

**44th European Congress of the  
European Regional Science Association  
Regions and Fiscal Federalism**  
University of Porto  
Porto, Portugal  
25-29 August 2004

**WHO LIMITS ENVIRONMENTAL FEDERALISM IN CROATIA?**

Dubravka Jurlina Alibegović, Željka Kordej De Villa  
The Institute of Economics, Zagreb  
Kennedy Sq. 7  
HR-10000 Zagreb, CROATIA  
Phone: \*\*385 1 2335 700, Fax: \*\*385 1 2335 165  
e-mail: [djurlina@eizg.hr](mailto:djurlina@eizg.hr), [kordej@eizg.hr](mailto:kordej@eizg.hr)

**ABSTRACT**

This paper explores the role of different levels of government in the design, implementation and enforcement of environmental regulatory measures, including environmental financing mechanisms.

The first section presents basic theoretical insights of fiscal federalism. Further, it reviews factors which most affect the decision regarding the governmental level to be responsible for environmental protection – externalities, information, costs, interjurisdictional competition, and government capabilities.

The second section elaborates the institutional and administrative framework of environmental policy and questions why local authorities are reluctant to take a more active role in shaping and financing environmental policy. One «success story» of local initiative in Croatia is described. Additionally, this section presents some evidence on budget revenues related to environmental protection and natural resource management, both at central and local levels.

The last section summarizes our analysis and offers several recommendations aiming at the improvement of environmental policy.

## 1. Some theoretical insights on environmental federalism

Recently fiscal federalism has in many countries received much attention. The term fiscal federalism implies the division of expenditures and tax revenues among different levels of government. Fiscal federalism is characterized by “conflict” between central and lower levels of government<sup>1</sup>. Environmental federalism, which is basically a specific form of fiscal federalism, considers which level of government should formulate, implement and control environmental policy.

Can environmental policy be improved by using federalism? The theory of environmental federalism teaches us who is to set goals and standards (uniform national standards *vs.* local standards), who to choose instruments, who is responsible for their implementation and who is to monitor and evaluate them. Some important lessons emerging from the fiscal federalism literature may be used to formulate environmental policy<sup>2</sup>. The scope of externalities defines assignment of responsibility, whereas efficiency of specific level/agency remains the most influential factor. According to Wiesner (1995) national government should deal with broad externalities which affect the national economy, as well as with research in environmental sciences, while local levels should be responsible for local public goods<sup>3</sup>.

Scientists have for a long time been trying to answer the question – what is the most efficient approach to environmental protection – the uniform national standards or something else<sup>4</sup>. The theory is rather indecisive as to these issues and hence the answer is to be sought in existent empirical studies and past experience. By way of illustration the EU experience has been given in Box 1.

---

<sup>1</sup> Messere (1993) and Estache and Zheng (1993).

<sup>2</sup> It is based on Kordej (2003).

<sup>3</sup> Local public choice is more subject to competition than national public choice, therefore this competition will force local authorities to reflect better environmental preferences (local authorities are closest to their constituents and problems).

<sup>4</sup> In the USA the Clean Air Act provides uniform quality air standards. By contrast the Law on water as well as current legislation specify that standards are to be established by individual states. Dilemmas in this respect are also present in the EU where it has still not been established which standards are to be at the EU and which at national state level.

## Box 1

**Federalism in the sphere of the environment has recently also gained in importance in the EU, and is known as a «principle of subsidiarity and shared responsibility». This principle is applied when the objective cannot be achieved in any other way, or when this is a faster way to achieve the objective. The principle is also applied as an instrument for better interconnection between member states, where the principle according to which decisions should be made with a high level of participation of the public is strongly highlighted. The subsidiarity principle implies that all the activities are to be carried out in such a way that all stakeholders be included and all instruments available used so that the authority of individual levels is not jeopardized. The subsidiarity principle is hard to apply at a global level. At the EU level a common program implementation in the area of water and air has been agreed upon, and the extension of activities to the program of marking products acceptable to the environment, to regional development and the protection of sensitive habitats is**

The fundamental recommendation of economics of fiscal federalism is that central government be responsible for research and dissemination of information relating to environmental damage while local government be responsible for local environmental issues. When local standards include preferences, costs and other specificities of a certain area potential economic gains are enormous. However, the issue is much more complex when there is the so-called spillover effect, or the externalities, between different jurisdictions. In such situations there is rationale for central intervention. However when there is an efficient regional institution there is an even stronger ground for regional environmental government. This leads to the conclusion that the characteristics of certain pollutants or groups of pollutants must be examined so that the most appropriate government level be established.

In principle, decision makers in order to decide on the assignement of responsibility between various governmental levels can measure the benefits arising from the decentralized provision of «local» public goods relative to a uniform centrally defined quantity of public good. It has been shown that the size of benefits depends primarily on the heterogeneity of demand among jurisdictions and on cost differences. Specifically, the so-called decentralization theorem<sup>5</sup> shows that potential benefits arising from decentralization are inversely proportional to price elasticity of demand. When people are forced to spend more than they prefer, the welfare loss increases, all other factors being constant, proportionally to price inelasticity of demand. There is

---

<sup>5</sup> Oates (1998).

substantial econometric evidence showing that the demand for most local public goods is usually price inelastic. This indicates that potential benefits arising from decentralized provision of public services might be very high. Therefore it would be necessary to examine all the information available on the elasticities of demand for environmental services in order to get a better insight into the potential gains from decentralized environmental governance.

A recently made comment regarding the abovementioned analysis is that a destructive impact of competition among jurisdictions is not recognized. In order to attract new investments local governments are often inclined to put up with lower environmental standards and make production within their area cheaper. This leads to a «race to the bottom»<sup>6</sup> the consequence of which is environmental degradation. The theory regarding such views is open to more than one interpretation<sup>7</sup>, and empirical results indicate that this is not an issue of a «downward spiral in the environmental quality» but of suboptimal equilibria.<sup>8</sup>

As an alternative to centralization, regional cooperation in the case of «spillovers» (acid rain) has emerged. The idea is that as long as pollution activities, which cause the externalities, do not interfere with efficiency levels, potential benefits from regional environmental control programs are feasible. The costs relating to the decrease of pollution in both jurisdictions are lower than the benefits achieved. This is a simple application of the Coase theorem. However, the problem is the establishing of such institution which could achieve potential benefits by regional cooperation.

Analyzing governmental statistics<sup>9</sup> it may be noticed that a process of decentralization is going on in many countries and that there is an economic rationale for this process. On the other hand, allocating responsibility to lower levels

---

<sup>6</sup> Oates (1998) and (2002).

<sup>7</sup> Farber (1997) according to Oates (1998). It is interesting to study past experiences regarding federalism in the USA. When local government is in a position to constantly sacrifice in their jurisdiction environmental quality at the expense of economic growth, the deterioration of environmental quality reaches a point where the intervention of the central state is inevitable. Centrally established standards then become a norm. Local government units do not introduce more severe standards than the central, as thus their jurisdiction would be placed in a less favorable position than others. Past history in the USA shows that there is no such a thing as a «race to the bottom».

<sup>8</sup> For more details see Oates (1998) and Wilson (1999).

of government puts on excessive financial burden on local authorities. Financial potential of local taxes is lower compared to national taxes and as a consequence there is an imbalance between local responsibilities and capabilities to fulfill them<sup>10</sup>.

In short, an efficient environmental policy requires the assignment of responsibility between different levels of government, as well as between different institutions while minimizing the costs of the policy. The role of a specific governmental level in providing environmental services is influenced by the administrative structure, legal framework and financial capacity of the specific tier.

The following section analyzes the legal and institutional framework of environmental policy in Croatia.

## **2. Institutional and legislative framework of environmental policy**

### **2.1. Institutions**

As regards its structure, the system of environmental protection in Croatia has traditionally been associated with physical planning activity which was fully developed at the end of the seventies. However it was not before the nineties that Croatia started to establish institutions for environmental protection both at national and local level. In 1994 the Environmental Protection Directorate was established which later became the Directorate for the Protection of Nature and the Environment. The range and impact of decisions issued by the Directorate and the ministries differed widely so performance of the Directorate, in addition to its professional capacity, organization and technical competence, also depended on its relationship with other ministries<sup>11</sup>.

Following numerous and protracted discussions, the Ministry of Environmental Protection and Physical Planning was established in the year 2000<sup>12</sup> by merging the

---

<sup>9</sup> Government Finance Statistics Yearbook, different issues.

<sup>10</sup> This usually results in financial transfers with dominant political implications.

<sup>11</sup> This can be also addressed as "a balance of forces" between individual administrative bodies.

<sup>12</sup> According to The Law on amendments to the Law on Structure and Competence of Ministries and State Administration Organizations (*Narodne novine* (hereinafter referred to as Official Gazette) No 15/2000) the Ministry is responsible for administrative and other activities relating to general environmental policy as regards the conditions for sustainable development, protection of air, soil, water, sea, and plant and animal world.

Directorate and the Ministry of Physical Planning, Construction and Housing in a way that some parts of the Ministry were removed and joined to other authorities. Thus the Ministry in charge of the environment is not responsible for all environmental issues, the fact that adversely affects its efficiency in carrying out environmental policies. It is estimated that by establishing the Ministry, which professionally and institutionally integrated the areas of physical planning and the environment, fundamental institutional prerequisites for the implementation of environmental policy in Croatia were created.

In 2003 the state administration was restructured once again resulting in the Ministry of Environmental Protection, Physical Planning and Construction. Environmental protection is once again within the responsibility of a number of ministries. Thus protection of nature is now within the responsibility of the Ministry of Culture while waters and water management is within the responsibility of the Ministry of Agriculture, Forestry and Water Management. The Ministry of Maritime Affairs, Tourism, Transport and Development is responsible for the protection of the sea from pollution from navigation; the Ministry of Health and Social Welfare is responsible for the protection from ionizing radiation, protection against noise, and for genetically modified organisms; the Ministry of Economy, Labor and Enterprise is responsible for nuclear safety and the treatment of chemicals.

In addition to ministries there are a number of other institutions involved in the protection of the environment. The Croatian Environment Agency collects and processes environmental data, drafts reports and maintains an environmental database. In 2003 the Fund for Environmental Protection and Energy Efficiency, an extrabudgetary fund, which provides additional funds for environmental projects, was established.

In Croatia the responsibility for environmental protection is divided between state authorities and the authorities of local (regional) self-government units. Ministries and state administrative organizations are executive authorities in the area of environmental protection whereas county and town offices for physical planning, housing and municipal activities, construction and environmental protection carry out

the affairs at a local level<sup>13</sup>. Thus local authorities organize, finance and improve environmental protection of regional or local significance. The local level provides for the conditions to enable the carrying out of environmental protection programs, prepares and carries out remediation, monitors and measures emissions, provides for the conditions to maintain the environmental pollution inventory and a register on the current state of the environment and the measures relating to environmental protection and public information<sup>14</sup>.

Such institutional lack of unity requires a high level of intersector communication and coordination; EU approximation requires institutional changes which would include devolving responsibility to a local level, improvement of horizontal coordination between ministries and improvement of the functional capacity of the central institution for environmental protection.

Similar to other transitional countries state administration in Croatia is inefficient. It is also believed that other sectors, being better organized, «take advantage of the lack of structure» in the field of environmental protection<sup>15</sup>. There is a discrepancy between the institutional structure and its functioning. The Ministry responsible for the environment does not include all the administrative and legislative functions relating to the environment as the authority for some functions is divided. Hence the recommendation that the authority of the ministry responsible for the environment be extended to the whole scope of environmental issues which would enable an integral and consequently more efficient approach to environmental protection.

## 2.2. Legislation

The first general law relating to the environment *The Environmental Protection Act*<sup>16</sup> was adopted in Croatia in 1994. This Act regulates the fundamental principles in

---

<sup>13</sup> Pursuant to the Law on Local and Regional Self-Government (Official Gazette No 33/2001) administrative departments and services (administrative authorities) are established to carry out environmental protection.

<sup>14</sup> The Environmental Protection Act, Article 7, Official Gazette No 82/1994. Furthermore, the role of environmental NGOs gain in importance.

<sup>15</sup> National Strategy on Environmental Protection (2002).

<sup>16</sup> In line with a model law on environmental protection of the Council of Europe and EC Convention, the Act defines the environment in its natural context: air, soil, water, sea, climate, plant and animal world in their entire relationship and cultural heritage as a part of the environment created by man, Official Gazette No 82/1994.

environmental protection<sup>17</sup>, the institutional framework, regulations and enforcement in the area of environmental protection, the position and role of central state authorities and local authorities, special program instruments, the assessment of the impact on the environment and access to information relating to environmental protection. Croatia like other transition countries has opted for a general ecological act which may however be inefficient in the transitional period. When standards are strict there is the danger that they are not to be enforced in transitional periods. General laws require a number of accompanying enforcement regulations – which in Croatia is quite a problem. It is also believed that when general laws are in place lawmakers are not so anxious to incorporating environmental protection into other laws<sup>18</sup>.

The Environmental Protection Act allows for the establishing of a financing system which combines central and local governance of environmental protection as it specifies adoption of a national strategy and local programs, budgetary and extrabudgetary sources of financing and allows for the imposition of local contributions and charges<sup>19</sup>. General ecological acts also include acts on the protection of nature, the air and the like<sup>20</sup>. In Croatia there are a number of individual pieces of legislation regulating a specific natural resource or individual rare or valuable plant and animal species. In addition to general and individual laws there are a number of special administrative laws regulating the issues relating to hazardous matters, chemicals, waste, noise and ionizing radiation. Environmental protection is also regulated under a number of subordinate pieces of legislation and other binding legislation. This group includes implementing regulations issued by

---

<sup>17</sup> General principles of the environment are the prevention principle, precautionary principle and the principle of objective liability (causality), or «a polluter pays principle» including pollution costs, repair of and the compensation for the damage done, the principle of integrity, expertise and selectivity, the principle of cooperation, the principle of reality and operationality and the principle of general compensation with a part of the funds to be provided from the state budget regardless of the «polluter-pays principle». The Environmental Protection Act, Articles 11-17, Official Gazette No 82/1994.

<sup>18</sup> See in Lončarić-Horvat (1997).

<sup>19</sup> Črnjar (2002).

<sup>20</sup> The Nature Protection Act regulates the protected parts of nature in Croatia (Official Gazette Nos 30/1994, 72/94), while the Air Protection Act in a comprehensive manner regulates the protection of the air and air space (Official Gazette No 48/1995).



competent state authorities<sup>21</sup> and enactments issued by the government<sup>22</sup> such as decree laws and decisions. Environmental protection is also regulated by strategic and planning documents at national<sup>23</sup> and local level<sup>24</sup>, as stipulated under The Environmental Protection Act<sup>25</sup>. It is deemed that some laws and regulations do not meet the necessary level of expertise, the main reason being the absence of coordination between professional and scholarly institutions when subordinate legislation is being drafted<sup>26</sup>.

Despite its shortcomings, such as its fragmentary nature, redundant and excessive detail and sometimes unfeasibility, environmental legislation is considered to have good legal grounds for the application of European standards in the field of environmental protection. The *environmental acquis*<sup>27</sup> constitutes the framework and guidelines for harmonization between national and European legislation.

A comparison of the extent of harmonization between Croatian law and EU legal system in the field of "ecological payments" does not show any significant shortcoming. The main problem is a weakness in the application of legal regulations and the enforcement of the environmental policy. Hence it is necessary to direct future activities and

---

<sup>21</sup> A number of ordinances are included, such as for example: Ordinance on Waste Types (Official Gazette No 27/1996), Ordinance on Waste Packaging Management (Official Gazette No 53/1996), and Ordinance on Environmental Emission Inventory (Official Gazette No 36/1996). Orders issued by ministries are also included, such as for example the Order on the protection of Fish and other sea organisms (Official Gazette No 46/1996).

<sup>22</sup> The Government most generally issues decrees to enforce law implementation, such as for example a decree on sea quality standards on sea beaches (Official Gazette No 33/1996).

<sup>23</sup> These are strategies for individual environment components (air, soil, waste) which are currently under preparation; the State contingency plan for water protection (Official Gazette No 8/1999), Strategy and action plan to protect biological diversity and landscape (Official Gazette No 81/1999), the Program of physical planning of the Republic of Croatia, the Intervention Plan relating to Environmental Protection (Official Gazette No 82/1999, Official Gazette No 86/1999, Official Gazette No 12/2001, Official Gazette No 14/2001).

<sup>24</sup> The Environmental Protection Act stipulates that the counties are to adopt Environmental Protection Programs and prepare Reports on the State of the Environment. Towns and municipalities can also adopt their Environmental Protection Programs «when it is necessary to protect a specific area of a town or municipality».

<sup>25</sup> The Environmental Protection Act, Articles 18-22.

<sup>26</sup> See The National Environmental Strategy and the National Environmental Action Plan (2002).

<sup>27</sup> One of the requirements to start accession negotiations for candidate countries is a "National strategy for the adoption and application of the environmental *acquis*". The strategy is to be applied, in cooperation with EU, in all candidate countries prior to accession. This document establishes priorities and objectives to be met prior to accession and the timeframe

initiatives to the strengthening of the institutional and legal infrastructure and provision of financial resources necessary for the creation and implementation of environmental policy.

---

of further activities for full harmonization. A draft of a Report on the State of the Environment (2002) includes a harmonigram between national and EU regulations.

## Box 2

"Eko-Kaštelski zaljev (bay)" as a «success story» of local initiative in Croatia

Kaštelski zaljev is one of the most polluted areas on the Eastern Adriatic coast as a consequence of a population explosion and industrialization in a limited coastal region which was not adequately supported by the construction of basic infrastructure – sewage system. The result is the discharge of untreated municipal and industrial wastewater into the eastern part of the bay.

An "Eko-Kaštelski zaljev" project plans the construction of public sewage systems to collect and carry to a treatment facility municipal and industrial wastewaters disposed of in the bay, and to carry the waste water after treatment to a required level to be disposed of in the sea along extended under-sea outlets. Construction of separate systems for the towns of Split and Solin, and Kaštela and Trogir is planned, as well as a support system which includes ongoing monitoring of coastal sea quality.

The Project is important not only because it will positively affect the development of the tourism industry but particularly because it will ensure that all decisionmaking levels ranging from the state, through government institutions, and local and regional self-governments cooperate on equal terms.

One of the tasks of a county is to provide for uniform development of all towns and municipalities in a county. In order to stop people leaving their place of residence the basic requirement is the provision of drinking water, electricity and appropriate communications. The Split-Dalmacija County embarked on a very ambitious program relating to the construction of a water supply system, and the project is to be financed, in addition to the funds from municipal, town, county and state budgets, also by the company Hrvatske vode (state agency for water management), international financial institutions, the Ministry of Reconstruction and Development and the Croatian Bank for Reconstruction and Development. The European Bank for Reconstruction and Development and the World Bank aware of the importance of the project have also ensured funds for the realization of the project.

The entire project is estimated at HRK 1 billion. The government will ensure HRK 285 million from the state budget; Hrvatske vode will ensure HRK 93.1 million whereas municipalities and towns in the Split-Dalmacija County will ensure around HRK 77.9 million. The European Bank for Reconstruction and Development and the World Bank have extended a loan amounting to HRK 532 million. The project was to extend over a period of five-years with completion planned for the end of 2003 and the timeframe for loan repayment to foreign financial institutions is 12 years.

At the beginning of May 2004 a major part of the project relating to water supply was put in operation while the rest of the project relating to wastewater discharge is planned to be put in operation by the end of the year. Considering the very high standards in all segments of the project implementation, and unexpected problems arising from unresolved property-right issues in one part of the project, the deadline for the completion of the entire project has been extended to the end of 2005.

Source: Nikolić (1999).

The next paragraph provides some evidence on budget revenues related to environmental protection and natural resource management in Croatia, on both central and local levels.

### 2.3 Environmental expenditures

In order to appropriately interpret public funds spending and the level of public expenditures earmarked for environmental protection and natural resource management, both at national and local (regional) self-government level, it is necessary to apply an internationally accepted methodology, such as Government Finance Statistics (GFS) issued by the International Monetary Fund. The GFS system provides international guidelines for statistical methodology to survey the public sector statistics which is fully compliant with the System of National Accounts, 1993.

In 2001 a methodology for the surveying of public finance was changed and a new revised Government Finance Statistics Manual, 2001 was introduced. Relative to the previous public finance methodology surveying carried out according to the 1986 GFS Manual, a revised methodology brought about a number of changes relating to fiscal statistics, the main objective being to improve transparency in public finance. The revised methodology also introduced a new classification of public functions according to which environmental protection is subdivided into several categories: waste management, wastewater management, pollution abatement, the protection of biological diversity and landscape, R&D – environmental protection, and environmental protection not otherwise classified.

The Republic of Croatia allocates from total public funds only a marginal amount for environmental protection. Although Croatia is a relatively highly centralized state considering the share of local and regional self-government in total consolidated revenues and expenditures of the general state and GDP, a major proportion of funds for environmental protection is allocated at local self-government level. This is because the involvement of the central state is for the most part reduced to institutional and legislative support of activities in the field of environmental protection.

In 2000, the year before the first phase of the process of decentralization had started in Croatia, the share of local budget revenues in GDP amounted to 5.2%. The

process of decentralization started in 2001. Unfortunately, the Ministry of Finance (MF) does not have a complete data base on the outturn of local government budgets. The reason for this is a change in the technical approach to compiling and distributing data (a change in the program of compiling data on local budgets). The result is that the MF disposes only with 70% of data relating to local budgets<sup>28</sup>. On the basis of available data, the share of local budget revenues in GDP totaled 4.2% (see Table 1). The situation in the following two years, 2002 and plan for the year 2003, is not much different – the share of sub-national government in GDP is 4.7% in 2002 and 4.4% as planned for the year 2003.

The share of local government revenues in the total amount of revenues of the consolidated state in Croatia is much lower compared to other transition countries. While in Croatia the share of total local government revenues in 2002 was 10.1%, the share of revenues in other countries was as follows: 20.8% in the Czech Republic, 26.7% in Hungary, 28.8% in Poland, 22.1% in Estonia, 25.0% in Latvia and 22.8% in Lithuania<sup>29</sup>.

---

<sup>28</sup> This 70% of local budgets covers 53 local self-government units (21 counties and 32 large towns) out of 569 local government units that, by law and government decree, cover decentralized functions in primary and secondary education, social welfare and health care.

<sup>29</sup> Ebel, Yilmaz (2002), p. 8.

Table 1

Share of Revenues and Expenditures of the Consolidated General Government (According to Government Level) in GDP, in %

	1998	1999	2000	2001	2002	2003 Plan
Total revenues and subsidies	52.56	52.56	47.37	47.54	46.93	47.18
Central Government	31.66	32.49	28.34	32.34	37.78	39.14
Extra budgetary funds	15.22	14.65	13.86	11.01	4.43	3.61
Local Government	5.68	5.42	5.18	4.19	4.72	4.43
Total expenditures and borrowing minus repayment of debt	52.07	54.76	52.26	49.96	49.83	49.48
Central Government	24.28	24.89	23.07	27.18	37.92	38.48
Extra budgetary funds	21.75	24.08	23.94	18.43	7.17	6.22
Local Government	6.04	5.79	5.25	4.35	4.75	4.78
Overall deficit/surplus	0.49	-2.19	-4.88	-2.42	-2.90	-2.30
Total financing	-	2.19	4.88	2.42	2.90	2.30

Source: Ministry of Finance.

As a result of the revised public finance statistics methodology, the public expenditure structure statistics relating to environmental protection which would cover a longer time period is not feasible either at central or local (regional) level.

Tables 2 - 4 present expenditures for environmental protection in the state budget, the budgets of local and regional self-government and the budgets of municipalities, towns and counties for the period 1998-2002.

Table 2

Central Government Expenditure Structure for Environmental Protection (in million HRK)

	1998	1999	2000	2001	2002 plan
Total expenditures	41473.1	47379.6	49567.5	56723.3	71992.1
Environmental expend.	20.6	30.7	14.1	32.5	53.2
Share of environmental expenditure (%)	0.05	0.06	0.03	0.06	0.07

Source: Ministry of Finance.

The amount allocated by the central government in the 1998-2002 period for environmental protection ranged from HRK 14 million in 2000 to HRK 53 million

planned in 2002 state budget, while all the municipalities, towns and counties in the same period spent HRK 229 (2001) to HRK 412 million (2000). The total expenditures for environmental protection for 53 local and regional self-government units in the year 2001 amounted to HRK 229 million and in the year 2002 to HRK 236 million.

Table 3

Total Expenditures of Local and Regional Self-government for Environmental Protection (in million HRK)

	1997	1998	1999	2000	2001*	2002*
Sanitary functions and services including pollution abatement and control	457.6	422.3	360.3	411.9	229	236

\* The 2001 and 2002 data include 32 towns, which assumed decentralized functions in education, 20 counties and the City of Zagreb. The data for other municipalities and towns in the Ministry of Finance are not publicly available.

Source: Ministry of Finance.

Total environmental protection expenditures constitute only a minor part of the structure of both central government and local and regional self-government. Central government for environmental protection allocated at the most 0.07% of total expenditures (2002), while local and regional self-government units for environmental protection spend 4% of their total expenditures.





Table 4  
Expenditure Structure of Local and Regional Self-government Units, in %

	MUNICIPALITIES				TOWNS				COUNTIES				TOTAL			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
<b>TOTAL EXPENDITURES BY FUNCTIONS</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
7. Housing and municipal functions and services	24.05	25.61	25.21	27.31	34.87	27.89	25.09	26.34	6.84	7.51	7.48	7.79	30.64	25.44	23.52	24.92
7.1. Housing and municipal development	14.92	13.11	12.41	13.51	22.88	18.02	17.45	18.71	1.96	2.05	1.41	1.70	19.74	15.67	15.29	16.48
7.2. Water supply functions and services	4.34	5.08	4.39	5.99	4.05	1.52	1.41	1.30	3.23	4.37	4.02	3.53	4.01	2.31	2.07	2.21
7.3. Sanitary functions and services including pollution abatement and control	3.32	4.13	4.34	3.88	7.27	5.49	4.42	4.57	1.65	1.08	1.96	2.54	6.17	4.84	4.19	4.29
7.3.1. Waste collection and discharge, maintenance of the sewage system	3.16	3.79	3.71	3.42	6.98	5.07	4.03	4.04	0.69	0.12	0.01	0.01	5.83	4.38	3.62	3.60
7.3.2. Pollution abatement and control (environmental protection)	0.16	0.33	0.63	0.46	0.30	0.41	0.39	0.53	0.95	0.96	1.95	2.53	0.34	0.46	0.57	0.69

Source: Ministry of Finance.

For the sake of comparison we compare the expenditures of central government for environmental protection and the revenues the central budget receives from public payments, the so-called «ecological payments» because they relate to products polluting the environment or using the environment, such as special taxes on petroleum products, special taxes on private cars, motor vehicles, vessels and airplanes, and on tobacco products, the concession fees for some natural resources and the like. Total revenues to the state budget from these sources in the year 2000 amounted to HRK 6.9 billion or almost 15% of the total budget revenues<sup>30</sup>. Other important environmental protection related financing sources represent earmarked payments for the environment pollution exploitation of natural resources pursuant to special regulations (regulations in the area of water, forest and mineral management), and the rates of certain public utility services. Within earmarked payments the major part refers to water protection charges, charges for multiple non-wood forest functions<sup>31</sup> and the sand/gravel extraction charges<sup>32</sup>. Only water protection charges for protection are fully allocated, while the remaining charges have multi-purpose functions, among which environmental protection.

It may be said that the entire environmental policy heavily relies on the command and control instruments while economic instruments play only a supplementary role. The new environmental policy in Croatia should in financing environmental protection apply primarily economic instruments because of their manifold advantages. Furthermore, decentralization could be achieved by a greater use of economic instruments<sup>33</sup> which would motivate local

---

<sup>30</sup> In contrast in the 2000 state budget only the amount of HRK 4.6 million was allocated for financing the nature and environment preservation and protection programs on the position of the Ministry for environmental protection and physical planning (200-30) and in 2001 the amount of HRK 7.1 million. See Kordej (2003).

<sup>31</sup> Legal entities engaged in economic activities pursuant to Article 70 of the Forest Act (Official Gazette No 52/1990) are subject to this payment.

<sup>32</sup> Pursuant to the Mining Industry Act (Official Gazette No 35/1995) legal entities entitled to the exploitation of mineral raw materials are subject to this payment and the allocation of funds for mineral research.

<sup>33</sup> Inter alia see Bovenberg, Cnossen (1995).

authorities to enhance revenue raising and thus become more independent from central authority.

### 3. Conclusions

Although the Republic of Croatia is a small country from a geographical point of view, as regards federalism it shares the same problems with large countries. The issue of shared responsibility is also present though it is not significant. While the Environmental Protection Act provides for the participation and shared solution of regional issues, there are no clear legal prerequisites for the application of a shared responsibility principle. No authority has been established with responsibilities for sustainable development, nor is there an interministerial authority or legal regulation that would ensure the integration of environmental issues into other development related policies. Environmental objectives and standards are established by the central government while responsibility for implementation is assigned to lower levels. It is estimated that while there are some positive cases, local government units are still rather reluctant to assume an active role in the creation of environmental policy. Their inactivity can be attributed to the fact that environmental quality is still considered a luxury and thus economic issues are those that are prioritized. Such views at lower government levels indicate people's inadequate awareness regarding environmental standards. Further, expertise in the application of economic instruments or incentives for the application of environmental protection policies are still insufficient at local levels. Central government could apply some simple incentive programs subject to financial and institutional limitations and their feasibility.

Finally we would like to answer the question posed in the title: *Who limits federalism in the area of environmental protection in Croatia?* Although officially there are no limitations they do exist as a result of shortcomings in legal and institutional constraints. *The legal framework is still considered more as a constraint than an incentive to environmental protection.*

The *absence of clear solutions when setting priorities* in the domain of environmental protection and coordination among all those involved in environmental protection issues is an enormous constraint.

*Lack of financial capacity to manage environmental protection* can be seen at subnational level. More than 30% of local government units cannot cover current expenditures with

current revenues. Hence no wonder that the funds allocated for environmental protection are insufficient both at national and local level.

*A decentralization process* should result in the transfer of both responsibility and resources from the central to local levels in the areas of public life relevant to the local population. This also refers to environmental protection. However, the decentralization process in Croatia did not begin by additional transfer of responsibility and resources from the central government to the level of towns, municipalities and counties. The actual decentralization of power will not be achieved without strengthening the overall developmental capacity of local government units, clear division of functions among levels of government, improved cooperation and coordination of activities in environmental protection at all levels both vertical and horizontal.

Difficulties in communication between different levels of government and lack of cooperation at all levels are considered to be a major obstacle to efficient environmental protection.

*Limitations in structural and human resources* relate to inadequate solutions in organizational issues and a shortage of highly educated and motivated staff in government administration and local and regional self-government whose primary task is to propose and find solutions to all issues relating to environmental protection.

The above mentioned restrictions should be viewed as a challenge which is being thoroughly addressed in Croatia, the challenge which is also a part of the National Action Plan aimed at Croatia's EU approximation and harmonization.

## References

Bovenberg, Lans i Sijbren Cnossen, 1995, "Public Economics and the Environment in an Imperfect World: An Introductory Summary" u Lans Bovenberg i Sijbren Cnossen *Public Economics and the Environment in an Imperfect World*, Boston: Kluwer Academic Publishers, pp. 3-19.

Črnjar, Mladen, 2002, *Ekonomika i politika zaštite okoliša*, Rijeka: Ekonomski fakultet Sveučilišta u Rijeci i Glosa.

Ebel, R.D. and Yilmaz, S., 2002, "On the Measurement and Impact of Fiscal Centralization", *Policy Research Working Paper 2809*, Washington, D.C.: The World Bank.

Estache, Antonio i Kangbin Zheng, 1993, "Pollution Control in a Decentralized Economy", *Policy Research Working Papers*, WPS 1066, Washington, D.C.: The World Bank.

Government Finance Statistics Yearbook, different issues, Washington, D.C.: International Monetary Fund.

International Monetary Fund, 1986, Manual on Government Finance Statistics 1986. Washington, D.C.: International Monetary Fund.

International Monetary Fund, 2001, Government Finance Statistics Manual 2001. Washington, D.C.: International Monetary Fund.

Kordej-De Villa, Željka, 2003, "Formuliranje i provođenje politike zaštite okoliša: primjer Hrvatske", doktorska disertacija, Zagreb: Ekonomski fakultet – Zagreb.

Lončarić-Horvat, Olivera, Leo Cvitanović, Igor Gliha i dr. (ur.), 1997, *Osnove prava okoliša*, Zagreb: Organizator.

Messere, K. C., 1993, *Tax Policy in OECD Countries: Choices and Conflicts*, Amsterdam: IBFD Publications BV.

Margeta, J., Barić, A., Ivančić, B. i Petković, A., 1999., "Projekt "Eko-kaštelanski zaljev", u: S. Nikolić, ur., *Program zaštite okoliša Županije splitsko-dalmatinske*. Zagreb: ZGO d.o.o.

Oates, Wallace E., 1998, *Environmental Federalism in the United States: Principles, Problems, and Prospects*, rukopis.

Oates, Wallace E., 2002, "A Reconsideration of Environmental Federalism" u John A. List i Aart de Zeeuw (ur.), *Recent Advances in Environmental Economics*, Cheltenham, UK: Edward Elgar, pp.1-33.

Official Gazette, different issues, online, [www.nn.hr](http://www.nn.hr).

Wilson, John D., 1999, "Theories of Tax Competition", *National Tax Journal*, 52, str. 269-304.

Ministry of Finance, 2003, Monthly Statistical Review [online]. Zagreb: Ministry of Finance, different issues. Available from: [www.mfin.hr](http://www.mfin.hr).