing that the simplest solution is to increase the penalties and their thorough implementation. Sociologists and political experts also have adopted the interpretation of rationality in the economic model, where all the parties (usually provider and consumer) take rational decisions and trying to maximize profits.

⁹⁰ *Ultimo Ratio* - last reason or argument; last means or resort (Beranek, 2005: 691), when all other (legal) means fail.

measures is highlighted. The reasons for this are more frequent and extensive ‘attacks’ on the environment with increasingly severe consequences. Environmental crime can occur in all known types of criminal activities addressed by the Slovenian legal system; disciplinary offenses, misdemeanors and criminal offenses. Selinšek (2003) points out that the environmental awareness of most people is still at a very low level. It is therefore necessary to resort to various means, including the criminal law. In doing so, fundamental function of modern criminal law is in the protection against the most serious forms of deviant behavior in society (Dežman, 2004). Environmental crime has become the most dangerous form of deviant behavior, from a global perspective, and an increasingly serious threat to the lives and livelihoods of people as well as all other living species on the planet.

Environmental law of the Republic of Slovenia encompasses all protections for the environment that emanate from the below named sources: 1) laws; 2) regulations; 3) court decisions; 4) European Union’s legislation, laws and treaties; and 5) international environmental legislation. In the Penal Code of the Republic of Slovenia (KZ-1, 2008; 2009; 2011), the field of environmental crime is defined in Section 32 as *Crimes against the environment, space and natural resources*. This section includes 16 environmental crime offenses (articles 332 - 347).⁹¹ Most environmental crimes are blanket nature and have their bases outside the criminal law in other regulations in the field of environmental protection, especially in the Environmental Protection Law (ZVO-1-UPB1, 2006; 2008; 2009). This provides a consistency of the criminal justice intervention with the administrative legal norms (Selinšek, 2003).

Criminal law has very little space for maneuvers in the field of environmental protection. It often appears that certain provisions are not concrete and

⁹¹ Burdening and destruction of environment and space (332); Marine and water pollution by ships (333); Import and export of dangerous substances into the country (334); Unlawful acquisition or use of radioactive or other hazardous substances (335); Contamination of drinking water (336); Tainting of foodstuffs or fodder (337); Unlawful occupation of real property (338); Destruction of plantations by a noxious agent (339); Destroying of forests (340); Torture of animals (341); Game poaching (342); Fish poaching (343); Illegal handling with protected animals and plants (344); Transmission of contagious diseases in animals and plants (345); Production of injurious medicines for treatment of animals (346); and Unconscionable veterinary aid (347).

comprehensive enough, as e.g., 'excessive pollution', 'cross loading' etc. It would be necessary to introduce new concepts, with clear terms and definitions, and determine when the consequences occur, and what kind of consequence has to occur so that criminal law can intervene. In the current environmental protection legislation, it is often extremely difficult to determine when an action is unlawful. The field of environmental protection, which includes criminal law, is mutually inseparably intertwined, due the fact that criminal provisions of environmental protection and the efficient functioning of the criminal justice system depend on the incidence of the environmental crime. The relationship is also confirmed by a strong interdisciplinary field of deviations against the environment, which combines social sciences and the natural sciences. A review of the provisions of Chapter 32 in the Penal Code (KZ-1, 2008; 2009; 2011), despite the blanket clauses, disclosed a relatively comprehensive criminal justice regulation of environmental protection. The problem is the failed implementation and unsuccessful execution of the criminal justice norms on environmental protection burdens and complicates the efficient functioning of the criminal justice system. The abundance and fragmentation of legislative and regulatory provisions which regulate individual fields (e.g., laws, decrees, and regulations) are especially compelling. The problem manifests itself in the work of the inspectors, police, prosecution and judiciary. For that very reason, useful solutions are more than just welcome they are necessary.

First of all, it should be clearly noted what kind of behavior towards the environment is illegal and when criminal justice intervention is necessary. From the nature of environmental justice, it is actually a compromise or a current professional knowledge and consensus in the society, so it is very unlikely that the law would allow broader modifications. In Slovenia, we witnessed the process of stabilization of environmental protection legislation, which still has no clear set of concepts and borders. It will take time for environmental justice to receive its complete comprehensive concept. In this process, the functionality and compatibility of the natural sciences, a multidisciplinary of the field of environmental crime and the links between

social and natural sciences (where law is no exception), have to be taken into consideration. The problem of disorder and incompleteness of the terms related to the environment really stands out. It would be appropriate to complement Chapter 32 of KZ-1 (2008; 2009, 2011) so that the appendix (separate article, or just extra indent in the Article 332 that defines basic terms) would include terminological definitions and enable clarity and the exhaustive nature of the sanction. Currently there is a confusion about cases as what the provision of 'partial damage to the environment' really means. It is necessary to determine when and how the consequences arise, when the action is unlawful, and what kind of consequence must occur that the criminal law can intervene.

Secondly, it is necessary to avoid excessive accumulation and abundance and (undesirable duplication) of the acts as much as possible. It definitely is possible to reduce the 'confusion' and congestion of environmental protection provisions in an efficient manner (i.e., country tries to directly transpose all European Union (EU) directives and regulations into its legislation, to avoid the accumulation of secondary legislation on environmental protection). The systematic arrangement of all legal resources that affect the field of the protection of the environment would be very applicable. The widespread, unsystematical and disorganized environmental protection legal norms would be decreased and the relevant departments would save a lot of time, which is now lost in the search among the laws and by-laws. In today's era of information technology, collection can be arranged also online which makes it even easier to search and browse.

At this point, however, it should be noted that deeper intervention into the actual provisions of the Penal Code without appropriate knowledge and experience in the field of environmental protection, criminal justice and the rule of law is not allowed. For every intervention, a more detailed analysis, comparison of criminal justice systems, case studies of 'good practices', and a good group of legal experts are necessary. If we have time for such a thorough, comprehensive and long-term analysis is another question.

Definitely it is not good to act rashly in the design of changes in this area. It is necessary to establish a national system of environmental criminal justice protection (without the unnecessary copying of foreign systems), which is supported by the EU, but still primarily remains the domain of a member state. The reasonableness of criminal justice protection of the environment is very important. It is reasonable to prosecute and punish a criminal offence only if people understand the purpose of punishment (cause, purpose, meaning and consequence) which should have a preventive effect. The punishment will have a true meaning only when criminal law intervention will be enforced under the condition that there is a clear consequence of environmental crime acts. The punishment will make sense, if the resulted consequence will be presented to people in the way all the other violations are. It is therefore necessary to clearly define when and how the threat or degradation of the environment and people is committed. Also the degree of risk has to be presented. The latter is best described with an analogy. Only after all this is achieved can the punishment have the desired general preventive effect. However, criminal law is used when it comes to the worst possible consequences. When it comes to environmental threats and risks, preventive punishment is much better.

Zorman (1986: 270) has previously pointed out that legal norms, which define environmental protection, should have a preventive nature and repressive measures. They should be used only in cases of specific misconduct of legal entities or individuals. In the era of progress and development of the modern society, it is important to protect the environment, as a matter of fact even necessary for the survival of the next generations of mankind. In Slovenia, such reasonability of legal norms in the field of environmental protection would be achieved faster if the inspection services were given a lot more powers and responsibilities and if the preventive character and repressive measures were preserved through their regular monitoring of legal norms. Slovenia became aware of the importance of protecting and conserving the natural environment very soon and, therefore connected it also with the criminal legislation. The numerous activities of legal, criminal justice and

criminological experts are evident in the constant adjustments of the legal environmental protection sources. All supplementations have to be based on reliable studies and analysis, especially when talking about changes of the criminal legislation. Besides the education and awareness about the significance of the protection of the environment, methods of environmental crime prevention can protect numerous potential environmental victims from environmental crime as discussed in continuation.

4.2 Victims of environmental crime

The specific characteristics of environmental crime lie in the fact that it is a relatively new and changing field of action and new deviance. Due to this, specifically protected goods, necessary for survival, are especially at risk. Damage caused by environmental crime (i.e., environmental harm) is often very large and the victims are often unknown (e.g., some of them never detected, others with the time forgotten). The individualization of the victims is often difficult (Boršnik-Pribakovič, Zovnik, & Žagar, 2004), almost impossible, as some of the consequences of these forms of criminality for a long time stay hidden and invisible, only detected after several years or decades. Most of the time, the consequential damage to the environment and people is irreversible. But despite the fact that it is much more likely that one becomes a victim of an environmental crime as to be murdered, people still worry much more about the homicides than the possibility to become a victim of environmental crime (Burns & Lynch, 2004: 289) (e.g., pollution, lack of drinking water and fertile soil etc.).

Environmental harm refers to a wide variety of injuries and degradation linked to the use, misuse and poor management of the ‘natural environment’ (e.g. various forms of pollution, hunting and killing animals, inappropriate toxic and other waste disposal, harming plants, causing the infertility of soils). Thereby, environmental crime, as one of the forms of environmental harm, does not confront people in the same way as ordinary crime (Burns & Lynch, 2004: 287). People do not recognize it and are sometimes even unaware that they are being victimized. A major problem with environmental crime is exactly

the range between the committing the crime and the formation of the consequences (perceived violations). We deal with acts that leave behind a remote and unpredictable consequences, therefore it is difficult to prove the existence of specific imminent threats, and even harder to prove the causation and blame the perpetrator.

Environmental victimization refers to social processes by which specific forms of harm are caused by ‘acts’ (e.g., dumping of toxic waste, water resource pollution etc.) or ‘omissions’ (e.g., failure to provide safe drinking water, political ignorance of corporate business that destroy environment or harm people etc.), leading to the presence or absence of environmental agents (e.g. poisons, nutrients, gases) that are associated with human injury (White, 2009). With globalization we face the phenomenon of universal victimization, where some types of environmental harm affect all people regardless of geography or social status (e.g., climate changes, nuclear accidents or use of nuclear weapon, infection with a dangerous virus) (Heckenberger, 2009: 15). Taking different forms of environmental crime and different groups of victims into consideration, environmental victimization can be divided into: 1) direct and indirect (White, 2009); 2) immediate and long lasting (White, 2009); 3) individual, local, regional, national, and global; and 4) deliberate and unintentional environmental victimization.

Criminologists (White, 2008b; 2009; 2010a; Williams, 2009; Burns, Lynch, & Stretsky, 2008) connect environmental justice very close to environmental victimology (i.e., radical victimology originates from critical criminology) (Mawby & Walklate, 1994: 13), because from its beginning justice is responsible for the protection of human rights and providing for a clean and healthy environment. Environmental justice is the one that generally raises the question “*who are the victims of environmental crime?*” in criminological and social science discussions. Are only people entitled to be classified as victims of environmental crime or should this discussion be taking broader perspective and supplement the group of environmental victims with animals and plants also? Would it be too extreme if the definition of environmental

victims would take into consideration the chemical, physical, microbiological, and psychological components of environment, or some others, likewise classification of the victims according to the elements that compound the environment?

Just like we are facing the numerous questions concerning the definition of environmental victim, the offered definitions are anything but rare. When defining the victim(s) of environmental crime, Williams (2009: 202) derives from the Declaration of Basic Principles for Victims of Crime and Abuse of Power (United Nations, 1985), which was adopted by United Nations in 1985:

'Victims' means persons who, individually or collectively have suffered harm, including physical or mental injury, emotional suffering, economic loss of substantial impairment of their fundamental rights, through acts or omissions that are in violation of criminal laws operative within Member States, including those laws proscribing criminal abuse of power.

Environmental perspectives (Williams, 2009) and Whites' (2008a) justice perspective fall within the framework of radical victimology⁹² (Mawby & Walklate, 1998), which emphasizes the causing of harm, violation of (human) rights, abuses of power and suffering. What is more, the United Nations definition coincides with in the present work proposed definition of environmental crime. It is possible to select the description of the victim(s) of environmental crime, named also 'environmental victims' (Williams, 2009). Taking into consideration all above mentioned aspects, Williams (2009: 204) defines environmental victims as:

...those of past, present, or future generations, who are injured as a consequence of change to the chemical, physical, microbiological, or psychosocial environment, brought about deliberate or reckless, individual or collective, human act or omission.

⁹² Radical victimology is known by the rejecting of theoretical underpinnings of positivist victimology. Radical criminologists (Quinney, 1972; Platt, 1975; Pearce, 1976) drew attention factors of the structure and organizations of the society, and to the role of the state and the legal system in the social construction of both victims and offenders. For them the definition and identity of victims extends to those who are oppressed, and thus victimized, by 'the powerful' and by those who act on behalf of the state (e.g., police, courts, prisons). Radical criminologists saw the offenders as the principal victims of state oppression (Dignan, 2005).

Deriving from in the present dissertation presented definition of environmental crime and considering the broadest environmental justice perspective, we can count up eight groups of environmental victims: air, water, soft soil, mineral materials, human species, animal species, plant species, and microorganisms. It is more than obvious that human species is the most protected and well-known group of environmental victims. Protection of animal species and fight for their rights is in second place. In addition, it is hard to decide, which group of environmental victims could be placed on the third place, because plant species, air, water and also soft soil present necessary resources for the human survival, therefore the environmental justice movement very loudly exposes their victimization and endeavors for their preservation. Mineral materials and microorganisms come last but not least. Even they are an important link in the natural life cycle and life on the planet Earth cannot continue without them. Although it is hard to accept eight groups of environmental victims, White (2009) emphasized the harm of specific groups, specific environments and specific nonhuman animals. And despite the fact that it is very hard to overcome the conservative definition of a victim, by which the right to be named as victim applies only to humans, we are facing the changes of anthropocentric mentality. Nowadays the violations against the animals are loudly and broadly punished (species justice) and the same is occurring with the violations against the plant species (ecological justice). A society speaks about violations against the environment on a daily basis, thereby the described classification of environmental victims does not seem too ambitious and unrealistic. Most likely it will be difficult to be broadly accepted due to the still strong influence of the anthropocentric perspective of environment and its' influence in the field of legislation. In this approach, legal acts are passed for the sake of protection of humans and their rights.

In the past, victims of environmental crime received very little criminological attention (Burns et al., 2008: 23). In such manner, Rossi, Wright, Weber-Burdin and Pereira (1983) in their study entitled Victims of the Environment very intuitively showed how very loose first notions of environmental victims have been. They considered only natural disasters (e.g., tornadoes,

hurricanes, earthquakes etc.) in which no apparent perpetrator exists. Today this notion has tremendously changed. Williams (2009: 203) distinguishes between environmental victims and ‘environmental casualties’ (i.e., those who suffer as a result of natural disasters). Although sometimes it is very hard to distinguish between deliberate or reckless human act. One such problematic issue is in the field of pollution, where intention is often blurred and hard to prove despite the hazardous and irreparable consequences. Studies about responses to pollution have found that the most common psychological effects of toxic or hazardous substances are stress, anxiety, depression, irritability, reduced cognitive performance, insecurity, powerlessness, distrust, and psychosomatic problems (Areh & Umek, 2011; Bell, Greene, Fisher, & Baum, 2005; Williams, Brown, & Greenberg, 1999; Shusterman, 1992).⁹³

Environmental harm (e.g., pollution, waste disposal, natural resource depletion) is unevenly distributed in geographical and social terms, evident in the population groups that generally constitute the extent of environmental victims (White, 2010b: 25-26). We often speak about the phenomena of *environmental racism*⁹⁴, when to humans and environment dangerous factories and industries are located in the (vicinity of the) poorer

⁹³ The most common source of mental problems is chronic stress, which induces the emergence of a wide range of unpleasant and harmful mental symptoms, and sometimes even those which are referred to as psychopathology (Areh & Umek, 2011; Asmus & Bell, 1999; Navarro, Simpson-Housley, & de Man, 1987; Williams et al., 1999; Bell et al., 2005). It is clear that environmental pollution significantly reduces the quality of human's life. By contact with or direct exposure to very toxic substances, effects occur quickly and clearly. However, such cases of extreme pollution are rare, but the greater problem is the hidden pollution and management of the landfills for which it is not entirely clear what negative effects they have on human health and on the entire ecological system. Areh and Umek (2011) point out that even in cases of staying in the vicinity of the sanitary good managed waste landfills, i.e., landfills which trade under the rules; we cannot avoid the mental stress of the surrounding population.

⁹⁴ Individuals and groups concerned with the question of environmental justice argue that the willingness to clean up wealthy areas but not to address the needs of poor areas is blatantly racist. Because race and class issues are intricately woven together in the U.S. and many other societies, making distinction between those issues can be difficult. The Cerrell Report identified the demographic characteristics of neighborhoods most likely and least likely to oppose the local placement of a hazardous waste facility. The report was used by businesses to target communities that would be less likely to oppose the placement of such facilities. For this reason, the environmental justice movement all over the world has mobilized to protect people of color and the poor from an increased risk of environmental hazards (Clifford & Edwards, 1998: 47-48).

neighborhoods, or when minority communities are excluded from the decision-making process and therefore exposed to health hazards and natural resource depletion because property in polluted areas is inexpensive (White, 2009; Bullard, 1994; Kangaspunta & Marshall, 2009; Pulido, 2000; Lynch & Stretsky, 2001). In the U.S., we can find countless examples of environmental racism, in which the environment and plants harmful to humans are located (near) in the poorer neighborhoods or town areas (Kangaspunta & Marshall, 2009). In these factories, the non-white people perform all the dangerous work. Besides that, gender inequality was discovered by women in Mexico and California (Faber, 2009), where female are better pickers of tomatoes and therefore much more exposed to hazardous pesticides. Women in our society are in accordance with an Australian study, more likely to use toxic substances contained in detergents (Pulido, 2000). The majority of females handle them almost daily. Another example, which could be understood as environmental racism, is in Zambia (Faber, 2009), where the powerful and influential countries introduce genetically modified organisms (e.g., corn, potatoes), and this way violate numerous international conventions and ethical obligations. In Slovenia, environmental racism of chance is not yet apparent, but demonstrations due to waste disposal sites are becoming more common and attention to irregularities of individual factories and industries is growing (e.g., Lafarge Cement, Kemiplas).

The human relationship towards the environment has to be understood in the context of historical and present, class, race and gender relations (Taylor, 1999). The responses to the consequences of environmental crime and to the caused harm depend on the question if only environment is endangered, or the human health is endangered too. White (2009: 279-280) divides environmental victims' responses into two groups: 1) *responses with limited focus* (spontaneous, exclusive to survivors - victims, with local range, searching the material relief, appealing to authority, action is motivated by loss, focus on victim as such); and 2) *responses with expansive focus* (organized, connected with others to alliances, with global range, fighting for

the environmental rights and justice, actions are motivated by future, victims interests are linked to social or environmental justice movements).

Williams (2009: 216) differentiates four different responses of environmental victims to environmental crime and caused harm:

- 1) Passive acceptance can happen if people are faced with other more pressing problems (e.g., political transition and changes; poverty, ongoing fighting with violence as known from Africa - the Shell Petroleum case in Nigeria and others);
- 2) Confrontation and litigation can happen when mass protest could develop to violent confrontations but hurt and victimized people choose to use legal channels for redress instead. The promise of compensation combined with a tradition of tolerance may be a part of explanation (e.g., Bhopal case in India);
- 3) Violent response with riots and strikes or sabotages is often linked to other political actors, where environmental and political activism combine (e.g., demonstration of people in Tahiti against the French nuclear tests in the South Pacific, protests against animal killing and use of fur) or to fight for the rights of minorities, such as cases of environmental racism (e.g., protests against the incineration in factory Lafarge Cement in Zagorje and location of the waste landfill in Tenetišće, protests in Warren County against the PBC waste disposal); and
- 4) Nonviolent community conflict resolutions seem possible with minor environmental harm and negligible environmental and health threat (e.g., U.S. Good Neighbors Agreements, such as case of Oakland Fruitvale).

With the aim to protect the environmental victims, environmental legislation has bounded possibilities to protect the environment and people from potential environmental crime and possible environmental harm. The purpose of the emphasis of a ‘preventive effect’ (i.e., intimidation) of criminal legislation in the field of environmental crime remains mostly only a wish (Faure & Visses, 2003). Undoubtedly, for the response to this type of crime

the good cooperation between law enforcement and other competent agencies is important (Meško et al., 2011: 50). Environmental crime prevention offers more or less inexpensive and non-aggressive method for responding to environmental crime and protecting the potential victim.

4.3 Environmental crime and crime-prevention

Environmental crime prevention deals with acts and omissions against the environment (White, 2008b: 2). Environmental crime can affect one or more of eight elements of the natural environment; therefore environmental crime prevention faces multiple kinds of environmental harm. In the present dissertation, the notion of environmental crime prevention refers only to the methods and measures that apply before an environmental crime has happened and an environmental harm has occurred. According to this White (2008a: 236) emphasizes that crime prevention is pre-emptive, not reactionary and therefore incorporates modes of intervention that are not reliant upon enforcement authority figures. Crimes against the environment could be described as far-reaching, dangerous and complex. Efforts to detect and deter environmental crimes need to be effective (Meško et al., 2011), planned and prepared on the results of the previously conducted studies. Prevention planning needs to take into account the new industrial development, economic trends and existence of financial problems in specific corporations and conform to them (Adler, 1996). As emphasized by Meško and colleagues (2011: 41), situational crime prevention has proved to be quite an effective form of prevention, which does not necessarily involve more enforcement, but it involves more creative strategies to prevent crime before it occurs. It is closely connected to rising of people's awareness on environmental crime and other forms of threats against the environment.

4.3.1 Concept and meaning of environmental crime prevention

Crimes against the environment may directly affect our health today as well as hurt future generations. We need effective efforts to detect and deter environmental crimes that culminate in prosecution to the fullest extent permitted. To achieve this, measurable data, records, information, case

studies, surveys, and useful suggestions formed on the basis of research findings are important (Meško et al., 2011: 44). Crime analysts, criminologists and other experts usually conduct studies and analyses; crime prevention methods are but one example, although they do not belong to the group of reactive responses. They belong to the group of proactive responses to environmental crime, whose role is more and more important.

Arising from White's (2008a) philosophical perspective of environmental crime, Wellsmith (2010: 134) stresses that from a species justice perspective all species have the right to live free from interferences and threats that may endanger their existence. To prevent possible environmental harm, that are perpetrated by humans, rules and regulations are needed (White, 2008b; 2010b). Different strategies and methods, including creative architecture, crime mapping, strategic planning, community and problem oriented policing, satellite surveillance, international networks, NGOs' activism and others can prevent and reduce the deviations against the environment. Whites' (2008b) opinion is to ameliorate the impact of harm. Reactive responses just deal with environmental harm that has already occurred, and try to contain it. Proactive responses prevent the environmental crime from being committed, thus environmental harm does not occur. Therefore, environmental crime prevention should be based on a problem-solving model of police intervention, which is much better than policy-prescribed model (White, 2008b: 2). We have to consider the types of skills, capacities and organizational relationships that will be successful in environmental crime prevention (White, 2008b: 5). This is why criminology has to learn as much as possible about the natural environment. If it wishes to be successful at environmental crime prevention, approaches and methods of environmental crime prevention must consider the following objectives (White, 2008b):

- 1) defining the problem of environmental harm, one is dealing with;⁹⁵
- 2) prevention and precaution;⁹⁶

⁹⁵ It is very important how one defines the problem of environmental harm. Based on a defined problem, environmental crime prevention methods are determined and used. Environmental crime prevention sometimes can expose the harmful, degrading and hazardous practices as a prelude to the banning of close control of such practices (White, 2008b: 4).

- 3) tailoring the responses to environmental crime;⁹⁷
- 4) problem of displacement of the environmental issues and crimes;⁹⁸ and
- 5) politics of knowing.⁹⁹

In light of various issues of controlling environmental crime and other potentially harmful activities via regulation, criminal and administrative law, and traditional enforcement activities, methods of crime prevention represent a suitable alternative. The idea to act before environmental harm has occurred seems appealing (Wellsmith, 2010: 138), therefore environmental crime prevention should be subjected to quality evaluations and dissemination in order to start developing a knowledge-base of successful and working methods (Wellsmith, 2010: 146).

Despite previous discussions of crime prevention as ideology (Husain, 1990; Wilson, Mitchell, & MacKenzie, 2006), we cannot deny the findings that in some countries (regions, cities) crime rates do decrease (or offenders move to other places). If it is possible that use of crime prevention methods can help

⁹⁶ With prevention methods and precautionary measures, the environmental protection politics, focused on ecological sustainability can come across with the interests of economic growth, but still be environmentally friendly. By Whites' (2008b: 5) opinion, environmental crime prevention has to be forward-looking, so that nature will be protected in the future.

⁹⁷ Due to its specificity and complexity, some forms of environmental harm demand special, more complex responses. Enormous scopes of the problem, such as transnational environmental crime usually require international cooperation, exchange of information, constant surveillance and social control (White, 2008b: 5).

⁹⁸ Whenever one uses crime prevention methods, displacement of crime can occur. This can also happen with environmental crime, where environmental crime prevention is used. The 'Not In My Back Yard (NIMBY) syndrome', 'trash for cash' schemes and relocations of the factory production in the developing countries are nothing new and unknown for the modern globalised society. With such human behavior additional environmental harm is caused, therefore global perspective of environmental crime prevention is needed (White, 2008b; Lemieux & Clarke, 2009; Williams, 2009). Environmental harm can result in lack of natural resources (e.g., water, fertile soil, food). Due to caused climate and environmental changes human migrations occur, often described with the phrase 'environmental refugees' (Homer-Dixon, 2004; Kajfež-Bogataj, 2006; Grošelj, 2007; Reuveny & Moore, 2009). In such situations, environmental crime prevention has to address general issues of global power relations, geographically based trends and differential victimization (White, 2008b: 5).

⁹⁹ Only a multidisciplinary approach to the study of environmental crime, harm, victimization and cooperation of different researchers, experts and sciences enables successful environmental crime prevention. One has to be more aware that denial and covering of the environmental harm is common tactics of major industries. White (2008b: 6) stresses that corporative and governmental deliberate misleading increases the pressure on (green) criminologists to collect and provide the reliable and affirmative data and tell the truth. People have the right to know, especially when facing environmental crime hazardous consequences and side effects.

and prevent damage, then it is better to use it and contribute to positive results than to ignore it and do nothing. The culture of silence and ignorance is the easiest way, but not necessarily the cheapest nor the healthiest. Environmental crime can cause catastrophic damage to environment and people, as it happened due to the aluminum factory ‘accident’ in Ajka, Hungary, or due to the nuclear power plant accident in Fukušima, Japan.

The prevention of crime exists to deter victimization; people are trying to defend and protect themselves and their families from various threats.¹⁰⁰ Crime prevention encompasses all ideas for preventing and reducing criminality (Meško, 2002: 47). The purpose of crime prevention was very clearly described by White (2008a: 234): "*The best way to respond to crime is to prevent it before it occurs.*" The development of area of crime prevention was followed by various attempts of defining of the crime prevention. For van Dijk and De Waard (1991), crime prevention is a set of all private initiatives and activities, except the criminal law enforcement, in order to reduce the harm caused by human actions, which are by the state determined as criminal. Hughes (1998: 85) described crime prevention as follows:

Crime prevention is any activity or technique used by private individuals or public authorities to reduce the damage caused by acts, which the state defines as criminal. Given that are only the acts, prohibited by statutory orders, are labeled as criminal, it is not surprising that there are plenty activities and initiatives, which are associated with the term 'crime prevention'.

As there are numerous and different definitions of crime prevention, there exists more classifications of crime prevention in the different groups and models. Crime prevention can be divided into several types, depending on the form of crime or the field of security issue to which one approaches: 1) the formal and informal; 2) intended for the victims and perpetrators; 3) the

¹⁰⁰ The idea of crime prevention with the purpose of preservation of goods and other items and prevention of loss or damage, whether it is material or immaterial damage, goes very far in the human history. It appeared about the same time as the invention of locks (Hughes, 1998: 2). Until the late 20th century, crime prevention was a part of the criminal justice ideology, whose primary task was to control crime. Only after 1970, did crime prevention receive greater attention and accelerated development in most modern societies (Hughes, 1998) and often the criminologists and other experts in the field of criminal justice have passed the crime prevention knowledge from west to east.

direct and indirect; 4) the correctional and punitive; 5) situational, developmental and community oriented (Meško, 2002). The most simple is the classification of crime prevention models to primary and secondary crime prevention. Hughes (1998: 86) divides crime prevention into social crime prevention and situational crime prevention. In addition to these two early and very important models, various other forms of crime prevention, such as general prevention, special prevention, media reporting about crime and others are known.¹⁰¹ Meško (2002: 62) has supplemented Hughes' (1998) division of crime prevention within the three basic models:

- 1) *primary crime prevention* (crime prevention by planning and designing of the environment; prevention of crime in the neighborhood; social prevention; general deterrence - general prevention; media presentation of crime);
- 2) *secondary crime prevention* (predicting of delinquency; school and delinquency prevention; allegations about drugs, crime and crime prevention; community policing; situational crime prevention; the effects of situational crime prevention); and
- 3) *tertiary crime prevention* (special prevention; obstruction of offenders; electronic surveillance and incarceration at home; rehabilitation).

All above-mentioned groups of crime prevention can be transferred to the field of environmental crime as presented below. The forms, characteristics and particularities of environmental crime are one of the main reasons that situational crime prevention methods are more frequently mentioned and used in the prevention of the crimes against the environment. Wellsmith (2010) and White (2010b) noticed the growing interest among criminologists in environmental issues and the possibility of their reduction with situational crime prevention methods. Numerous works confirm their ascertainment (Mailley, 2008; Schneider, 2008; Leimieux & Clarke, 2009; Wellsmith, 2010; Meško et al., 2011).

¹⁰¹ For more about specific crime prevention models, see Meško (2002).

Situational crime prevention, according to Hughes' (1998: 20) classification falls under the auspices of the 'primary' crime prevention. As such it is focused on crime and situations in which crime occurs, rather than on the perpetrator (Meško et al., 2011: 45). What can be explained as a consequence of the fact, the theory of situational crime prevention is built on the basic idea that the situations are more predictable than the individuals (Weisburd, 1997: 8). Situational crime prevention is significant in two respects - the already mentioned shift of emphasis away from the criminal to the environmental, and its crime specific focus (Rosenbaum, Lurigio, & Davis, 1998: 153-154). The concrete measures are targeting a very specific crime, based on the assumption, that the situational determinants of each type of crime are different. For this reason, individual crime prevention measures can be very different one from another (Meško et al., 2011).

Meško and colleagues (2011: 63) emphasize that transferring situational crime prevention techniques to the environmental criminality involves the basic crime prevention principles. When doing this, the method of reflection and the five theories, as described by Ronald Clarke and his colleagues: *theory of situational crime prevention* (Clarke, 1992; 1997); *rational choice theory* (Keel, 1997; Cornish & Clarke, 1986; 2003); *routine activity theory* (Cohen & Felson, 1979); *control theory* (Hirshi, 1969); and *lifestyle theory* (Biderman & Reiss, 1976), should be used. First, effective strengthening of the guardianship of the environment depends on the relationship of regulator (Meško et al., 2011) and regulated. The mentioned theories are in practice used following Clarke's and Eck's (2008) situational crime prevention principles (Meško et al., 2011: 44) to:

...reduce the commission of crime by designing models that eliminate the crime opportunities (e.g., redesigning enforcement strategies to cut off industry-specific criminal opportunities; improvement of enforcement effectiveness with the emerging knowledge of the offender's characteristics and with the increase of technical training etc.).

The purpose of situational crime prevention is designing and managing the immediate environment, where crime is most likely to occur. The situations in

which the potential perpetrator and the potential victim get together, are altered to the point where the specific changes influence the offender's *decision or ability* to commit crime (Meško et al., 2011: 45). The interventions can also act on prior 'scenes', in which offenders prepare, or become primed for crime, and they can be implemented directly or indirectly (Ekblom 2006: 384). Based on the above cognitions, Clarke (1992) managed to develop one of the most comprehensive, detailed and evidence-based models of situational crime prevention. The initial three clusters contained 12 techniques (Clarke 1980; 1992) and have been gradually modified and expanded to five clusters of 25 techniques (Clarke, 1997; 2010; Cornish & Clarke, 2003; Clarke & Eck, 2008), which is due to the developments in theory, practice and technology surrounding the prevention of crime (Meško et al., 2011). These techniques are widely used and were recently transferred to the field of environmental crime prevention.

Situational crime prevention is connected with the usual criminological endeavor to explain why people commit environmental crime or cause environmental harm. Instead, they take a pragmatic, problem-solving approach to primary crime reduction, focusing on the situations of crime and harm as opposed to the social circumstance of it (Clarke, 1980). Additionally, it tries to identify the situations and intervene where environmental crime and environmental harm opportunities are present in order to deflect offenders or targets away from one another, introduce more capable guardianship, and alter the thinking process of potential offenders so that they make a non-crime decision (Wellsmith, 2010: 140). Cornish and Clarke (2003: 90) divide situational crime prevention intervention at immediate time in specific place in five clusters: 1) increasing the perceived risk; 2) increasing the perceived effort; 3) reducing the perceived rewards; 4) reducing the perceived provocations; and 5) removing the excuses associated with offending. The appropriate situational intervention(s) can be suggested as further advantage of crime science (problem oriented approach by Clarke and Eck (2008)) and analyses must be undertaken. A problem oriented approach demands recording of data and results in an improved understanding of the

extent and nature of the problem to be tackled, the ways in which opportunities are formed and discovered, the methods used to commit offences, and people, situations or tools, that can facilitate such activities (Wellsmith, 2010: 141). In the case of environmental crime prevention, such thorough problem oriented analysis can be problematic due to the lack of necessary information. Environmental crime is known to be hard to detect and investigate (i.e., complex and undetectable crime, with long time invisible consequences, so the investigation is usually long and complicated, especially due to the collectivity and the anonymity of the victim that leads to the rather abstract and vague perception of the damage). The latter is crucial for detailed analysis and determination of appropriate crime prevention methods and responses.

It is important that basic principles of environmental crime prevention are guided by consideration of ecological balance (White, 2008a: 237). Environmental crime prevention has to go further than contemporary crime prevention. It has to incorporate a wide range of new techniques, technologies and expertise (e.g., satellite surveillance; environmental forensics and DNA testing; taxonomy and rare species protection; ocean fishing control; controlled hunting of wild animals, etc.) as applied to varying types of environmental harm and environmental issues connected to it (White, 2008a: 239). A problem-solving oriented approach to environmental crime prevention demands inclusion of commonly accepted statements, definitions and decisions about the nature of environmental crime and caused harm accompanied by accurate harm or site analysis (White, 2008b, 2009, 2010a; Clarke & Eck, 2008). Wellsmith (2010: 146) emphasizes that situational harm reduction is only one among several tools required to repair caused environmental harm. Environmental ethics and changes in human behavior towards the environment are inevitable. Green criminology must be sure that targeted measures of environmental crime prevention also provide overall, useful, wider and more exposed basic methods of prevention of crime against the environment and environmentally friendly behavior. These are largely associated with increased education and awareness. These general methods include:

- 1) assurance of adequate long-term monitoring and control over the environment;
- 2) establishing ongoing research;
- 3) establishing continuous monitoring of changes in the health status of humans and other living beings;
- 4) identification of legal loopholes, lack of expertise and continuous removal of the detected defectiveness;
- 5) promotion of environmentally friendly, more persistent and flexible technologies to reduce costs and increase benefits;
- 6) by the detection of the environmental issues the different opinions, attitudes, knowledge and experience must be taken into account, where the views of local communities are very important; and
- 7) identification and reduction of institutional and legal actions over the implementation of environmental crime prevention.

Responding to different environmental issues demands different approaches. Some issues resonate more with the public; others emerge only if an accident or disaster occurs (White, 2008b: 3). Specific environmental crimes need different types of crime prevention methods. Considering the multidisciplinary approach to environmental crime, knowledge of natural and social sciences is jointly used, various suggestions of response to caused environmental harm have been presented using different approaches, techniques and measures, and is demonstrated and discussed in the case analysis of the situational crime prevention methods that follows.

4.3.2 Models of environmental crime prevention

The role to prevent environmentally harmful activities is attached to criminology. It was criminology that realized humans can neither conquer nor control nature (Meško et al., 2011: 63), but has to respect it and to strive for sustainable development. As emphasized by Meško and colleagues (2011: 46), criminological research in the area of environmental crime and harm is almost as new to criminologists as penal sanctions for environmental crimes are to criminal lawyers. When they enter the sphere of environmental criminality,

researchers indeed come to unfamiliar territory. For this reason, proposed changes and solutions must be based on previous reliable research results and analyses. Solutions should be implemented progressively and closely observed. By all means, the problems that occur must be handled by experts and, as emphasized by White (2008b: 2) try to include human, environmental and animal interests in a maximum extent.

People respond to environmental crime differently than to the traditional crime, because it is much easier to violate environmental laws. One of the elements to control the strategy is the constant discovery of really serious cases of environmental crime and presenting them to the public. The rules are respected, if one believes that the other does the same. If inappropriate sanctioning of violations of the rules is commonly known, then circumvention of the rule will become the group unanimously behavior. The behavior of individuals and business people is also affected by perceptions about the work of control mechanisms. If they work well and the violations are quickly and appropriately punished, their number will decrease. For the establishment and successful operation of such a mechanism or system, an review of control measures is necessary; everything from the big sticks to the small bars and from businesses self-regulations inside the factories and industries to the system of administrative and penal sanctions. Emanuelsson Korsell (2001), in accordance with the proposed strategy for the fight against the environmental crime and the system of monitoring and the environmental crime prevention, applies a use of the so called big and small stick. In addition to a homogenous, exact legislation and measures, their implementation and especially consistent use in practice is necessary. Therefore the author in the hands of competent environmental agencies, inspectorates, police and carriers of the criminal justice system lays a big stick and considers them as responsible for the successful operation of the system to prevent environmental crime. Small bars and responsibility for the legal conduct is placed in the hands of politicians and businessmen, which he deems responsible for the creation of environmental protection system within the organization. The enforcement of informal supervision must not be underestimated. This type of control also

reduces the potential violations of environmental laws, although Emanuelsson Korsell (2001) points out that the most objective solution is the establishment of the foundations and the strengthening of the trust-based relationship between companies and control agencies as well as encouraging more voluntary compliance with laws and measures for the benefit of the environment. Emanuelsson Korsell (2001) finds such control system and measures useful and transferable to all other areas of regulation and supervision.

On the basis of previous research in Slovenia, Meško, Bančič, Eman and Fields (2011) conducted an analysis of the detected forms and consequences of environmental threats by using five theories of situational crime prevention and the method of reflection. They developed the following proposals of situational crime prevention measures of environmental criminality based on Clarkes' and Ecks' (2008) classification sorted into five above-described clusters (Meško et al., 2011: 53-62):

- 1) *Increasing the effort: hardening of the targets* (e.g., preventing of destruction of natural heritage in national parks with the use of creative architecture, strategic planning, human presence and therefore social control); *controlling access* (e.g., customs control, maritime inspection, use of fences, entry ramps); *screening the exits* (e.g., customs and other above mentioned inspection services); *deflecting offenders* (e.g., establishing proper polygons for dirt-bike riders, off road four-wheelers, snowmobiles and similar offenders who break the prohibitions regarding motor-vehicle presence in the natural environment, walking paths by waste dumping or poaching endangered areas); *controlling the tools and/or weapons* (e.g., control of the radioactive materials, chemicals and by poachers used firearms, use of special sensors which can detect a gunshot);
- 2) *Increasing the risks: extending guardianship* (e.g., broadening the number or range of guardians and surveillance in endangered and other areas for preventing nuisance and environmental degradation, marine and water pollution, contamination of drinking water, food or feed,

and destruction of crops with harmful substance); *assisting the natural surveillance* (e.g., setting walking paths, jogging tracks and similar in areas where illegal dumps often appear; organized voluntary cleaning up actions, anonymous call numbers for environmental crime reporting); *reducing anonymity* (e.g., along with the list of companies, which severely burden the environment, the public should also be presented with the names and faces of these companies' directors and owners - 'naming and shaming', obligatory ID badges for fishermen and hunters during fishing and hunting); *utilizing place managers* (e.g., foresters and forestry inspectors could be by appropriate stimulations encourage to be more attentive to signs of environmental crime, the same goes for hunters, farmers, veterinaries); *strengthening the formal surveillance* (e.g., increased presence of the police and inspection services, use of satellite surveillance and CCTV, patrolling by ships and airplanes);

- 3) ***Reducing the rewards:*** *concealing targets* (e.g., design of walking paths and tourist infrastructure in national parks, an establishment of a national park or protected area where the regime forbids any exploitation of natural sources, caving tourism, where tourist are allowed to visit only a part of a cave with a special guide); *removing the targets* (e.g., relocation of an endangered species, authorization of veterinary inspection); *identifying property* (e.g., animal and plant species DNA testing); *disrupting markets* (e.g., extensive media coverage and disruption of the international ivory and other black markets, interfering with distribution channels, implementation of strict control over permit and licenses issuing for fishing, hunting, waste-disposal); *denying the benefits* (e.g., green public procurement, where a company with worse environmental impact is being denied benefits, since it is not selected to do business with the state, labels "eco" or "green" and "carbon footprint" on products);
- 4) ***Reducing provocations:*** *reducing frustrations and stress* (e.g., simplification and shortening of the procedures regarding toxic, construction or other waste removal, increasing of state help in cases

of protection against wolves and bears, provision of alternative food sources provision and GPS tracking of wild animals combined with alarms when they get too close to human); *avoiding the disputes* (e.g., destruction of foreign plants, fruit trees, or other crops with harmful substances is a criminal offence, which can be a result of a dispute between land owners - measure for prevention of such offence is an effective and accessible legal assistance (mediation), use of situational crime prevention techniques for environment modeling); *reducing the emotional arousal* (e.g., specialists' techniques for detection of strong emotional arousal, such as pyromania, sexual molestation of animals); *neutralizing the peer pressure* (e.g., awareness raising media campaigns specifically aimed at specific behavior, such as juveniles riding motorbikes, all terrain four wheelers, or snowmobiles in the natural environment, public campaign against peer pressure among directors of large companies, who compare one to another and compete for success, which leads to one-way race for profit at any cost); *discouraging imitation* (e.g., strict environmental protection legislation, effective communal service); and

- 5) **Removing excuses:** *setting rules* (e.g., simplifying the environmental protection laws, rules and regulations by authoritative services, media campaigns, awareness raising actions and education in schools); *posting instructions* (e.g., warning signs forbidding waste disposal, warning signs at the entries of natural parks); *alerting the consciousness* (e.g., awareness raising and media campaigns of short warning messages, regarding dangers of illegal trade in endangered animal species and their products, distribution of pamphlets); *assisting compliance* (e.g., subventions for environmental preservation and protection, regular collection and removal of large and hazardous waste, eco-tourism); *controlling drugs and alcohol* (e.g., consideration of a total ban on alcohol and other drugs consumption in natural parks, similar areas and various with it related work places, where human error resulting from inappropriate psychophysical condition can lead to ecological disaster,

such as nuclear power plants, in maritime traffic, on oil rigs and refineries, chemical factories).

In examining the problem analysis triangle (Clarke & Eck, 2008: 29), three factors are necessary for (environmental) crime to occur; offender and victim or target have to meet on a certain place under certain circumstances. When talking about environmental crime, the role of a victim is sometimes blurred, pushed in the background. One of the main reasons is that natural environment cannot speak and report the crime, which was committed against it. Environmental crime offenders purposely harm only animal and plant species to gain the desired profit; otherwise the elements of the natural environment are just accidentally victims or casualties that were harmed by the committed crime. Water in the form of stream, lake or sea has not been officially classified among environmental victims, although when polluted, its chemical composition is ruined and life in it is difficult. The same can be said for air and soil. The exploitation of mineral materials is an irreversible process. Similar goes for the destruction of microorganisms. By harming just one of the natural environments' elements the balance is crushed and all the consequences spread to all other elements. Due to all the above emphasized reasons, a proactive response to crimes against the environment is crucial; returning to an original state is usually not possible anymore. Therefore, the environmental crime prevention plays an important role in preservation of nature and life on the planet Earth.

On the basis of the problem analysis triangle, the basic models of crime prevention (primary, secondary and tertiary crime prevention) were compared to three factors (offender, victim/target and place/circumstances). The basis for analysis of different environmental crime prevention strategies, measures and actions are presented in the Table 4 below.

Table 4: Primary, secondary and tertiary environmental crime prevention methods divided by offender, victim or target and place of circumstances.

	Primary crime prevention - reducing the opportunities for crime	Secondary crime prevention - reducing the opportunities for crime to potential offenders	Tertiary crime prevention - rehabilitation, reduction, mitigation and prevention of well-known offenders
Offender	<p><i>Identification of factors that provide opportunities for criminal activities:</i></p> <ul style="list-style-type: none"> - media presentation of environmental crime; - environmental ethics lectures in companies and industries; - 'little stick' (companies' self-regulation); - hardening targets; - deflecting offenders; - reducing anonymity; - denying benefits; - identification of legal loopholes, lack of expertise and continuous removal of the detected defectiveness. 	<p><i>Predicting the delinquency:</i></p> <ul style="list-style-type: none"> - reducing emotional arousal; - socialization process: eco-schools, NGOs, clubs, etc.; - environmental ethics lectures; - drugs and alcohol control programmes; - media presentation of environmental crime; - 'little stick' (companies' self-regulation); - reducing anonymity; - reducing frustration, stress; - avoiding disputes; - neutralizing peer pressure; - discouraging imitation; - promotion of environmentally friendly, more persistent and flexible technologies to reduce costs and increase benefits. 	<p><i>Programs for prevention of recidivism:</i></p> <ul style="list-style-type: none"> - rehabilitation; - special prevention; - obstruction of offenders; - electronic surveillance; - community service work - cooperation in clean up actions; - media presentation of environmental crime; - 'big stick' (successful operation of the (criminal) justice system).
Victim / Target	<p><i>Raising of awareness of the potential victims:</i></p> <ul style="list-style-type: none"> - environmental justice and protection media campaigns; - media presentation of environmental crime; - hardening targets; - concealing targets; - removing targets; - identifying property; - continuous monitoring of changes in the health status of humans and other species. 	<p><i>Providing assistance to victims:</i></p> <ul style="list-style-type: none"> - governmental and non-governmental organizations; - civic initiatives; - community policing; - media presentation of environmental crime and environmental victims; - environmental forensics and DNA testing of animal and plant species. 	<p><i>Programs for prevention of secondary victimization:</i></p> <ul style="list-style-type: none"> - NGOs; - media presentation of environmental victims; - training of competent governmental agencies.
Place / Circumstances	<p><i>Identification of crime hotspots and tackling crime factors:</i></p> <ul style="list-style-type: none"> - prevention of environmental crime in the neighborhoods; - media presentation of environmental crime; - 'big stick'; - satellite surveillance; - controlling access; - assisting natural surveillance; - strengthening formal surveillance; - adequate long-term monitoring and control over the environment; - continuous research and study. 	<p><i>Planning and designing the environment where potential crime spots or areas are discovered:</i></p> <ul style="list-style-type: none"> - planning and designing of the environment; - problem-oriented policing; - the effects of situational crime prevention - environmental crime relocation; - controlling access, - assisting natural and strengthening formal surveillance. 	<p><i>Situational crime prevention methods:</i></p> <ul style="list-style-type: none"> - taxonomy and rare species protection; - ocean fishing control; - wild animal hunting control; - controlling access; - screening exits; - controlling tools, weapons; - extending guardianship; - assisting natural surveillance; - utilizing place managers; - strengthening formal control; - disrupting markets; - denying benefits; - setting rules; - posting instructions; - alerting consciousness; - assisting compliance.

Source: summarized after Meško (2002), Clarke (1997); Emanuelsson Korsell (2001); Clarke and Eck (2008); Meško et al. (2011); White (2008b; 2010); and Williams (2009).

Situational crime prevention has been proven to be quite an effective form of prevention. Nevertheless, it is necessary to be aware that situational crime prevention is just one piece of the jigsaw puzzle of modern societies responding to environmental threats (Meško et al., 2011: 64). Situational crime prevention, however, plays no insignificant part in this process. Especially if it is used as an element in problem solving-oriented way of responding to problems and not just as a political attempt to publicly eliminate current problems (White 2008a: 237). As emphasized by Meško and colleagues (2011: 64), development and application of situational prevention measures is a promising attempt to achieve tangible results. It may protect the environment in which people live up to the moment when humanity realizes the need for radical social changes. When talking about environmental crime prevention, the notion of opportunity, social control and elements of 'intimidation' (probability, reliability, speed and severity of the criminal justice responses) stand out.

In the modern era, globalized society strives for progress and profit and still follows the human-centered perspective of the relationship between humans and nature. Green criminology must apply the multidisciplinary approach to the study of phenomena and processes of emergence of environmental crime, the resulting environmental damage, development of environmental legislation and regulation, measures for the protection of environment and social responses to caused violations. This was done in the case of Slovenia, where environmental crime survey used comparative criminological and criminal justice aspects and applied for the green criminology specific approaches and characteristics, emphasized above.

5 Criminological and criminal justice aspects of environmental crime trends in Slovenia

The use of comparative and criminal justice perspectives and the application of the Reichel (2008) historical approach (authentic and synthetic strategy, based on classification approach) were done in the theoretical part of the present dissertation. This was the basis for the understanding, explanation, and the conducted analyses in the comparative criminology and criminal justice study about the environmental crime in Slovenia. Results and conclusions are presented in the following chapters.

Since independence, Slovenia has witnessed changes in political, economical and social level, in universal human values, and increasingly complex developments that affect the changing society and, consequently, criminal activity. Slovenia is a parliamentary republic, near the top of economically developed countries in transition, with the old mining and industrial tradition (which is currently being modernized) and service industries. The crop and livestock production is somewhat trivial, since it covers only about 20 percent of the territory of the state that measures 20,273 square kilometers. Recently, growth in the number of agricultural holdings employing organic farming has been observed.¹⁰² Two-thirds of the country is covered by forests (from 1993 to 2005, forested areas have increased by 17%). The share of land for roads is increasing (from 1993 to 2005, the percentage of land for roads, increased 150%) (Hren et al., 2011: 28). Slovenia has an interest in sustainable development and to increasing the energy of production from renewable resources.¹⁰³ In recent years, we witnessed a restructuring of waste disposal and recycling (in 2002 in municipal landfills 84% of all municipal waste were

¹⁰² As is typical in the transition countries, the structure of the economy between 1991 and today has dramatically changed. The share of agriculture in GDP has declined by more than half, from 5.7 percent of GDP in 1991 to 2.4 percent in 2010. Besides, also the share of industry and construction has greatly reduced (in 1991 44% of GDP was generated by industry and construction, in 2010 only 31% of GDP). On the other side, the proportion of service activities rised significantly (from 50% in 1991 to 67% in 2010) (Hren et al., 2011: 48-49).

¹⁰³ In 2009, 30 percent of the total electricity generated was produced from renewable energy, where the highest percent of energy is produced by hydroelectric stations (Hren et al., 2011: 29).

deterred, in 2009 only 69%) (Hren et al., 2011: 29-30). Much progress has been achieved on the educational level where all primary and secondary schools are involved in the program of 'eco-school'. Kindergartens are following the main guidelines of this program as well. Topics about environmental protection and threats, threats against the environment are connected with social studies which is becoming a part of curricula in many university faculties (e.g., Faculty of Criminal Justice and Security UM).

Unique to Slovenia are the still largely intact nature, rich water resources and forested land. A specialty of Slovenia is the countries' spatial placement in the transition zone between the Western and Eastern Europe and the border between North and South. Slovenia is known for bringing together diverse worlds, from the Alps to the Dinarides, and the Pannonian to the Karst. It is also known as a transit country of organized criminal groups. This applies to environmental crime as well, with the last three years particularly dangerous because of illegal transport of waste from Western Europe to the East and trafficking of animal and plant species in the opposite direction.

Meško and Flander (2011: 228) emphasize that in last period penal legislation and sentencing policy are getting harsher in spite of the fact that the crime rate has not risen in recent years. Similar trends are observed in the field of environmental crime. The purpose of this chapter is to analyze the current situation in the field of environmental crime in Slovenia, deriving from past similar studies from American, British and Australian research works. This will be done by analyzing statistical data concerning offences and criminal acts against the environment, revealing the real threats to security. We discuss the factors of endangering the environment, which includes the human as an individual. We will also discuss security threats. Environmental crime as the real threat will be compared to the perceived threats to security, especially threats against the environment based on the analysis of the past Slovene public opinion surveys. The third part of the study about the situation in Slovenia consists of the analysis of the experts' standpoints about the environmental crime collected by structured interviews. Besides the

interviewed group's opinion about the seriousness of the problem of environmental crime and the most problematic forms of environmental crime, analysis shows their opinion about the victims of environmental crime. Possible effective forms of responding and preventing environmental crime in Slovenia are explored. Finally, the gained results together with the findings from the theoretical part are used for the verification of the thesis of the present dissertation.

5.1 Official statistical data about environmental crime in Slovenia

In the present dissertation, the legal definition of environmental crime is used (presented in the Chapter two). Based on the described environmental crime definition, the analysis of official statistical data is conducted. The method of crime statistics analysis (data obtained from police, inspectorate, public prosecutors' office and courts of justice), is used for the analysis of trends of growth and decline of the number of environmental crimes committed in Slovenia with the purpose to estimate the actual situation in the State.

Offences against the environment are most often dealt with by the Inspectorate of the Republic of Slovenia for the Environment and Spatial Planning¹⁰⁴ (hereafter Inspectorate). The police deal with it second most frequently. The most common offences belong to the following groups (IRSOP, 2005; 2006; 2007; 2008; 2009; 2010): water, air and soil pollution; waste management, disposal and trafficking; illegal trafficking with animal and plant species, minerals and fossils; animal torture and illegal hunting; light

¹⁰⁴ Inspectorate of the Republic of Slovenia for the Environment and Spatial Planning (IRSOP) exercises inspection supervision over the implementation or compliance with environmental protection regulations (e.g., nature and environment protection, ecological control at the state border, air quality, waste management, water quality, water regime, water and its management, nature protection, chemicals and genetically modified organisms, industrial pollution and risk, noise and electromagnetic radiation). Inspection control is conducted in accordance with the powers and responsibilities of the officials that are defined by the following laws and the resulting regulatory framework: Inspection Act (Zakon o inšpeksijskem nadzoru [ZIN-UPB1], 2007); Offences Act (Zakon o prekrških [ZP-1-UPB8], 2011); Environmental Protection Act (ZVO-1-UPB1, 2006; 2008; 2009); Water Act (Zakon o vodah [ZV-1] (2002; 2004; 2008); Nature Conservation Act (Zakon o ohranjanju narave [ZON-UPB2], 2004; 2006; 2008; 2010); Act on the Management of Genetically Modified Organisms (Zakon o ravnjanju z gensko spremenjenimi organizmi [ZRGSO-UPB1], 2005; 2010).

and noise pollution; import, export and unlawful acquisition or use of radioactive, ozone-depletion or other hazardous substances; and driving in the natural environment with bicycles and motor vehicles, and motor slides.

In 2009 and 2010, the most often dealt with offences against the environment were (IRSOP, 2010; 2011): excessive emissions into the air, mainly from combustion plants and industrial facilities; excessive emissions into the water; excessive noise in the environment; light pollution; illegal activities affecting the environment (mainly intervention into the land and illegal driving in a natural environment) in protected areas; and inappropriate management of waste (e.g., illegal disposal of waste in the environment, especially into the soil (i.e., construction and hazardous waste)). The illegal waste disposal is representing approximately 50 percent (in year 2010 55% (IRSOP, 2010)) of all complaints and violations reports. The increase in violations of legal provisions governing genetically modified organisms and examples of excessive electromagnetic radiation was detected.

Unfortunately, statistical data, separated according to particular offences, are not available in the Inspectorate reports. Therefore Table 5 contains only information about the realization of the inspection controls, inspection provisions and the passed sanctions against the perpetrators in the period 2003 - 2010.

Table 5: Data about the inspection provisions of the offences against the environment, space and natural resources in the period from 2003 to 2010.

Year	Inspection (regular and irregular)	Inspectorate provisions				Offences		Criminal offences	Together
		Provision	Warning	Execution order	Other decisions (decree, referral of case)	Payment order	Provision		
2003	10015	1786	1009	1013	216	252	27	5	14323
2004	9267	1231	1606	1083	269	265	125	11	13857
2005	9437	896	1665	1219	230	152	99	1	13699
2006	11523	1568	1918	1448	283	185	190	5	17120
2007	10780	1367	1496	1070	1109	258	243	2	16325
2008	10231	1484	1379	885	530	292	241	18	15060
2009	10325	1556	547	985	1911	157	316	4	15801
2010	10311	1782	439	998	2216	145	377	5	16273

Source: IRSOP (2005; 2006; 2007; 2008; 2009; 2010; 2011).

Table 5 shows that the number of regular and irregular inspections since 2008

is increasing again, although the Inspection in 2006 and 2007 carried out a lot more inspection controls (11523 in 2006 and 10231 in 2007). The number of inspectorate provisions is also increasing; from 1367 in 2007 up to 1782 in 2010. It is necessary to add that inspection services pass fewer warnings in the last two years. The number of warnings has sharply declined since 2005, as in 2005 1665 warnings and in 2010 only 439 warnings were issued. The number of inspectorate offence provisions is increasing; since 2005 only 99 offences were sanctioned and in 2010 the number of offences increased to 377. The number of filed criminal charges for offences against the environment varies considerably. The Inspectorate recorded just one criminal charge in 2005, which increased to 18 criminal charges in 2008. In the period from 2003 to 2010, the Inspectorate filed an average of six criminal offences per year and passed them to the public prosecutor. In Slovenia Inspectorate issues on average 5071¹⁰⁵ different warnings, decisions, provision, and other measures in cases of violations against the environment per year. The minimum of Inspectorate provisions that were passed was in 2005, 4262 provisions, and the maximum in 2010, 4262 provisions.

Table 6 shows the number of crimes against the environment from 2000 to 2010 that were detected and inspected by the Slovene police. The mentioned crimes are due to better and easier presentation divided according to the Articles from Chapter 32 in the Penal Code (KZ-1, 2008; 2009; 2011) of the Republic of Slovenia. The sum of all criminal acts against the environment and the number and the percentage of the successfully inspected criminal offences are added.

As outlined in the Table 6, the number of environmental crimes varies, decreasing and increasing in the eleven-year period (2000-2010) so we cannot talk about any particular increase of this form of crime, although the number of detected environmental crimes in 2009 increased up to 201 and the number in 2010 decreased to 169. The most probable reason for the high number of

¹⁰⁵ The data are difficult to access and hard to understand. What is more, the Inspectorate annual reports differ and the competent department of the Inspectorate is almost completely unresponsive. What is more, reports and models of tables and graphs are changing every two or three years, so it is very difficult to follow this group of official statistics.

detected crimes in 2009 was the preparation by NGOs which initiated a national action called 'Clean Slovenia in one day'. The organizers invited citizens and competent agencies to assert more control and to report the detected crimes against the environment (mostly illegal waste dumpings), which influenced on the number of reported criminal offences in 2009.

Table 6 shows that criminal offences of marine and water pollution by ships, import and export of dangerous substances into the country, transmission of contagious diseases in animal and plant species, destruction of plantations by a noxious agent and production of injurious medicines for treatment of animal species in the period from 2000 to 2010 have not been detected.

By Slovenian police detected environmental crime offences are fish poaching, tainting of forests or fodder, unlawful occupation of real property, and contamination of drinking water. The number of offences changed in variation from one up to five per year. In this group, the most often and most dangerous (i.e., threatening to health and life of people and other living species) is contamination of the drinking water. Slovenian police register an average from two to three cases of drinking water contamination per year.

Destroying forests is a criminal offence whose number is decreasing. In 2000, police detected 13 such cases, in 2001 there were nine, in 2002, eight, and in 2003, there were 11 cases. Since 2003, the number for this criminal offence decreased to approximately two offences per year. In 2010 only one such case was detected. The opposite situation is observed in the case of unlawful acquisition or use of radioactive or other hazardous substances. From two offences in 2000, and one offence in 2001, the number increased to 14 in 2006 and 29 in 2008. In the last two years the number is again decreasing; five offences in 2009 and just two offences in 2010.

Table 6: Number of criminal offences against the environment, space and natural resources, which in the period from 2000 to 2010 were dealt with and investigated by the Slovenian police.

Article \ Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Burdening and destruction of environment and space (332)	21	34	29	24	16	12	12	9	14	57	31
Marine and water pollution by ships (333)	/	/	/	/	/	/	/	/	/	0	0
Import and export of dangerous substances into the country (334)	0	0	0	0	0	0	0	0	0	0	0
Unlawful acquisition or use of radioactive or other hazardous substances (335)	2	1	0	1	6	10	14	9	29	5	2
Contamination of drinking water (336)	3	5	0	3	4	3	0	4	4	3	0
Tainting of foodstuffs or fodder (337)	1	1	2	1	2	0	0	0	0	1	1
Unlawful occupation of real property (338)	1	2	3	3	3	2	3	2	4	3	5
Destruction of plantations by a noxious agent (339)	0	0	0	0	0	0	0	0	0	0	0
Destroying of forests (340)	13	9	8	11	5	0	2	4	2	2	1
Torture of animals (341)	15	20	19	28	29	36	33	23	29	42	41
Game poaching (342)	67	57	92	78	68	66	66	60	59	79	86
Fish poaching (343)	2	2	0	1	1	1	0	0	0	2	1
Illegal handling with protected animals and plants (344)	0	0	0	0	0	0	0	0	1	4	1
Transmission of contagious diseases in animals and plants (345)	0	0	0	0	0	0	0	0	0	0	0
Production of injurious medicines for treatment of animals (346)	0	0	0	0	0	0	0	0	0	0	0
Unconscionable veterinary aid (347)	0	0	0	0	0	0	0	1	0	0	0
Number of all detected offences	125	131	155	152	136	137	133	112	145	201	169
Number of successfully inspected offences	/	80	82	71	67	66	56	40	67	101	70
Percentage of successfully inspected offences	/	61.1	52.9	46.7	49.3	48.2	42.1	35.7	47.2	50.3	41.4

Source: Policija (2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011).

The torture of animals, game poaching, burdening and destruction of the environment and space, are the three groups of environmental crime offences that stand out the most and are the most often registered and investigated form of environmental crime by the police in Slovenia. Burdening and destruction of the environment and space is the most general criminal offence in the group of the criminal offences against the environment, space and natural goods. The review of the statistical data in the period 2000 to 2010 shows changes in the number of detected offences. The minimum, nine offences, was detected in the 2007, and the maximum, 57 offences in 2009. Slovene police investigates on average 23.5 criminal offences of burdening and destruction of environment and space every year.

The torture of animals and game poaching are the most often detected and the least charged criminal offence against the environment. Slovenian police investigates an average of 28.6 cases of animal torture and 70.7 cases of game poaching per year. Game poaching offenses have increased in the past three years. This represents a problem that is definitely connected with the difficult social circumstances and economic crisis in the country. The sale of the game meat and trophies offers a profit which also contributes to the increase. The increase in the number of this offence is worrisome. The fact is that police are confronting more and more brutal cases of animal torture, thereby in August 2010, the first prison sentence in Slovene history was given for the torture of a dog.

Slovenian police investigate an average of 145 crimes against the environment, space and natural resources per year. Furthermore, 47.45 percent of criminal offences are successfully inspected¹⁰⁶ and criminal charges against the perpetrator passed to the public prosecutor.

¹⁰⁶ Although the number of crimes committed against the environment, recorded and investigated by police, is not so very high in comparison to some other forms of crime (e.g., thefts and robberies). With the use of additional crime analysis and tools the number of offenses against the environment could be reduced and the percentage of successfully inspected cases increased. Likewise, the statistics about environmental criminal and minor offences, presented in the tables, show the trends and the changes of specific forms of crime. A crime map, which enables the representation of detected environmental crimes on the map of the State, is more appropriate and would be more useful for crime analysis and further police work. For the purpose of the analysis and detection of specific crime patterns crime mapping with the use of Geographic Information System should be used.

Table 7: Number of criminal charges filed by the state prosecution office and number of convicted offenders for crimes against the environment, space and natural resources in the period 2000-2010.

Year	2000*	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of criminal charges	/	32	141	112	146	200	144	118	85	48	48
Adult individuals	/	32	140	110	146	164	142	111	81	41	48
Legal entities	/	0	1	2	0	36	2	7	4	7	0
Number of convictions	/	29	22	32	33	29	29	38	21	39	98
Adult individuals	/	29	22	32	33	28	29	38	21	39	98
Legal entities	/	0	0	0	0	1	0	0	0	0	0

Source: VDT (2002; 2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011).

Note: *Data for the year 2000 are not available.

Table 7 shows the number of filed criminal charges against adult individuals and legal entities, and the number of convictions for both groups of perpetrators of environmental crime in Slovenia. The number of filed criminal charges for the criminal offences against the environment, space and natural goods is not especially high. If we compare it with police data about the investigated crimes against the environment and with by the Inspectorate reported criminal offences against the environment, the number by the public prosecutor filed criminal charges for the criminal offences against the environment, space and natural resources is high. Neither the criminal charges against the legal entities are an exception. Interesting is the discovery from 2005, when the public prosecutor filed 36 criminal charges against legal entities. On the contrary, in 2001, 2002, 2004 and 2010 no criminal charges were filed against them.

Between 2001 and 2010, an average of 107 criminal charges were filed against offenders of the Slovene environmental protection legislation. The ratio between the number of criminal charges and the number of convictions is almost three to one (107 per year : 35 per year). Only one third of filled criminal charges ended successfully with the conviction. From the 56 pressed criminal charges against legal entities in the period 2005-2010, only one case ended successfully with a conviction. Since 2005, no legal entity was convicted for a crime against the environment.

Analysis of the available annual reports of the Inspectorate for the period 2003-2010 and the annual reports of Police for the period 2000-2010 show that

for deviations against the environment competent authorities have noticed an increased concern for environmental protection in Slovenia. The number of received reports is increasing and represents an average of two-fifths of inspection control. A substantial part of the deviations represent the lack of knowledge or circumventing regulations by investors, particularly in the field of nature and water protection. It is disconcerting that the bodies of administrative units do not take into account the requirements of rules of environmental protection, nature and water protection in the conduct of administrative procedures (IRSOP, 2005; 2006; 2007; 2008; 2009; 2010; 2011). Waste separation and recycling is the governmental priority in the last period which is evident by the percentage of provisions in this field.

Offences against the environment are most often dealt with by the Inspectorate for the Environment and Spatial Planning. The Police rank second. In the last three years, the number of regular and irregular inspections and the number of Inspectorate provisions are increasing. The number of warnings sharply declined but the number of inspectorate offence provisions has increased. The number of Inspectorate filed criminal charges for offences against the environment vary considerably (in average six criminal offences per year). In Slovenia, Inspectorate issues on average 5071 different warnings, decisions, provision, and other measures in cases of violations against the environment per year. It is interesting to note that illegal waste disposal represents approximately 50 percent of all complaints and violation reports per year.

In the last five years, Inspectorate shows that the most severe problem is extensive and very contextual diverse legislation, which is constantly changing, and the associated enormous scope of work. Similar problems due to the systemization of environmental protection legislation in Slovenia are reported also by police. Slovene police investigate on average 145 crimes against the environment, space and natural resources per year. 47.45 percent of criminal offences are successfully inspected and criminal charges against the perpetrator referred to the public prosecutor. The torture of animals, game poaching, and burdening and destruction of environment and space

stand out the most and are the most often registered and investigated form of environmental crime. The number of these crimes in the period from 2000 to 2010 never exceeded 100.

During 2001-2010, an average of 107 criminal charges were filed against offenders of the Slovene environmental protection legislation. Only one third of filed criminal charges end successfully with a conviction, and in only one case the legal entity was convicted for crimes against the environment.

One of the major problems in Slovenia is the dependence of municipalities (regions and people) on the industry and the businesses in their area. They are often major polluters, but the local representatives are indulgent, compassionate and tolerant towards the pollution due to the dependence on the business (e.g., Helios, Cementarna Celje, Belinka, Salonit Anhovo), which among other represent needed working places.

Pečar (1981: 40) pointed out that if we are the polluters, we have no moral right to require changes, since it would affect our actions. In the victimological sense, we are placed in a similar position with crime without the victim when the victims allow themselves to be victimized because of certain advantages and comfort that this phenomenon enables them. For this reason many Slovenes do it, just because of the comfort, prestige, perceived gains, and to avoid costs. Unfortunately, many people today are the perpetrators and victims of environmental crime tomorrow (where even self-victimization is possible). However, the finding that public awareness about the meaning and importance of environmental protection is growing is encouraging.

5.2 Public opinion about environmental issues

5.2.1 Slovene public opinion surveys - public opinion about the environmental threats and the threats against the environment

The opinions of citizens are commonly expressed in public opinion surveys. In Slovenia, the Defense Research Centre at the Faculty of Social Sciences in Ljubljana is one of the research institutes in charge of conducting these

studies. The results of the prior Slovene public opinion surveys regarding possible threats to security in Slovenia in 1994, 1999, 2001, 2005, 2007 and 2009 are presented in the Table 8 below. We are aware that *perceived threats* (Sotlar et al., 2011) reported in studies such as public opinion survey, can significantly differ from the so called *real threats* (Sotlar et al., 2011) that actually occur. They are statistically recorded and verified by different competent national agencies, institutes or other services (e.g., police, inspectorate, public prosecutor and others).

Table 8: Factors of possible threats to the security of the Republic of Slovenia in years 1994, 1999, 2001, 2003, 2005, 2007 and 2009 (N=1000).

Threats/Year	1994	1999	2001	2003	2005	2007	2009
Traffic accidents	/	3.21	3.24	3.16	3.12	3.34	3.22
Crime	3.14	3.46	3.28	3.28	3.20	3.20	3.18
Drugs, narcotics	2.95	3.45	3.41	3.28	3.21	3.17	3.12
Degradation of environment	3.17	3.35	3.07	2.91	3.06	3.04	3.12
Sell-out of social property	3.01	3.14	2.87	3.06	2.96	3.03	3.19
Poverty	/	3.13	3.05	3.08	3.05	2.99	3.25
Low birth rate	2.25	3.29	3.00	3.09	3.14	2.98	2.60
Unemployment	/	3.35	3.14	3.26	3.24	2.97	3.46
Natural and technological disaster	2.76	3.19	2.76	2.62	2.73	2.85	2.83
Suicides	/	3.08	2.88	2.82	2.72	2.74	2.74
Economic problems	3.08	3.22	2.99	2.92	2.85	2.69	3.14
Refugees, illegal immigrants	2.68	2.98	2.74	2.59	2.49	2.52	2.47
Internal political instability	2.89	2.94	2.53	2.59	2.45	2.51	2.61
Lagging behind in the field of science and technology	2.66	2.83	2.33	2.47	2.55	2.41	2.67
Contagious diseases, AIDS, etc.	/	2.77	2.43	2.21	2.28	2.22	2.23
Conflicts on the territory of former Yugoslavia	2.72	2.74	2.09	2.31	2.22	2.15	2.26
Extreme nationalism	2.48	2.53	2.20	2.14	2.15	2.07	2.14
Terrorism	2.45	2.64	2.09	1.87	1.90	1.91	1.79
Military threats of other countries	2.36	2.21	1.79	1.76	1.68	1.70	1.68
Energy dependence on foreign countries**	/	/	/	/	/	/	2.62

Sources: Dobovšek et al. (2009); Meško et al. (2007); Malešič et al. (2010).

*Note: The table shows the average value on a scale from 1 to 4 (1 = not a risk, 4 = very threatening).

**The question about energy dependence on foreign countries in year 2009 for the first time appears in the survey.

Table 8 shows that since 1999, security threats for the Slovene population have become less important and less threatening. This group of threats include: terrorism, military threats from other countries, conflicts on the territory of the former Yugoslavia and extreme nationalism. Contagious diseases, such as AIDS and hepatitis are also not seen by the public as a very dangerous threat to them and their security. In the past, low birth rate was an important issue, but since 2007, the fertility rate is increasing so this form of security threat is only moderately dangerous. It is interesting to note that suicides are by public opinion perceived as a medium threat to security beginning in 1999 when this question was included in the survey.

On a daily basis, threats presented in the media and more often confronted threats (Sotlar et al., 2011: 18-19) are perceived as medium threats. Included in this is internal political instability, lagging behind in the field of science and technology, traffic accidents, crime, drugs and narcotics, sell-out of social property, economic problems, degradation of the environment, and natural and technological disasters. Among the medium-security risk factors energy dependence on foreign countries is included. This question appeared for the first time in the study in 2009. The Slovene public perceived unemployment as a strong threat ($M > 3.4$) to security.

If we look closely at the *degradation of the environment* and the *natural and technological disasters* as security risk factors of the Republic of Slovenia, we can notice from the Table 8 that:

- 1) both risk factors were in the public opinion surveys from 1994 to 2009 classified as med medium threats to security;
- 2) natural and technological disasters are by Slovene public opinion less threatening than degradation of environment;
- 3) with the exception of year 1999, when natural and technological disasters as a threat to security were ranked higher, on a scale from 1 to 4 the natural and technological disasters are ranging between $M = 2.62$ and $M = 2.85$ (i.e., $M = 2.7$). We can conclude that people are aware of the potential danger of natural and technological disasters, while knowing that they are rare (with the exception of flooding in

- Slovene flood-prone areas in recent years), and therefore classified as medium threat to security;
- 4) in terms of degradation of the environment as one of the security risk factor is by Slovene population perceived as slightly more serious security threat, but it is still classified in the category of medium threats to security (its middle residue is slightly higher, ranging from $M = 2.91$ in the year 2003 and to $M = 3.35$ in the year 1999, or about $M = 3.1$). Although small, since 2003 a trend of increasing of risk rate of the environment degradation as a factor of security threat is noticeable; and
 - 5) Slovene public opinion survey from year 2009 included a question about the impact of environmental changes on a safety: "Do you worry that the changes in the environment as a result of human behavior in the future could have a decisive impact on safety?". The survey results showed that 859 (86.1%) respondents answered positive and 139 (13.9%) respondents answered negative. From the results of the Slovene public opinion survey in 2009 results that more than three-quarters of Slovene public believe that human intentional and unlawful interference with the environment and thereby caused changes in the future may affect the safety.

Threats against the environment are dangerous not only to the environment and people; they also represent an important aspect of threats to national security. From the national point of view about the relationship between environment and security, the question about the direct and indirect influence of the environment on national security is crucial. Environmental crime is ranked among the risk factors for individual, national and international security. Since the acts of unlawful and excessive depletion and degradation of natural resources have led to the state of their shortage. The interest and awareness about the importance and seriousness of the studied environmental risks and issues among the public is growing more quickly than it is in the field of research. The public rightfully expects an appropriate response of the state in environmental protection and the reduction of

environmental threats to security. In the modern era and the globalization conditions, security has a universal content.

In the last few years in Slovenia, academic research concerning environmental crime and issues is increasing. Green criminology represents one of the important bonds between the criminal justice system, its' subsystems, other sciences and all other interested parties. It combines and connects different scientific knowledge and experiences that deal with environmental issues. The case studies, conducted studies, research results, done analysis and scientific discussions can merely help competent authorities and other interest groups that confront environmental crime and environmental harm as constantly growing threat. The awareness of the impact of environmental crime on national security and the possible consequences makes the preparation of the security system for responding in crisis situations easier. Preventive measures for stopping possible environmental threats are less pretentious, complicated, expensive and not threatening at all. Reactive and proactive responses to environmental crime in Slovenia are addressed in the next chapter. Opinions of Slovene experts that deal with environmental crime issues on a daily basis are presented.

5.2.2 Expert opinion about environmental crime in Slovenia

The aim of the planned research is to gain an integrated view into the researched problem (i.e., investigation and responding to environmental crime in Slovenia); therefore the method of structured interviews was used to collect data about the standpoints on environmental crime taken by each group of experts that meet with environmental threats and/or environmental protection regularly during their work. For this purpose, 25 individuals from different parts of Slovenia were interviewed, which work as members of NGOs, environmental protection inspectors, police officers, criminal investigators, prosecutors, judges, journalists, firefighters, representatives from civil protection agencies, academic researchers, governmental officials from the ministries, and teachers in elementary and secondary schools. We were interested in their views regarding environmental crime, its' various

forms, victims and possible methods for successful responses to environmental crime in Slovenia. The respondents were asked the following five groups of questions:

1) *Question one:*

1.1: How big problem the threats against the environment (e.g., pollution and destruction of environment) are for Slovene society by your opinion? Where would you place it on a 10-point scale? (from 1 = no problem at all up to 10 = a very big problem)

1.2: What do you understand under the term environmental crime?

1.3: Did you ever meet with environmental crime? If yes, where?

2) *Question two:*

2.1: What do you think is causing the most concern and is the most problematic in the field of environmental crime in Slovenia?

2.2: What types of threats to the environment (forms of environmental crime) and/or forms of protection of the environment are you encountered at your work?

3) *Question three:*

3.1: Do you think that we can talk about the victims of environmental crime in Slovenia? Why do you think so?

3.2: Who (i.e., which groups of people, animals, plants) do you think is the most often exposed to environmental crime and becomes environmental victim?

4) *Question four:*

4.1: What is your opinion about the formal responses (statutory, legal responses) of the state against the violators of environmental legislation?

4.2: What is your opinion about the informal responses (unwritten rules of a society) of the society against the violators of environmental legislation?

4.3: Do you think that the competent governmental agencies at dealing with environmental issues and its perpetrators cooperate? If yes, in what ways? How would you rate the effectiveness of cooperation between governmental and nongovernmental organizations?

5) *Question five:*

What forms and methods of prevention of environmental crime would be by your opinion useful and effective for the Slovene society and the environment?

There were five demographic questions included. The interviews were conducted in September, October and November 2011. A research diary was kept during the study where all interviews were signed in together with the record outlining dates and locations, including the list of interviewees. Anonymity of the interviewees was assured. A tape recording was not done during the interviews because it could be disruptive for individuals who are more careful during their responses, as shown in pilot study. All responses were recorded by hand and later retyped in electronic form. In this way the data bases was constructed. For analysis, the statistical packages Excel program tools for electronic tables, and analysis of texts or the statistical handling of language data in sociological researches were used.

5.2.2.1 The sample of interviewed experts

Table 9 shows us the demographic data about the sample of respondents who participated in the survey. The sample includes 25 interviewed participants; 16 (64%) men and nine (36%) women.

Table 9: The description of sample.

		f	%
Gender	Male	16	64.0
	Female	9	36.0
Age	<= 30 years	5	20.0
	31 - 40 years	5	20.0
	41 - 50 years	6	24.0
	=>51 years	8	32.0
	Missing answer	1	4.0
Education	High school	2	8.0
	College	1	4.0
	B.A.	15	60.0
	M.A.	4	16.0
	Ph.D.	3	12.0

From Table 9 it is evident that, according to the age structure of the

interviewees, five (20%) respondents were 30 years of age or less, five (20%) respondents were 31-40 years of age, six (24%) respondents were 41-50 years of age, and eight (32%) respondents were 51 or older. Particularly interesting is the high percentage of the older respondents and the fact that one respondent refused to answer question about the age due to the reason of perceived lack of anonymity (it was a district court judge).

From the data regarding education in Table 9, it appears that as many as 15 (60%) of the interviewees had a B.A. The percentage of other educational groups is much smaller.

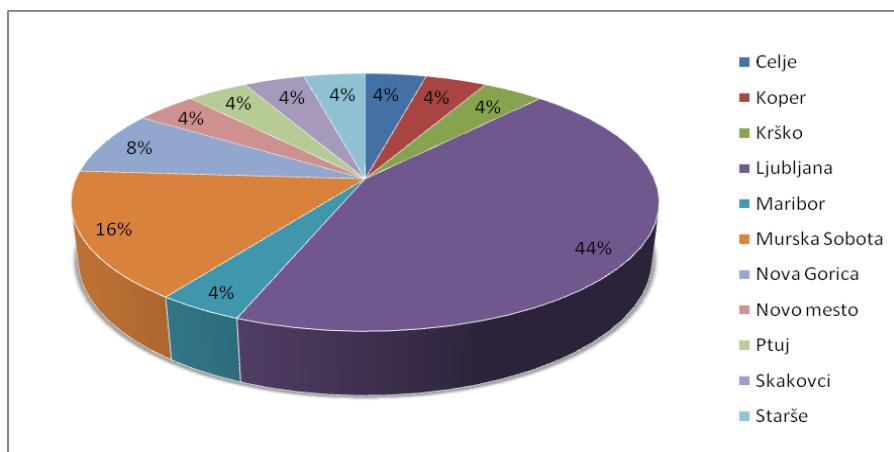


Figure 7: Local dispersion of the respondents' sample.

Figure 7 above represents the local dispersion of the respondents' sample in the present research. The large number of respondents (11 respondents or 44%) from the area of Ljubljana is not surprising, as most competent institutions and NGOs also are centralized in the capital city of Slovenia.

5.2.2.2 Interpretation of the results

Respondents believe that the threat to the environment is a major concern for several reasons: 1) the extent of the caused damage, which later most often cannot be repaired; 2) the people and other living beings who are affected; and 3) because it is a problem of survival.

The average value of the placement of the assessment of the environment

endangering problem in Slovenia on the 10-step scale is 5.56 (min=2; max=10). Many respondents (40%) believe that the threat to environment in Slovenia is not a serious problem, as in other parts of the world, but warn that the problem in the Slovenian area is growing. Respondents emphasized the fact that we are facing the problem of the anthropocentric human relationship towards the environment and that in most cases, man exploits the environment for the purpose of profit. The degree of tolerance of the Slovene population to such acts is still too high.

The interviewees understand the term environmental crime to mean all forms of environmental threats and environmental degradation (i.e., misdemeanors and offenses that are defined by the environmental protection legislation). Two-thirds (17) of the interviewees strictly follow the legal definition of environmental crime and one-third (8) of the interviewees extends the concept of environmental crime to all offenses against the environment that are unacceptable by society (i.e., sociological definition of environmental crime). In the Slovene space, the interplay between the both definitions of environmental crime and impact of the sociological definition on the legal definition of environmental crime is evident.

Over two thirds of the respondents (72%) experience environmental crime during their work on a daily basis. One third (28%) of respondents see environmental crime less frequently when addressing individual issues (e.g., teachers, scholars, researchers) and cases (e.g., prosecutors and judges).

Respondents believe that in the field of environmental crime in Slovenia, the following forms of environmental crime and other related forms of crime are the most problematic:

- 1) waste (illegal burning, dumping and smuggling of waste; radioactive waste);
- 2) water pollution and groundwater contamination by discharges, sprinklers and fertilizers;
- 3) soil, air and noise pollution;

- 4) cruelty to animals;
- 5) white-collar environmental crime which is detected by law enforcement agencies, but they are often unable to accede to the case (i.e., the difficulty of proofs) or do not get far with the investigation due to the lobbying and influence of the politics;
- 6) organized environmental crime and other serious forms of environmental crime because the competent Slovenian authorities are unable to discover them; and
- 7) the old, from the past (i.e., previous political regime) remained illegal dumping grounds.

Besides the above listed forms of environmental crime in Slovenia, which are by the interviewees ranked among the most problematic, the experts have also pointed out some other phenomena associated with environmental crime and by their opinion causing the most concern:

- 1) low environmental protection awareness of people and companies (legal entities);
- 2) media and political misleading of the public about the seriousness and incidence of the environmental crime and the diminishing of the problem and appealing on the "greenness" of Slovenia (from the interview: "*...the problem is an absence of the discourse on the noxiousness of everyday capitalist habits for the environment*");
- 3) incompetence and helplessness of individual governmental departments;
- 4) huge environmental damage, caused to the environment and the country or its citizens and the fact that the destroyed environment is very difficult to repair and the returning back to the environment's original state most often is not possible;
- 5) insufficient control over the legal entities by the competent agencies (inspectors); and
- 6) inadequate legal regulation of the environmental protection field.

We asked the interviewees "What types of threats to the environment (forms

of environmental crime) and/or forms of protection of the environment are you encountered at your work?". Their responses are represented in Table 10 below, and shows the types of environmental crime with which respondents most often meet at their work. The data reveal that the most often dealt with form of environmental crime are waste, mainly illegal dumping and trading in waste, burning of waste and other forms of inappropriate management of waste. Not less than 60 percent (15) of respondents at their work have to deal with the waste. The data is consistent with the figures from the Inspectorate (IRSOP, 2010), where violations at waste disposal are representing 55% of all violations reports. It is evident the second most often environmental crime types mentioned are excessive emission into water and groundwater pollution, which is in the course of their work met by 56% (14) of interviewees, and excessive emissions into air, met by 36% (nine) of the interviewees.

Table 10: Most often encountered forms of environmental crime.

Environmental crime forms	f	%
Waste (illegal disposal and trafficking, burning of waste and inappropriate waste management)	15	60
Excessive emissions into water and groundwater contamination	14	56
Excessive emissions into air	9	36
All forms of environmental crime (criminal offences, defined in the KZ-1 (2008; 2009; 2011), and misdemeanors, defined in the ZVO-1-UPB1 (2006; 2008; 2009) and other laws)	8	32
Illegal exploitation of the mineral materials	3	12
Interventions to protect natural habitats (riding with motor vehicles)	3	12
General forms of environmental protection and raising awareness	3	12
Torturing of animals	2	8
All forms of omissions of the duties (i.e., crime of the state)	2	8
Illegal lobbying at the systematical changing of the environmental legislation	2	8
Building permits and illegally changing the spatial arrangement	2	8
Organized and white-collar environmental crime	2	8
Electromagnetic radiation	1	4
Fish kills	1	4

It is interesting too note that 32 percent (eight) of respondents at their work meet all kinds of environmental crime listed in the KZ-1 (2008; 2009; 2011),

ZVO-1-UPB1 (2006; 2008; 2009) and other legal acts. If we compare these data with official police statistics, we see that in the period from 2000 to 2010 that four groups of environmental crime types (criminal offences of marine and water pollution by ships; import and export of dangerous substances into the country; transmission of contagious diseases in animal and plant species; destruction of plantations by a noxious agent; and production of injurious medicines for treatment of animals) have not been detected. At this point the question arises, if these forms of environmental crime really occur, or are these forms of environmental crime difficult to prove and are therefore never recorded in the official statistics, or the gray field of environmental crime is so extensive that some specific forms are not detected and processed.

Among the less frequently discussed forms of environmental crime are: fish kills, excessive electromagnetic radiation, torture of animals, interventions in the protected natural environment, illegal exploitation of mineral materials and the omission of the duties of the competent authorities (i.e., environmental crime of the state). The data on detection of cases of illegally lobbying at the systematical changing of the environmental legislation, illegal building permits and illegally changing the spatial arrangement, and cases of organized and white-collar environmental crime stand out.

Three (12%) interviewees at work do not deal with environmental threats and environmental crime directly. On the contrary, teachers and scholars deal with the general forms of environmental protection and raising awareness, as reported in an interview by a primary school teacher:

At my work I do not face with environmental crime directly. We try to present themes of pollution and environmental degradation to pupils and to stress the importance of environmental protection; how we need to behave and protect the environment. We are also involved in the project 'eco-school' that really offers a lot of opportunities and forms of education and raising awareness of children and even teachers.

Environmental crime victims in Slovenia are one of the hot topics of discussion, especially when it comes to those particularly vulnerable or risk areas, such as the Mežica valley, Idrija, the plains Sorško polje, Kranjsko

polje, and Krško polje, Ljubljana and its surroundings, Savinjska basin, and plains at the rivers Drava and Mura, called Dravsko polje and Panonsko polje. Ninety-two percent (23) of interviewees (the majority) believe that in Slovenia we can talk about the victims of environmental crime. Respondents believe that the problem of environmental crime victims is especially related to the problem of pollution from factories, corporations and the emergence of mass casualties of environmental crime and their living in degraded environments. We talk about the phenomena of environmental injustice and environmental crime of the state in the areas where the state did little to protect the citizens (e.g., Mežica, Idrija, Zasavje, Anhovo).

Especially stressed is the belief that humans are impaired, or victims of environmental crime, due to the destruction of the environment and the killing of animals. The anthropocentric aspect of the relationship between human and environment is still present and the human is very often set in the forefront, before the environment. Only in very rare cases is the environment put first by certain social groups (i.e., NGOs) or individuals who have a high level of ecological ethics and integrity. This situation can be described with the words of the interviewed criminal investigator:

...we can talk about the ‘direct’ victims and the general perception of the environmental issue. By this I mean that when we are destroying the environment, we are endangering ourselves. On the other side, the narrower definition of the term ‘environmental crime victim’ applies only to environment and its’ deterioration. At the same time, the plants, animals and people, who are part of this environment, are affected.

Table 11: Victims of environmental crime.

Environmental crime victims	f	%
People	22	88
Animals	19	76
Plants	18	72

Table 11 confirms the above arguments since as much as 88 percent (22) of respondents believe that people are the most common victims and the most vulnerable victims of environmental crime. Animals are next most commonly noted (76%) and finally plants (72%).

Especially stressed is the belief that humans are impaired, or victims of environmental crime, due to the destruction of the environment and murdered animals. In other words, the anthropocentric aspect of the relationship between human and environment is still present and the human is very often set in the forefront, before the environment. Only in very rare cases the environment is put in first place by certain social groups (i.e., NGOs) or individuals who have a high level of ecological ethics and integrity. The major problems in Slovenia remains the dependence of people on the industry. They tolerate the polluters due to the dependence on their business. This was emphasized in one of the gathered interview:

'In Slovenia, we are not talking about victims of the environmental crime, because it is still more important that people have an employment and get a job (i.e., hidden victims), but no one is asking in what kind of working environment are these people working and how health hazardous it is. The consequences of such form of environmental crime will be visible only in few years or decades time and we will 'pay' them very expensively (e.g., the next generations), because we do not protect the environment and today still put the economy and production in the forefront.'

All of the respondents believe that formal responses (statutory, legal responses) of the state against the violators of environmental legislation should be defined by legislation. The interviewees expressed the following views about the formal responses in the field of environmental crime in Slovenia:

- 1) lack of practice, qualifications and experience;
- 2) still forming legal system, legal loopholes and too slow implementation (e.g., "...the reparation of the environment and the returning to its original state should be obligatory, no matter which governmental agency would be responsible for this...");
- 3) the police should have more power and authorities;
- 4) lack of environmental inspectors;
- 5) the state has a dual role - is the perpetrator of environmental crime and the guardian of the environment at the same time;
- 6) an operational monitoring system at national level is not established (i.e., is not functioning); and

- 7) the crossing or the division of competences between national authorities is still a problem (i.e., police and Inspectorate).

Environmental protection should be a national priority, as emphasized by the governmental official, working in the field of the prevention of corruption:

"In Slovenia stands out the problem of evaluation of environmental policy in comparison to other policies (e.g., economic, social, etc.), since this is really an undeveloped area. Not earlier than in the last period the European Union provisions impact on the relevance and development of environmental policy in Slovenia. It is becoming a priority."

Figure 8 below summarizes the informal responses to environmental crime in Slovenia, experienced or perceived by the interviewees. The most common are NGOs (26%) and civil initiatives (25%), followed by citizens' violations reports (22%). Less often is media coverage (16%), which is usually associated with the operation of NGOs and civil initiatives.

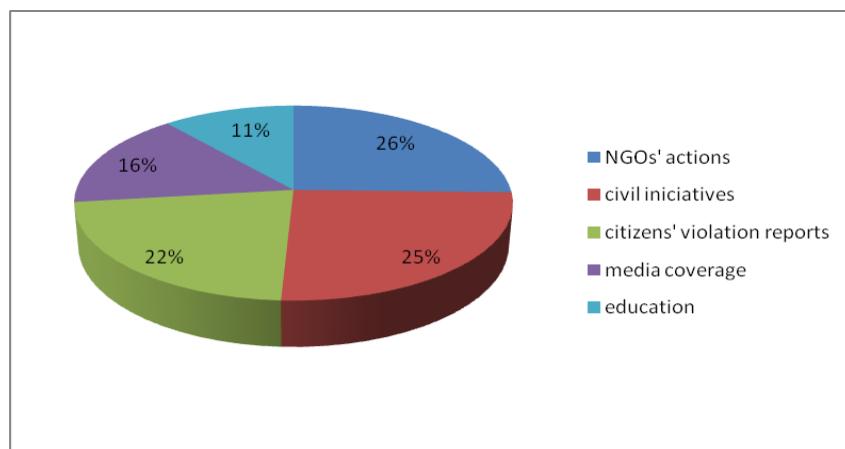


Figure 8: Informal responses to environmental crime in Slovenia.

Interviewees among the important forms of informal responses also include education. Respondents expressed the following views of the informal responses in the field of environmental crime in Slovenia:

- 1) informal responses are immediate, but still fall short, although the individual actions are sometimes exaggerated, just because of the search of attention and the lack of trust in the criminal justice system;
- 2) informal responses depend on the consciousness of the individual (i.e., ecological ethics);

- 3) people in Slovenia are still selectively tolerant; and
- 4) NGOs are still dependent on funding of the state and political elites.

As evident in Table 12 below, showing the viewpoints about cooperation between the relevant governmental agencies and organizations, and about cooperation between governmental and non-governmental organizations, all organizations involved do not cooperate enough and could strengthen their cooperation in responding to environmental crime and issues in the future.

Interviewees stressed that: 1) national authorities respond too slow; 2) national agencies too often remain in the frames of annual plans (e.g., Inspectorate) what is resulting in too little governmental control (to this partially contributes (too) low number of inspectors); and 3) in recent years cooperation actually is improving. In particular, a recurring problem in the interaction and cooperation between police and Inspectorate is slowly improving.

Table 12: Cooperation between organizations when dealing with environmental issues.

Opinion about the cooperation	Cooperation between governmental agencies and organizations		Cooperation between governmental and non-governmental organizations	
	F	%	F	%
Yes, they cooperate	6	24	2	8
No, they do not cooperate	3	12	3	12
Not enough cooperation	13	52	18	72
No answer	3	12	2	8

Regarding the cooperation between governmental and non-governmental organizations, the interviewees believe that partnership is required. Representatives of both groups are critical toward the cooperation of the other side (e.g., NGOs' sometimes complain that the competent authorities push them aside or do not pay regard to their opinion and collected facts; NGOs are sometimes little bit annoying to governmental agencies' representatives because of big media fuss following them, which if often more harmful than good because the pre-criminal procedure is clearly defined by the law). Due to the described situation, the cooperation between these two groups should be established under statutory provisions.

When asked about environmental crime prevention and methods that would be useful and effective in the Slovene environment, a surprisingly high proportion (68% [17]) of respondents still believe that the effective, immediate, and more stringent action by the competent authorities is the best form of environmental crime prevention. We are talking about a situation where severe punishment and consistent enforcement of (criminal) sanctions should work as general intimidation (i.e., a form of special prevention). It noted that almost half (48%) of respondents believe that in the Slovene space higher fines and stricter legislation in general are needed. Respondents in this group of preventive measures also include better cooperation between the competent authorities (32%), increase in the number of environmental inspectors (16%) and the strengthening of cooperation between the competent authorities and NGOs (1%).

Another group of proposed measures for the environmental crime prevention are education (64%) of the entire population, as well as individual groups (e.g., older population that about environmental protection and waste separation have not listened in primary schools; and additional education of governmental authorities) and rising awareness (48%). Respondents believe that media coverage (20%) (e.g., investigative journalism and a regular media reporting about the offenders of environmental legislation, the so-called media 'lynch'), have an important role in the environmental crime prevention. Finally, the respondents believe that the strengthening of environmental policy at the national level, highlighted by 12% (three) of respondents, as well as the regulation of the problem of over-abundance and fragmentation of the environmental protection legislation are important for the Slovene environment. Twelve percent of respondents consider it necessary to simplify and systematically organize the laws and regulations that cover the field of environmental protection.

From the above, we can conclude that a multidisciplinary approach and combination of different pro-active and re-active methods of responding to environmental crime are necessary to be successful in this 'game of survival'.

5.4 Verification of the research theses

Following comparative criminology and criminal justice perspectives of crimes against the environment, four groups of research questions, based on Sutherland's (1949; in Sutherland & Cressey, 1974) definition of criminology, were formed for the purpose of this study. They are verified by the above data and findings.

Sutherland's (1949; in Sutherland & Cressey, 1974) statement that criminology includes the research of law formation forms the first thesis: *Is there any special pattern of law formation as response to deviational phenomena against the environment in the Republic of Slovenia that is typical? Why does it come to increase/changes in criminal acts against environment?*

Environmental law in the Republic of Slovenia encompasses all protections for the environment that emanate from the following named sources: 1) laws; 2) regulations; 3) court decisions; 4) European Union's legislation, laws and treaties; and 5) international environmental legislation. Environmental protection in the Slovenian legal process has its basis in the Constitution, but on the systemic level it is governed by the laws. Talking about laws, in the Penal Code (KZ-1, 2008; 2009; 2011) the field of environmental crime is defined in the Chapter 32 as *Crimes against the environment, space and natural resources*. Despite early attempts to define environmental crime and environmental law, Slovenia still does not have a completely organized criminal justice system of environmental protection. The main reason for this is still largely complementing and coordinating the environmental legislation - the ongoing process of systemization of the environmental protection legislation. Developing environmental protection legislation as well as the lack of legal practice, has to be taken into consideration. Despite constant changes in legislation, especially criminal legislation in the field of environmental protection, it is still sketchy and sometimes not specific enough. Individual deficiencies have not been resolved even with the commitment and coordination of the Slovenian legislation with the legislation of the Union.

Unfinished processes of systemization of environmental protection in the criminal justice system are the main reason that Slovenia has had few proposals for environmental law formation at the national level. Almost all directives and regulations, introducing amendments and changes to the environmental protection legislation come from the EU, and Slovenia as a member state is taking them in consideration and including them in future environmental legislation. A clean and secure human environment is the priority of the Union, which is also reflected in the pattern of law formation as a response to environmental crime in Slovenia. The analysis of environmental protection legislation shows that the field of environmental protection is mutually inseparably intertwined, primarily due to the fact that criminal provisions of environmental protection and the efficient functioning of the criminal justice system depend on the incidence of the environmental crime. The relationship is also confirmed by a strong interdisciplinary field of deviations against the environment, which combines the social science and the natural sciences. A review of the provisions of Chapter 32 disclosed a relatively comprehensive criminal justice regulation of environmental protection. The problem of failed implementation and unsuccessful execution of the very good criminal justice norms on environmental protection burdens and complicates the efficient functioning of the criminal justice system. The abundance and fragmentation of legislative and regulatory provisions are especially compelling. The problem manifests itself in the work of the inspectors and the police, and with the prosecution and the judiciary.

The European Union and its member states are facing similar problems of unsuccessful transfer and problems with implementation and performance of environmental law sanctions. The Union is confronted with completely contradicting trends. On one hand, the so-called *Europeanization* and globalization of key environmental standards by the EU without an accompanying effective implementation and enforcement of sanctions is occurring. On the other, the deregulation of the system of penalties in the member states is happening as well. Implementation of (criminal) sanctions on the European territory is extremely inefficient in practice. The expected

contribution to environmental protection is not achieved (i.e., placebo laws phenomenon) (Comte & Krämer, 2004). Not only is it necessary to find a solution to the problem of inefficient transmission, provision of implementation and enforcement of environmental protection at national level, but it also requires a multidisciplinary approach of social and natural sciences. The recognition that environmental law has reached its limits, when it is no longer sufficiently effective, triggered a response and development of social sciences in the field of environmental protection.

To answer the second question "*Why does it come to increase/changes in criminal acts against environment?*", we have to understand that there is a difference between the criminal law and the sociological approach to defining environmental crime. The first one defines the parameters by following the practice, which are legally ruled; the second approach defines criminal cases, which could be defined in the existing criminal law regulations or not (morally inadmissible actions). The sociological definition extends the term environmental crime more than the definition of criminal law; unsocial behavior in general, which is in contradiction to the valid behavioral norms, but it is not necessarily punishable. The limit between environmental harm and environmental crime is determined by national (very rarely international) environmental protection legislation (presented in Figure 1). We talk about the interplay between both definitions of environmental crime (legal and sociological) and impact of the sociological definition of environmental crime on the legal definition of environmental crime. The latter is evident in the changes of legislation and widening the field of covered environmental criminal acts and consequently it is evident in the increase of the number of criminal acts against the environment. Besides changing the environment protection legislation and the increase of the number of criminal provisions that define the forms of environmental crime, the constant changes of environmental crime forms and the striving for profit have an influence on the number of the criminal acts against the environment. The increased workload and more required inspections have an influence on the number of the criminal acts against the environment as well.

The analyses show that in Slovenia the number by the Inspectorate detected and investigated environmental offences is slowly increasing. Besides, the number of environmental criminal offences investigated by police constantly varies and has decreased much in 2010 as compared to 2009 (from 201 in 2009 to 169 in 2010). We cannot say that the number of committed environmental crimes in Slovenia is growing and presenting the main reason for the changes in the number of the criminal acts against the environment.

Based on Sutherland's (1949; in Sutherland & Cressey, 1974) statement that criminology includes the research about the breaking of laws, thesis number two was formed: *Which are the reasons that bring an individual to break the environmental law? Which are the most frequent of criminal acts against the environment, space, natural goods and other deviant actions of an individual against the environment? Can we talk about a special group of perpetrators of criminal acts against the environment?*

As in other forms of crime, the reasons why people commit crimes against the environment are very diverse; from inadvertent, negligent, or unknowing violation of the environmental protection legislation, to planned making profit, reduction of operating costs or due to financial difficulties. Environmental crime is the crime of anthropocentric habits and the crime of the capitalistic production under the conditions of globalized modern society. It generally occurs because people behave towards the environment according to human-centered perspective, acting as having biological, mental and moral superiority over the nature, with the right to strive for profit and commodity no matter what.

The environment and its natural resources represent an opportunity (source of profit) for criminals. If the environment did not exist, environmental crime could not occur. When dealing with environmental crime, we face explicitly the incriminations, which are directed against the environment and consequently the human. As emphasized throughout the analysis of criminological theories about environmental crime, debates on environmental issues within the area of sociological, political, economical and biological

theories reflect the presence of a lack of certainty respectively the existence of contradictions between social development and progress (and existence) and environmental issues.

As derived from the anthropocentric (human-centered) perspective, the analysis of the phenomenal forms of environmental crime and in Slovenia detected forms of environmental crime, environment for humans in the majority of cases represents a way to make a profit (e.g., use of natural resources, poaching) or to avoid the costs prescribed by the state or the society (e.g., illegal waste disposal, toxic substances releases). This is also confirmed by the dominance of criminological theories dealing with the interpretation of the crime of the rich and powerful. In other words, corporate and white-collar environmental crime (e.g., profit theory, socio-biological theory, legitimacy theory, rational polluter theory, theory of critical criminology) prevail.

Based on the etiology of environmental crime, it is possible to conclude that the primary reason for committing crimes against the environment is human nature related to anthropocentric attitudes toward the environment. The origin for committing environmental crime lies in nature itself, because the environment represents the resources for the survival and the opportunity for profit (or to avoid the costs). The primary motives for environmental crime are profit and human development. Very rare are the cases where offenders have a different reason for committing environmental crime, such as cruelty to animals. Environmental crime occurs under the influence of the social conditions and circumstances (i.e., environment as a resource for survival) and economical factors (i.e., environment as a resource for profit) in the nowadays modern globalized society with the developed industrial system and oriented in market economy.

Regarding the frequency of crimes against the environment, analysis of the official Inspectorate and police statistical data bases in Slovenia shows that the most frequent forms of environmental crime are: water and soil pollution;

contamination of drinking water; illegal waste disposal and trafficking; illegal exploitation of mineral materials; animal torture; illegal poaching and fishing; driving in the natural environment with motor vehicles; tainting of forests or fodder; unlawful occupation of real property; destroying of forests; and unlawful acquisition or use of radioactive or other hazardous substances. The torture of animals, game poaching, burdening and destruction of environment and space are the three groups of environmental crime offences that are most observed by the police in Slovenia. They are the most often registered and investigated form of environmental crime.

Survey results about environmental crime in Slovenia show that over two thirds of the respondents almost daily see environmental crime during at work. One third of the respondents observe environmental crime less frequently. Especially when they address individual issues (e.g., teachers, scholars, researchers) and cases (e.g., prosecutors and judges). Respondents believe that in Slovenia the most problematic forms of environmental crime are: 1) waste; 2) water pollution and groundwater contamination; 3) soil, air and noise pollution; 4) cruelty to animals; and 5) white-collar environmental crime and organized environmental crime. If we compare official statistical and public perception about environmental crime, we see similar findings.

The answer to the third question of the second thesis is positive. We discuss special groups of perpetrators of criminal acts against the environment. It has to be mentioned that the environment represents an inter-connected system, so the acts of environmental crime are interwoven. Despite the fact that each form of environmental crime has its own particularities and that it is defined with a different combination of criminological theories and consequently affects different victims, we cannot draw precise boundaries and avoid mutual interaction and influences between them. In Slovenia, we distinguish five groups of environmental crime forms, according to the criterion of *who* is the perpetrator: 1) environmental crime of an individual; 2) environmental crime of the rich and powerful; 3) environmental crime of particular groups; 4) environmental crime by the state or the ruling authorities; and 5)

transnational environmental crime that can be connected with all other forms of environmental crime (as presented in Figure 3).

Based on Sutherland's (1949; in Sutherland and Cressey, 1974) statement that criminology includes research about offenders, thesis number three was formed: *What are the forms of formal and informal responses of the society against environmental lawbreakers? Do competent agencies cooperate when handling environmental problems and its perpetrators and in what way?*

Formal responses (statutory, legal responses) of society against violators of environmental legislation have to clearly be defined in legal acts. The results of the conducted study show that Slovene governmental agencies must face the following: 1) lack of practice, qualifications and experience; 2) still forming legal system, legal loopholes and too slow implementation; 3) lack of the number of the environmental inspectors; 4) lack of the operational monitoring system at national level; and 5) the crossing or the division of competences between national authorities is still a problem (i.e., police and Inspectorate). All these facts definitely influence the quality and efficiency of the work of competent agencies and officials against the lawbreakers when trying to protect the environment.

The most common informal responses to environmental crime in Slovenia are NGOs, civil initiatives, citizens' violations reports, media coverage and education. The informal responses by the experts' opinion in Slovenia are: 1) immediate, but still fall short, although the individual actions are sometimes exaggerated, just because of the search of attention and the lack of trust in the criminal justice system; 2) dependant on the consciousness of the individual (i.e., ecological ethics); 3) dependant on the fact that people in Slovenia are still selectively tolerant; and 4) influenced by the fact that in Slovenia NGOs are still dependent on funding of the state and political elites.

The results show that in Slovenia, governmental agencies and NGOs do not cooperate enough and could strengthen their cooperation in responding to

environmental crime and issues in the future. The two main reasons for this situation are that national agencies respond too slowly and that national agencies often remain in the frames of annual plans (e.g., Inspectorate) which results in too little governmental control. Particularly that issue is the present problem of the interaction and cooperation between police and Inspectorate, which is slowly improving.

Again, based on Sutherland's (1949; in Sutherland & Cressey, 1974) statement that criminology includes the research about the social response to lawbreaking and the lawbreakers, thesis number four was formed: *What forms and methods of preventing environmental crime would be useful and effective for Slovenian society and environment?*

The solution to contemporary environmental problems lies not only in more restricted environmental protective legislation. On the contrary, it lies in redefining our relationship to nature in general. Unfortunately our culture, values, and perceptions towards nature need to be reexamined. People have to exchange the anthropocentric with the eco-centric perception of the natural environment and have to pass over from reactive to proactive (i.e., preventive) behavior.

Results concerning environmental crime prevention types and methods that would be useful and effective in the Slovene environment reveal the experts' opinion about different forms of environmental crime prevention. They still cling to traditional methods of responding and crime prevention and recall the importance of their more frequent and more consistent implementation: 1) effective, immediate, and more stringent action by the competent authorities; 2) higher fines and stricter legislation in general; 3) better cooperation between the competent authorities; 4) increase of the number of environmental inspectors; 5) strengthening of cooperation between the competent authorities and NGOs; 6) education (of the entire population, as well as individual groups) and raising awareness; 7) constant media

coverage;¹⁰⁷ 8) strengthening of environmental policy at the national level; and 9) regulation of the problem of over-abundance and fragmentation of the environmental protection legislation.

In our opinion, situational crime prevention should be added to the above group of environmental crime prevention methods. Transferring situational crime prevention techniques to crimes against the environment involves designing models that eliminate crime opportunities (e.g., redesigning enforcement strategies to cut off industry-specific criminal opportunities; improvement of enforcement effectiveness with the emerging knowledge of the offender's characteristics and with the increase of technical training). Situational crime prevention tries to identify those situations and intervene where environmental crime and environmental harm opportunities are present in order to deflect offenders or targets away from one another with five groups of clusters (increasing the perceived risk; increasing the perceived effort; reducing the perceived rewards; reducing the perceived provocations; and removing the excuses associated with offending) (Clarke and Eck, 2008).

The general conclusion of everything discussed in this chapter is easy: environmental protection should be a national priority and the society has to develop a complete intolerance to all forms of environmental crime. Society must develop a complete intolerance to all forms of environmental crime. An eco-centered perspective of environment must become a social value, environmental protection must become a national priority. To achieve such a state, a combination of reactive and proactive methods need to be applied to environmental issues (e.g., harm, crime, threats), combining the 'top-down' (adoption and implementation of the stricter legislation) and 'bottom-up' (implementation of awareness raising and educational programs) approaches simultaneously. A thorough analysis has to be conducted on every concrete case or problem so that appropriate reactive and proactive measures can be developed.

¹⁰⁷ When reporting about the environmental issues, journalists cannot avoid the influence of the social, political, and cultural factors. Sometimes the media do not take their secondary role about the raising of public awareness seriously.

Less easy is the way that Slovene population has to go to reach the goal - sustainable development in the clean and protected environment. Education, cooperation and conformation will be needed at all levels, but especially on the national level, between the governmental and non-governmental organizations; and on the academic level, between the social and natural sciences. The education and awareness rising of the population will follow. The first steps are promising; we identified the problem (i.e., environmental crime) and started to study it in details. What is more, we managed to develop (and are still developing) the new criminological branch, whose role is the study of phenomena of environmental harm that are already been criminalized or are by society perceived as threatening and with it related processes of phenomena, as discussed in the last part of the dissertation. The best solution, besides education and ecological ethics (i.e., raising awareness), is the development of a complete intolerance to all forms of environmental harm and crime. Environmental protection must become a national (number one) priority.

6 Discussion

'Man is the measure of all things.'
Protagoras

The present doctoral dissertation is a study of environmental crime and green criminology. The comparative criminological and criminal justice aspects of environmental crime are the link from the beginning to the end of the present work. To this end, we first review the development of green criminology and examine the current state of environmental crime in other countries. This was necessary because these have not been developed very well as yet in Slovenia; we are at the initial stages but are progressing successfully. In the first part of the dissertation the field of environmental crime and green criminology were reviewed, analyzed and presented. The support on the foreign findings and experiences was crucial and inevitable. In the second part of the dissertation, the collected theoretical knowledge-base was examined and verified (i.e., supplemented and upgraded) by the empirical study regarding environmental crime in Slovenia. Derived from the criminological aspect of environmental crime, the theses were based on the Sutherlands' definition of criminology, verification of the research theses was addressed and the answers to research questions were given.

The lack of a knowledge-base about environmental crime and green criminology in Slovenia was the main reason for the use of comparative analysis. Support and knowledge extraction from foreign published sources, above all from the United States of America, Australia and Great Britain; countries at the forefront of this research field, was used. The present discussion summarizes gained findings. The current situation in the field of environmental crime and green criminology is emphasized, answering the questions about forms of deviance against the environment, formation of social norms, causes for violating the norms, and formal and informal responses of the society against the environmental crime offenders.

Today, in the age of electronic, cyber space and robots, we are faced with environmental pollution, degradation and destruction as the 'side-product' of the capitalistic society and production of maximal profits. Human needs and the arrangement of the human environment are invading the existing natural environment, causing environmental harm. Environmental crime is a crime of the past anthropocentric habits, determined from the human-centered philosophical perspective. The boundaries between environmental harm and environmental crime are often hard to establish, therefore they are often determined by national (very rarely international) environmental protection legislation. When talking about the term environmental crime, we discuss the interplay between the legal and sociological definitions of environmental crime and the impact of the sociological definition on the legal definition. The latter is evident in the changes of legislation and widening the field of covered environmental criminal acts. Thereby we are facing the increase of the number of criminal acts against the environment. This shows that the conviction that the number of environmental crime offenses is increasing merely because the actual increase in number of committed environmental crme offences, is mistaken. To illustrate our statement, we can look at the case of Slovenia, which in just four years, between 2008 and 2012, twice amended the criminal law on environmental protection and considerably expanded the field of environmental crime offences. Besides, due to the lack of adjusted terminology and united internationally acknowledged definition problems on all other levels of discussion, research, analyses, punishment, and prevention of environmental crime are appearing. Despite the strong influence of both definitions of crime, a narrow legal and a wider sociological definition, the classification of environmental crime forms, the comparison and the argumentation is by our opinion more logical, if based on a legal framework. We believe that only if the definition of environmental crime is simple, clear and understandable, can it be unified, broadly accepted and used for the purpose of comparative study or any other.

In following the proposal about the simple definition, from the criminological and criminal justice perspective, environmental crime can be described as

every temporary or permanent act or resigned activity, determined and defined as deviant by the (inter)national legislation, which causes any form of harm (an artificial change, worsening, burden, degeneration or destruction) to one or more of eight elements (air, water, soft soil, mineral materials, human species, animal species, plant species, and microorganisms) that compound the natural environment or interrupt the environments' natural changes. The violator could be anyone or everyone of us (corporations, companies, groups, individuals, state, etc). Environmental crimes' special characteristics are victims, because besides or directly through the environment (biotic and abiotic natural elements) it harms people as well.

Environmental crime currently signifies huge challenges for the criminal justice theory and practice. When talking about environmental crime, we talk about very different phenomena that are more or less still an unknown form of crime. In some aspects, it is a different form of crime as criminologists, researchers and other experts are used to dealing with. The analyses show that when addressing environmental crime and performing any kind of study, we have to be aware of the specific facts about the environmental crime, its' characteristics and with it related issues; environmental crime is new, diverse and still changing crime, related to the technical development and progress; it is crime that is hard to detect and deter, and often committed during the performing of a professional or economic activity; it is crime where the boundaries between legal and illegal are often vague and crime that causes different environmental issues, such as environmental injustice, environmental racism, green-washing, organized crime involved in thefts of natural goods. Another problem concerning environmental crime is the range between committing the crime and the perceived violations, when the consequences occur. Environmental crime is specific on one hand because of the perpetrators, their motives and the chosen modus operandi, and on the other hand because of special features of two different victims. In the field of environmental crime, we face the broader concept of the term victim. Environmental crime is specific because of special features of two different victims. Environmental crime acts usually do not affect human victims directly

as it happens in classical forms of criminality. The first victim of a criminal act of environmental crime is the environment, which afterward threatens the humans. Based on the analysis, eight groups of environmental victims can be formed: air, water, soft soil, mineral materials, human species, animal species, plant species and microorganisms. It is the human being that is the most protected and well-known group of environmental victims. Despite the fact that it will very hard to overcome the conservative definition of a victim, we are facing the changes of anthropocentric mentality. Nowadays the violations against the animals are loudly and broadly punished (species justice) and the same is occurring with the violations against the plant species (ecological justice). A society speaks about violations against the environment on a daily basis; thereby the described classification of environmental victims does not seem too ambitious and unrealistic.

In the dissertation, criminological and sociological theories and models reviewed emphasize the problem of separation of the human being from nature and the influence of the human-centered perspective of the relation. The biological, mental and moral superiority of humans over nature stand out. Affirmed by the dominance of criminological theories dealing with the interpretation of the environmental crime whose purpose is to gain profit (e.g., profit theory, legitimacy theory, rational polluter theory, theory of critical criminology), the human's perspective of the environment (in the majority of cases) represents a way to make a profit or to avoid the costs prescribed by the state or society. The environment and its natural resources represent a source of profit. If the environment did not exist, environmental crime could not occur. When dealing with environmental crime, we face explicitly the incriminations which are directed against the environment and consequently humans, fundamental human values and life. Likewise, the discussion regarding the contradictions between social development and progress and the environmental issues seems infinite. Although the rational polluter model only partially explains the organizational behavior and its inappropriate premise for the environmental protection legislation, it has an important value for understanding the behavior of environmental crime

perpetrators. We believe that the primary reason for committing crimes against the environment is human nature related to past anthropocentric attitude towards the environment. The origin lies in the nature itself, because the environment represents the resources for the survival and the opportunity for profit. The primary motives for environmental crime are profit and human development. Very rare are the cases where offenders have a different reason for committing environmental crime, such as cruelty to animals. Environmental crime occurs under the influence of the social conditions and circumstances (i.e., environment as a resource for survival) and economical factors (i.e., environment as a resource for profit).

Due to the lack of studies on environmental crime, its causes and perpetrators, it is difficult to make assumptions about other reasons for commitment of environmental crime offences. This will be, at least in the case of Slovenia, possible only when we will have the actual base on convicted environmental crimes offenders.

Another fact, that must not be overlooked, is that the environmental crime represents a huge threat to the individual as well as national and global safety. Environmental crime is ranked high among security risk factors, since the acts of unlawful and excessive depletion and degradation of natural resources have led to the state of their shortage. From the national point of view regarding the relationship between environment and security, the question about the direct and indirect influence of the environment on the national security is emphasized. Environmental crime with its devastating effects penetrates into all spheres of nature and life, leaving behind devastation and destruction. A return to its original state is often no longer possible, and the consequences of environmental crime are visible in all eight elements of the environment. A natural balance is essential for the conservation of nature and life. We believe that already the awareness of the impact of environmental crime on national security and the possible consequences with devastating damage makes the preparation of the social security system for responding in crisis situations easier.

Scientific research partly represents the beginning of environmental awareness and environmentally safe and friendly behavior; research in the field of environmental crime needs to continue and expand. The deeper insights and knowledge about environmental crime and caused consequences is needed to prepare proper solutions for deterrence and prevention of environmental crime. Due to the fact that the field of environmental crime is wide and pretentious, environmental crime is an objet of study of various sciences. In comparison to natural science disciplines, social science disciplines realized the actual importance of their role in protecting and preserving the environment (i.e., addressing environmental issues) rather late. The cooperation between sciences is necessary if they want to be successful in responding to environmental issues. It is important that social scientists employ inter- and multidisciplinary approach to finding solutions for environmental issues, as done by green criminology.

Green criminology is one of the possible ways for renewed cooperation between natural and sociological disciplines. In the 21st century, green criminology has an even more intensified focus in the formulation of the basic terminology and, at the same time, expanded its' field of study. This confirms the dominance of the sociological perspective of environmental crime. The foundations of the study remain in the historical legacy. A historical review shows that at first, criminology was incredibly slow in responding to the problems of threatening the environment and environmental crime. The required reorganization within its research and redirection from strict classical to new forms of criminality, in which crimes against the environment also belong, was discovered rather late. However, today we are witnessing a big change in the interest of criminologists for the field of environmental crime, which is also shown in growth of the number of surveys and scientific publications.

Green criminology can be described as a social study that uses multidisciplinary and interdisciplinary approach at research of the environmental crime, environmental harm, environmental legislation,

environmental regulations, environmental protection measures and public responses to caused violations. Green criminology is much more than just a discussion about environmental issues. It is based on critical criminological conviction to defend environment as one of the basic human good and human right. The research agenda of green criminology is based on the assignment to study the known forms of deviant behavior against the natural environment. Green criminology observes the dynamics between the human and the natural environment, especially human behavior and acts towards one or more elements of the natural environment. It is interested in humans as perpetrators of environmental crime, the environment and humans as victims of environmental crime and possible crime-prevention methods of environmental crime. Green criminology is much more than just a debate on environmental issues, because due to the multidisciplinary subject of the study it also has characteristics of *critical criminology*, from which it actually originates. Warnings about violations of human rights and environmental threats need to be made. The so-called "*modern criminology*", because it deals with the current interest area the wider public or the entire society is aware of,¹⁰⁸ and *public criminology*, because it actively participates in the preparation of programs of crime politics and stimulates the participation of crime experts with practice in social activities and the presentation of their research work in professional and scientific debates. *News-making criminology*, which in the era of dominance of mainstream media, provides realistic media reporting and thus related informing and raising awareness of the public. Green criminology within the framework of its work and with the findings and proposals also affects the creation of politics on environmental issues, which includes crime policies as well as policies of environment protection. It represents one of the important bonds between the criminological justice system, its' parts, other sciences, and all other interested parties. It combines and connects different scientific knowledge bases and experiences.

¹⁰⁸ The so-called *modern criminology* (Selinšek, 2006) deals with the problems of trying to 'normalize the criminal' as regards the exploitation of profit at the expense of exploitation of environment.

Green criminology is a *criminology of environmental protection*. As such, criminology of the 21st century should have an intellectual width and a legal space to be able to include all elements of the environment as an inseparable and among themselves connected field of expertise. In other words, the ecocentric or socio-ecological centered perspective, which emphasizes the equality of the human with the rest of the nature, should be followed in all criminological and criminal justice studies. The connection between the sociological and naturalistic sciences in the field of environmental issues is becoming generally accepted. Green criminology needs to examine the role that society plays in generating environmental degradation, and expand the methodological approaches in criminological studies of environmental crime. Still present remained a problem about the naming of a new criminological science. Perhaps the term 'criminology of environmental protection' could extenuate the current conflict between criminologists.

After four decades of development, the above-described culmination of green criminology is also noticeable in Slovenia. Compared with Great Britain, the United States and Australia, green criminology in Slovenia is still in the initial phase, approximately two decades behind the leaders in this field, but developing much faster than in the leading countries. Green criminology in Slovenia preserves the position of a 'modern' and new branch of criminology, affects new themes of criminology studies and encourages the development of criminology in this part of the world. Environmental crime is specific, because it introduces a multidisciplinary approach to criminology and makes criminology step out of its own frameworks. It cooperates with other sciences and continues to develop and promptly publishes its own findings, informs the public, educates and contributes to environmental protection.

Environmental crime surveys in Slovenia revealed that Slovenia still has a largely intact nature, especially rich water resources and large areas of forest land. On the other side the number of yearly detected criminal offences against the environment, space and natural resources is relatively small; in average only 145 offences per year. Analysis of official statistical data show

that the illegal waste disposal, the torture of animals, the game poaching, and the burdening and destruction of environmental and space in general are groups of environmental crime forms, most often dealt with by police and inspectorate. One of the major problems in Slovenia is the dependence of municipalities (regions and people) on the industry and the businesses in their area. They are often major polluters, but the local representatives are indulgent, compassionate and tolerant towards the pollution due to the dependence on the business, which among other represent needed working places. Another issue is the finding that only one third of filled criminal charges end successfully with a conviction. In the period 2001-2010 Slovenian state prosecutors manage to achieve only one conviction of legal entity for committed crimes against the environment.

From the Slovene public opinion surveys, it is possible to conclude that degradation of the environment and natural and technological disasters are perceived by the public as a medium threat to security. People in Slovenia are aware of the potential danger of environmental degradation. More than three-quarters of Slovene public believe that human intentional and unlawful interference with the environment and thereby caused changes in the future may affect the safety. It is possible to conclude that environmental crime can be ranked among the (national) security risk factors.

The results of the study on expert opinion about environmental crime in Slovenia show that environmental crime is perceived as medium important issues. Similar to official statistics, the most problematic forms of environmental crime are waste management, all kind of pollution and cruelty to animals. Interesting is the finding that white-collar environmental crime, organized environmental crime and with them often related crime of the state are exposed.

Environmental crime victims in Slovenia are one of the hot topics of discussion, especially when it comes to those particularly vulnerable or risk areas, such as the Mežica valley, Idrija, Krško, Savinjska basin, and plains at

the rivers Drava and Mura. The problem of environmental crime victims is especially related to the problem of pollution from factories, corporations, due to agriculture and the emergence of mass casualties of environmental crime and their living in degraded environments. We talk about the phenomena of environmental injustice and corporate environmental crime related to the crime of the state in the areas where the state did little to protect the citizens.

The formal responses of the state against the violators of environmental legislation should be defined in legal acts. The responses of the Slovene governmental agencies are still ineffective due to the lack of practice, qualifications and experience; still forming legal system, legal loopholes and too slow implementation; lack of power and authorities; and the undetermined division of competences between national authorities, especially police and inspection. The most common informal responses are NGOs' activities and civil initiatives, followed by citizens' violations reports. Less often are media coverage, which is usually associated with the operation of NGOs and civil initiatives, and education.

The cooperation between governmental and non-governmental organizations is insufficient; too slow and often remaining in the frames of annual plans. In this level the partnership is required. Representatives of the both groups are critical toward the cooperation of the other side thereby this cooperation should be established under statutory provisions.

When talking about environmental crime prevention, useful and effective in the Slovene environment, experts emphasize that the effective, immediate, and more stringent action by the competent authorities is the best form of environmental crime prevention. We are talking about a situation where severe punishment and consistent enforcement of (criminal) sanctions should work as general intimidation. In Slovenia, higher fines and stricter legislation in general are necessary. Other effective preventive measures are better cooperation between the competent authorities and NGOs, education,

awareness raising, training, investigative journalism and a regular media reporting about the offenders of environmental legislation (so-called media 'lynch'). We can conclude that a multidisciplinary approach and combination of different pro-active and re-active methods of responding to environmental crime are necessary to be successful in this 'game of survival'.

Dealing with environmental crime from criminological and criminal justice perspective demands new ways of thinking about humans and society. The general conclusion is that environmental protection must become a national priority and the society must develop a complete intolerance to all forms of environmental crime. This is the way that Slovene (and every other) society must struggle to reach the goal of sustainable development in a clean and protected environment. Education, training, operation and conformation will be needed in all levels, but especially on the national level, between the governmental and non-governmental organizations. The education and increased awareness of the population is still the second priority. The initial steps are promising; we have identified the problem - forms of environmental crime and groups of perpetrators - and began to study it in detail. We managed to start the development of green criminology as one of the social sciences that uses a multidisciplinary and interdisciplinary approach research environmental crime, environmental harm, environmental legislation, environmental regulations, environmental protection measures and public responses to caused violations. To achieve the set goals, a combination of reactive and proactive responding to environmental issues (e.g., harm, crime, threats etc.) is necessary, combined in the 'top-down' and 'bottom-up' approaches. A thorough analysis has to be conducted on every concrete environmental problem before any sort of preventive or other measure is designed and applied and any kind of generalization must be avoided.

Now, knowing everything written in the present dissertation, especially in detailed analyzed environmental crime field, we can return back to the beginning and start all over again, with the criminological study of the environmental crime in Slovenia, applying new ways of thinking about humans and society, being aware of the real value of the natural environment.

7 Conclusion

The main purpose of this doctoral dissertation was to address the problem of understanding and explaining the crimes against the environment, that criminology and criminal justice have been facing in the last four decades, and to show the development of both fields in Slovenia. The primary goal was to review and analyze the existent situation in the field of research work, investigation and facing with environmental crime in Slovenia. The theoretical groundwork was based on available national sources and foreign scientific works and experiences. The secondary goal was the comparison of the research results on Slovenia with other countries who are leading in the field of environmental crime and green criminology studies (Great Britain, the United States of America and Australia). With the planned survey we wanted to gain an integrated view into the researched problem - environmental crime - by combining qualitative and quantitative research methods. We used criminological and criminal justice perspectives with the aim to be able to prepare the efficient solutions for the deterrence and prevention of environmental crime in Slovenia on the basis of the collected results.

In the end it seems appropriate, given that most of the findings have already been addressed in the previous chapters, to present those aspects which we consider to be important for the future. Why is the present dissertation important and different from the previous studies? What needs to be done to effectively and successfully respond to environmental crime issues in Slovenia and abroad?

Based on the study results and findings, it was possible to create for the Slovenian environment useful solution suggestions. We found out that in Slovenia, any typical pattern of law formation as response to environmental crime does not exist. Slovenia is a member of the European Union and as such forms the legislation in accordance to Unions' directives and regulations. For Slovenia specific is the still ongoing process of systemization of environmental protection in the criminal justice system; more has to be done for the

effective implementation and enforcement of the environmental protection legislation with avoiding the abundance and fragmentation of legislative and regulatory provisions. The analyses show that we cannot make assertions that the number of committed environmental crime offences in Slovenia is growing and presenting the main reason for the changes in the number of the criminal acts. The second important factor, that has an influence on the number of offences, is the changing of legislation and widening of the field of covered environmental criminal acts. We have to consider both above-emphasized reasons for the changes in the number of environmental offences and also have to consider the possible specific happenings, such as national cleaning action ‘Clean Slovenia in one day’, that have an important impact on the environmental crime trends.

The primary reason for committing crimes against the environment is human nature related to anthropocentric attitudes towards the environment. The origin for committing environmental crime lies in nature itself, because the environment represents the resources for the survival and the opportunity for profit (or to avoid the costs). Environmental crime occurs under the influence of the social conditions and circumstances (i.e., environment as a resource for survival) and economic factors (i.e., environment as a resource for profit) in the nowadays modern globalized society with the developed industrial system and oriented in market economy. In Slovenia, the most problematic forms of environmental crime are: waste; water pollution and groundwater contamination; soil, air and noise pollution; cruelty to animals and game poaching; white-collar environmental crime and organized environmental crime. Knowing all that about environmental crime forms, causes and offenders, it is much easier to understand why specific groups commit environmental crime, what are their characteristics, and how and where to trace them. The preparation of methods for deterrence and prevention of environmental crime is, knowing all that, much easier.

Better cooperation between the competent agencies and their cooperation with the NGOs would result in more efficient and successful responses to

violations of environmental protection legislation. More consistent implementation of formed responses and combination (i.e., supplementation) with the crime prevention methods, especially situational crime prevention, and the informal responses would be more promising response of society to environmental crime. Environmental protection has to become a national priority. To achieve such a state, a combination of reactive and proactive methods need to be applied to environmental issues (e.g., harm, crime, threats), combining the ‘top-down’ (adoption and implementation of the stricter legislation) and ‘bottom-up’ (implementation of awareness raising and educational programs) approaches simultaneously. A thorough analysis has to be conducted on every concrete case or problem so that appropriate reactive and proactive measures can be developed.

Since our study began, several scientific works about environmental crime and green criminology have appeared in academic circles, but none of them has contained the entire field of environmental crime from comparative criminology or criminal justice perspective. Conducted studies were generally dealing only with one specific group of environmental crime, such as transnational environmental crime. If we were doing this study all over again, we would include more foreign countries in the comparison and conducted more in-depth interviews so that the samples of the specific groups of experts would be bigger and the comparisons among the groups would be possible. Furthermore, the analysis of the entire field of environmental protection legislation would be required. Although, the thing we regret the most, is the lack of convicted offenders. Their reporting about the reasons for the committing of environmental crime offences would represent the verification of our conclusions about the causes for environmental crime.

We are aware of the possible impact of our research work and findings on Slovenian environmental protection practices; therefore we persist in the close cooperation of science and practice, especially when dealing with so fragile and important thing as natural environment. Further researching that might follow from our findings and concepts used are: analysis of each

identified environmental crime group; study on environmental crime from legal, victimology or crime prevention perspectives; further criminology study on environmental crime; development of criminological theories about environmental crime; development of possible methods for deterrence and prevention of environmental crime, useful for police, environmental protection inspection and other governmental agencies; survey on environmental crime offenders and many others.

The purpose of the planned research work was to contribute to scientific and social achievements that have already been conducted. An exhaustive review of existing knowledge and previous research in the field of environmental crime and environmental issues that are connected with it is completed. The results of the planned research are influential in the development of green criminology and other social sciences which deal with the field of environmental crime - especially criminal justice, criminal investigation, victimology, criminal law and crime prevention.

The review of the development of green criminology, compared to the development of the entire criminology field, has never been done before; it represents an important contribution to science, especially criminology. Quite so, both presented definition proposals not only represent a step forward in the criminological debates but are an important contribution to the development of environmental crime field and green criminology in general, and especially the field of green criminology in Slovenia. Today, we can talk about a new branch of criminology in Slovenia.

The main meaning of this research is in its originality, research and finding the real state in the field of environmental crime in Slovenia, with criminological and criminal justice comparison with other countries, and setting up the basis for further research and activity in the field of environmental crime (e.g., development of fields, which fell behind, abolishing the weaknesses, analysis of specific characteristics for Slovenia). With this work, we tried to spark determination and further development of

green criminology as a scientific discipline and its field of research (i.e., environmental crime). We also tried to develop new methods of prevention in the field of environmental crime. Reducing the differences among different comprehensions and lack of a common definition of environmental crime and green criminology in the world (and in our country) could have a positive influence on further development and research in the field of environmental crime.

This study represents an important contribution to science on a national level, because it is beyond every research of this problem of environmental crime in Slovenia that has been done up to this time. The planned work is also beyond all the prepared classifications and analysis of environmental crime forms on the world level, which were based only on analysis of statistical data basis, use of quantitative methods or analysis of legal sources (legal and court records). In the present dissertation conceptualization is different from ones previously used. In the dissertation used triangulation of the qualitative and quantitative research methods is new. Up to this point, it has been rarely used in the Slovene criminology field and therefore increases the validity and reliability of the gained results.

All new comprehensions and research results on environmental crime in Slovenia represent an important basis for further development of green criminology and other sociological sciences and a very useful basis for all further, deepened and more directed research, and also for preparation of programs, resolutions and other documents about responding to changes in the environment in Slovenia and its protection. Timely action in this area is very important, therefore preparation of programs and forms of environmental crime prevention are also pertinent. Programs should be developed for the victims of environmental crime, as well as adequate methods and education for police officers, environmental protection inspectors, state prosecutors and other competent agencies and services, which are active in the field of discovering and handling the actions of environmental crime.

Whenever conducting a study on environmental crime, we have to remember that “*An individual cannot choose a certain environmental problem and expect from it that it would naturally meet all the aspects of criminological theory and practice.*” (White, 2003: 293). In the real world, the situation is the opposite; green criminology adapts to the emerging environmental issues, always trying to understand and to explain those issues.

Finally, the present dissertation has several implications for policy and practice. The results represent an important starting point for changes and expansion in the field of legal protection of the environment in Slovenia (possible supplements and changes of laws) and development of legal experts and other scientific disciplines. The improvement of environmental protection policy can be done based on the gained research results. All that should have a positive influence on assuring the safety of the Slovene society. We suggest that a multidisciplinary approach and combination of different pro-active and re-active methods of responding to environmental crime are necessary to be successful at responding to environmental crime, and at its' deterrence and prevention.

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