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# Environmental Crime Trends in Slovenia in the Past Decade

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#### Purpose:

Environmental issues become part of modern society within a developed economic system. This article examines the changes of number and forms of detected environmental crime in Slovenia with the purpose to form useful prevention and deterrence methods to face this 'new' form of crime.

#### Design/Methods/Approach:

The method of crime statistics analysis (data obtained from police, inspectorate, public prosecutors' office and courts of justice) is used for the analysis of the environmental crimes trends in Slovenia with the purpose to estimate the actual situation in the country. Furthermore, using the responses of 25 Slovenian experts in a field of environmental justice, additional standpoints analysis and comparison with the official statistic data is conducted.

#### Findings:

Previous 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 hand, 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 environment and space in general are groups of environmental crime forms, most often dealt with by police and inspectorate. Another issue is the finding that only one third of filled criminal charges end successfully with a conviction.

#### **Research Limitations/Implications:**

Given that the official crime statistics do not cover the grey area of crime, where white-collar and organized environmental crime acts prevail, additional, more focused surveys could improve the gained research results.

#### Originality/Value:

Environmental crime currently signifies big challenges for criminal justice theory and practice. The results presented here represent a first and very useful basis for additional activities in the study of environmental crime Slovenia.

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Keywords: environmental crime, Slovenia, crime trends, environmental crimeprevention

#### Trendi ekološke kriminalitete v Sloveniji v preteklem desetletju

#### Namen prispevka:

Okoljska vprašanja so postala del sodobne družbe v razvitem gospodarskem sistemu. Prispevek preučuje spremembe števila in oblik odkritih dejanj ekološke kriminalitete v Sloveniji z namenom oblikovati uporabne metode preprečevanja in odvračanja za lažje soočanje s to 'novo' obliko kriminalitete.

#### Metode:

Za analizo trendov ekološke kriminalitete v Sloveniji in za oceno dejanskega stanja v državi smo uporabili metodo analize kriminalitetne statistike (baze podatkov policije, inšpektorata, državnega tožilstva in sodišča). V analizo smo vključili še odgovore 25 slovenskih strokovnjakov s področja varstva okolja ter analizi stališč strokovnjakov dodali še primerjavo z uradnimi statističnimi podatki.

#### **Ugotovitve:**

Pretekle študije o ekološki kriminaliteti v Sloveniji so razkrile, da ima Slovenija še vedno v veliki meri neokrnjeno naravo, še posebej bogate vodne vire in velike gozdne površine. Statistični podatki kažejo, da je število letno odkritih kaznivih dejanj zoper okolje, prostor in naravne dobrine razmeroma majhno, v povprečju le 145 kaznivih dejanj na leto. Iz analize uradnih statističnih podatkov je razvidno, da so nezakonito odlaganje odpadkov, mučenje živali, nezakonit lov ter obremenjevanje in uničenje okolja in prostora oblike ekološke kriminalitete, ki jih policija in inšpektorat najbolj pogosto obravnavata. V zvezi s tem pa predmet razprave predstavlja podatek, da se le ena tretjina podanih kazenskih ovadb uspešno konča z obsodbo.

#### Praktična uporabnost:

Upoštevajoč dejstvo, da uradni statistični podatki o kriminaliteti ne pokrivajo sivega polje kriminalitete, kjer prevladujeta beloovratniška in organizirana ekološka kriminaliteta, menimo, da bi z dodatnimi, bolj usmerjenimi raziskavami lahko izboljšali dobljene raziskovalne rezultate.

#### Izvirnost/pomembnost prispevka:

Ekološka kriminaliteta trenutno predstavlja velik izziv za teorijo in prakso na področju kazenskega pravosodja oziroma varstvoslovja. Zbrani rezultati predstavljajo prvo in zelo uporabno osnovo za nadaljnje dejavnosti pri preučevanju ekološke kriminalitete v Sloveniji.

#### UDK: 343.3/.7:504(497.4)

Ključne besede: ekološka kriminaliteta, Slovenija, trendi kriminalitete, preprečevanje ekološke kriminalitete

## 1 INTRODUCTION

Since independence, Slovenia has witnessed changes in its political, economic and social levels, 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 an old mining and industrial tradition (which is currently being modernized), and service industries. 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 kilometres. Recently, growth in the number of agricultural holdings employing organic farming has been observed.<sup>1</sup> 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. In recent years, we witnessed a restructuring of waste disposal and recycling (in 2002 in municipal landfills 84% of all municipal waste were 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 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, Faculty of Social Sciences UL for example).

Unique to Slovenia are the largely intact nature, rich water resources and forested land. A specialty of Slovenia is the countries' spatial placement in the transition zone between 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 study is to analyse the current situation in the field of environmental crime in Slovenia. This is done by analysing statistical data concerning offences and criminal acts against the environment. Furthermore, results of previous Slovene public opinion surveys on security threats, especially threats against the environment, are analysed. The third part of the study about the situation in Slovenia consists of analysis of the experts' positions about 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 also considers their

<sup>1</sup> 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 hand, the proportion of service activities raised significantly (from 50% in 1991 to 67% in 2010) (Hren et al., 2011: 48–49).

opinion about the victims of environmental crime. Possible forms of effectively responding and preventing environmental crime in Slovenia are also explored.

## 2 ENVIRONMENTAL CRIME TRENDS IN SLOVENIA

## 2.1 Official statistical data about environmental crime in Slovenia

In the present work, the legal definition of environmental crime is used. 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 (e.g., corporations, companies, groups, individuals, the state). Environmental crimes' special characteristics are victims, because besides or directly through the environment (biotic and abiotic natural elements) it harms people as well. Based on the presented 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 the environmental crimes trends 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 Planning [IRSOP] (hereafter Inspectorate). The police deal with it second most frequently. In 2009 and 2010, the Inspectorate most often dealt with several offences against the environment (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]). Illegal waste disposal represents 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 also detected.

Unfortunately, statistical data, separated according to particular offences, are not available in the Inspectorate reports. Therefore, Table 1 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 1:  |      | н                                     | Iı        | nspectora | ate provi       | sions  | Offences      |           |                   |          |
|---|------|---------------------------------------|-----------|-----------|-----------------|--|---------------|-----------|-------------------|----------|
| Data about<br>the inspection<br>provisions of<br>the offences<br>against the<br>environment,<br>space and | Year | Inspection (regular<br>and irregular) | Provision | Warning   | Execution order | Other decisions<br>(decree, referral of<br>case) | Payment order | Provision | Criminal offences | Together |
| natural<br>resources in the   | 2003 | 10015                                 | 1786      | 1009      | 1013            | 216  | 252           | 27        | 5                 | 14323    |
| period from   | 2004 | 9267                                  | 1231      | 1606      | 1083            | 269  | 265           | 125       | 11                | 13857    |
| 2003 to 2010  | 2005 | 9437                                  | 896       | 1665      | 1219            | 230  | 152           | 99        | 1                 | 13699    |
| Source: IRSOP   | 2006 | 11523                                 | 1568      | 1918      | 1448            | 283  | 185           | 190       | 5                 | 17120    |
| (2005, 2006,  | 2007 | 10780                                 | 1367      | 1496      | 1070            | 1109   | 258           | 243       | 2                 | 16325    |
| 2007, 2008, 2009,   | 2008 | 10231                                 | 1484      | 1379      | 885             | 530  | 292           | 241       | 18                | 15060    |
| 2010, 2011).  | 2009 | 10325                                 | 1556      | 547       | 985             | 1911   | 157           | 316       | 4                 | 15801    |
|   | 2010 | 10311                                 | 1782      | 439       | 998             | 2216   | 145           | 377       | 5                 | 16273    |

Table 1 shows that the number of regular and irregular inspections since 2008 is increasing again, although the Inspections in 2006 and 2007 used a lot more inspection controls (11523 in 2006 and 10231 in 2007). Thus, 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.

Table 2 below 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 (Kazenski zakonik [KZ-1], 2008) 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. 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 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 dumping), which influenced on the number of reported criminal offences in 2009.

| Article \ Year  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Table 2:<br>Number  |
|---|------|------|------|------|------|------|------|------|------|------|------|---|
| Burdening and destruction<br>of environment and space<br>(332)                          | 21   | 34   | 29   | 24   | 16   | 12   | 12   | 9    | 14   | 57   | 31   | of criminal<br>offences<br>against the                    |
| Marine and water<br>pollution by ships (333)  | /    | /    | /    | /    | /    | /    | /    | /    | /    | 0    | 0    | environment,<br>space and                                 |
| Import and export of<br>dangerous substances into<br>the country (334)                  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | natural<br>resources,                                     |
| Unlawful acquisition or<br>use of radioactive or other<br>hazardous substances<br>(335) | 2    | 1    | 0    | 1    | 6    | 10   | 14   | 9    | 29   | 5    | 2    | which in the<br>period from<br>2000 to 2010<br>were dealt |
| Contamination of drinking water (336)   | 3    | 5    | 0    | 3    | 4    | 3    | 0    | 4    | 4    | 3    | 0    | with and investigated by                                  |
| Tainting of foodstuffs or fodder (337)  | 1    | 1    | 2    | 1    | 2    | 0    | 0    | 0    | 0    | 1    | 1    | the Slovenian police                                      |
| Unlawful occupation of real property (338)  | 1    | 2    | 3    | 3    | 3    | 2    | 3    | 2    | 4    | 3    | 5    | Source: Policija<br>(2002, 2003,                          |
| Destruction of plantations<br>by a noxious agent (339)                                  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 2004, 2005, 2006<br>2007, 2008, 2009<br>2010, 2011).      |
| 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<br>protected animals and<br>plants (344)                          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 4    | 1    |   |
| Transmission of<br>contagious diseases in<br>animals and plants (345)                   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |   |
| Production of injurious<br>medicines for treatment of<br>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 |   |

From Table 2 is evident 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, and 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. Slovenian police detected environmental crime offences of fish poaching, tainting of forests or

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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 and is decreasing. 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.

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 torture of animals and game poaching are the most often detected and the least charged criminal offence against the environment. Slovenian police investigated 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 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;

**Table 3:** in August 2010 the first prison sentence in Slovene history was given for the torture **Number** of a dog.

of criminal prosecution office [VDT] and number of convicted offenders for crimes against the environment, space and natural resources in the period 2000-2010 Source: VDT (2002, 2003,2004, 2005, 2006, 2007, 2008, 2009,

2010, 2011).

of criminal The Slovenian police investigated an average of 145 crimes against the charges filed environment, space and natural resources per year. Furthermore, 47.45 percent by the state of criminal offences are successfully inspected and criminal charges against the perpetrator passed to the public prosecutor, as shown in the Table 3 below.

| 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    |

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

Table 3 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 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 reported criminal offences against the environment by the Inspectorate, the number of filed criminal charges by the public prosecutor for criminal offences against the environment, space and natural resources is high. Neither the criminal charges against the legal entities are an exception. Interesting to note 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.

One of the major problems in Slovenia is the dependence of municipalities (regions and people) on industry and the businesses in their area, as shown in the continuation. These companies 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 things represents needed working places. In addition, Pečar (1981: 40) points 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.

## 2.2 Slovene Public Opinion about Environmental Threats and 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 4 below. We are aware that *perceived threats* (Sotlar, Tičar, & Tominc, 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 4:                 |
|--------------------------|
|                          |
| Factors of               |
| possible threats         |
| to the security          |
| of the Republic          |
| of Slovenia in           |
| years 1994, 1999,        |
| 2001, 2003, 2005,        |
| 2007 and 2009 ( <i>n</i> |
| = 1000)                  |
| Sources:                 |
| Dobovšek,                |
| Sotlar, &                |
| Flander (2009);          |
| Meško, Bučar-            |
| Ručman, &                |
| Tominc (2007);           |
| Malešič et al.           |
| (2010).                  |
|                          |

| 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<br>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 |

\*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 4 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 Table 4 that:

- 1. Both risk factors were in the public opinion surveys from 1994 to 2009 classified as 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 the degradation of the environment as one of the security risk factors the Slovene population perceived it as a slightly more serious security threat, but it is still classified in the category of medium threats to security (its mean 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 there is a trend of increasing the risk rate of the environment degradation as a factor of security threat is noticeable; and
- 5. The Slovene public opinion survey from 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 behaviour 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 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. The interest and awareness about the importance and seriousness of 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 associated issues has been increasing. Green criminology, as a (social) study of environmental harm, crime, victimization, law, regulation, and justice (Lynch and Stretesky, 2011: 293), 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, completed analysis and scientific discussions can help competent authorities and other interest groups that confront environmental crime and environmental harm as constantly growing threat. 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, and expensive and not threatening at all, as emphasized in the survey about Slovene experts' opinion, presented below.

## 3 EXPERT'S OPINION ABOUT ENVIRONMENTAL CRIME IN SLOVENIA

The aim of the research was 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 views on environmental crime taken by each group of experts that deal with environmental threats and/or environmental protection regularly during their work. For this purpose, 25 individuals from different parts of Slovenia who 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, were interviewed. Respondents were asked five groups of questions about environmental crime, its' various forms, victims and possible methods for successful responses to environmental crime in Slovenia, and several demographic questions. The interviews were conducted in September, October and November 2011. All responses were recorded by hand and later retyped in electronic form. In this way the data base 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.

## 3.1 The sample of Interviewed Experts

Table 5 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.

|           |                | f  | %    | Table 5:                     |
|-----------|----------------|----|------|------------------------------|
| Gender    | Male           | 16 | 64.0 | The description<br>of sample |
| Gender    | Female         | 9  | 36.0 | of sample                    |
|           | <= 30 years    | 5  | 20.0 |                              |
| 1 32      | 31–40 years    | 5  | 20.0 |                              |
| Age       | 41–50 years    | 6  | 24.0 |                              |
|           | => 51 years    | 8  | 32.0 |                              |
|           | Missing answer | 1  | 4.0  |                              |
|           | High school    | 2  | 8.0  |                              |
|           | College        | 1  | 4.0  |                              |
| Education | B.A.           | 15 | 60.0 |                              |
|           | M.A.           | 4  | 16.0 |                              |
|           | Ph.D.          | 3  | 12.0 |                              |

From the data regarding education in Table 5, it appears that as many as 15 (60%) of the interviewees had a B.A. The percentage of other educational groups is much smaller.

## 3.2 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 Slovenian 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., misdemeanours and offenses that are defined by the environmental protection legislation). Twothirds (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. We asked the interviewees "What types of threats to the environment (forms of environmental crime) and/ or forms of protection of the environment are encountered at your work?". Their responses are represented in Table 6 below. It shows the types of environmental crime that respondents most often meet at their work. The data reveal that the most often dealt with form of environmental crime are waste related, 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 represent 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 in the course of their work is met by 56% (14) of interviewees, and excessive emissions into air, met by 36% (nine) of the interviewees.

It is interesting to note that 32 percent (eight) of respondents at their work meet all kinds of environmental crime listed in the KZ-1 (2008), 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 is the gray field of environmental crime so extensive that some specific forms are not detected and processed.

| Environmental crime forms  | f  | %  | Table 6:                              |
|--|----|----|---------------------------------------|
| Waste (illegal disposal and trafficking, burning of waste and inappropriate waste management)  | 15 | 60 | Most often<br>encountered<br>forms of |
| Excessive emissions into water and groundwater contamination   | 14 | 56 | environmental                         |
| Excessive emissions into air   | 9  | 36 | crime                                 |
| All forms of environmental crime (criminal offences, defined in the KZ-1 (2008), and misdemeanours, defined in the Environment protection act (Zakon o varstvu okolja (uradno prečiščeno besedilo) [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  | ]                                     |

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 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 am not faced 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, raising the 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 of Sorško polje, Kranjsko polje, and Krško polje, Ljubljana and its surroundings, the Savinjska basin, and the plains at the rivers Drava and Mura, called Dravsko polje and Panonsko polje. What is more, ninetytwo 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).

| Table 7:<br>Victims of | Environmental crime victims | f  | %  |
|------------------------|-----------------------------|----|----|
| environmental          | People                      | 22 | 88 |
| crime                  | Animals                     | 19 | 76 |
|                        | Plants                      | 18 | 72 |

Table 7 above 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 is the environment 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 problem in Slovenia remains the dependence of people on industry. They tolerate the polluters due to the dependence on their business. This was emphasized in one of the interviews:

"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. What is more, environmental protection should be a national priority, as emphasized by the governmental official, working in the field of the prevention of corruption:

"In Slovenia the problem of evaluation of environmental policy stands out 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."

The most common informal responses to environmental crime in Slovenia, experienced or perceived by the interviewees, 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. Among the important forms of informal responses to environmental crime interviewees 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); and, 3) people in Slovenia are still selectively tolerant; and 4) NGOs are still dependent on funding of the state and political elites.

Expert opinions about cooperation between the relevant governmental agencies and organizations, and about cooperation between governmental and non-governmental organizations, suggest that all organizations involved do not cooperate enough and could strengthened their cooperation in responding to environmental crime and issues in the future. 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; thereby 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 deterrence (i.e., a form of special prevention). Gained findings suggest that almost half (48%) of respondents believe that in Slovenia 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%), increasing the number of environmental inspectors (16%) and strengthening of cooperation between the competent authorities and NGOs (1%).

Another group of proposed measures for environmental crime prevention are education (64%) of the entire population, as well as individual groups (e.g., the 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 strengthening 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. These 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'.

## 4 CONCLUSION

Survey results about environmental crime in Slovenia show that over two-thirds of the respondents almost daily see environmental crime during 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). In general, experts' opinions suggest that threats to the environment in Slovenia are a medium problem. Respondents believe that in Slovenia the most problematic forms of environmental crimes 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.

In the last five years, the Inspectorate reports show 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. This means that 47.45 percent of criminal offences are successfully inspected and criminal charges against the perpetrator referred to the public prosecutor. Furthermore, during 2001–2010, an average of 107 criminal charges was 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.

The solution to contemporary environmental problems lies not only in more restricted environmental protective legislation, also in redefining our relationship to nature in general. 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) strengthen 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;<sup>2</sup> 8) strengthen 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 & Eck, 2008).

The general conclusion of everything discussed above 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-centred perspective of environment must become a social value, and 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 must be conducted on every concrete case or problem so that appropriate reactive and proactive measures can be developed.

Less apparent 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 raising the awareness 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.

<sup>2</sup> 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.

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