

Original Article

# An Overview of the Policies on Water Protection and Management - Consequences of the Romanian Economy

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**Abstract** - The study conducted through interdisciplinary research will discuss some issues of utmost importance raised by the environmental policy requirements of the European Union, focusing primarily on water protection and management, starting from the framework directive no. 2000/60/CE, amended by directive no. 2455/2001/CE. This directive has underpinned a modern and holistic water policy within the European Union. We will also emphasize how Romania meets the requirements imposed by the management program created for each geographical area. The new water management policies require rethinking the relationship between economic activities and the environment, adopting a new mentality regarding nature, the natural elements of the earth, environmental economics, etc. Romania has signed important agreements; international conventions have contracted structural funds to ensure water quality and the efficient use of resources. By signing and adopting these contracts, our country focuses on environmental management integrated into the European eco-economy model.

The implementation stage of the European directives on water protection and management is part of a second section in the approach and will provide details on how Romania managed environmental investments and their impact on the Romanian economy in 2014-2020.

**Keywords** - sustainable development, environmental programs, water protection and management, the balance of absorption, economic convergence.

## I. INTRODUCTION

### A. European Union water and related legislation

During the last decades, national and international policies focused on environmental matters have become increasingly in many countries showing that environmental and related issues are global even if they sometimes have more local appearances.

The present research is justified by the fact that the whole corpus of problems focused on the policies on water protection and management is of utmost interest because water is an essential component both for sustaining life and also for the economy of each state (worldwide, water consumption per capita is one.

Of the criteria for assessing the degree of civilization of a country).

From the perspective of the sustainable water policy framework, the current research starts by exploring and evoking several measures taken to integrate water management, promote the sustainable use of water resources, and ensure policy coherence at the European level since 1995. On 10 November 1995, in its report “*Environment in the European Union*”, the European Environment Agency presented a report on the state of the environment, confirming the need for action to protect the community waters both from qualitative and quantitative perspectives. In this respect, an important role was played by the European Commission, which created the EU water policy framework by enforcing environmental legislation in areas with contaminated waters, in areas where there are large amounts of industrial and household waste; the implementation of environmental legislation taking into account the important infusion of capital and the creation of new jobs; providing the necessary financial resources for the development of programs and projects that contribute to economic development, creation of new jobs, thus ensuring sustainable development.

The essence of this concept requires that the economic development issues can be solved only by taking into account the environmental requirements and the social insurance needs.

Thus, the main pillars of the European Commission focused on the water protection policy are: ensuring the supply of drinking water in a controlled manner through standards based on the latest scientific evidence; ensuring the provision of drinking or non-drinking water that meets the economic requirements, other than those required for human consumption; protecting and conserving the aquatic environment; limiting natural disasters (drought, floods). These objectives were also embedded in the Water Framework Directive no. 2000/60/EC (from now on referred to as WFD), which established the legal support to protect the inland surface waters, groundwaters, and coastal waters, implicitly to restore the purity of water in the European Union and to ensure the sustainable use of water in the long term.

The content of this directive specifies that any effective and coherent water policy must consider the vulnerability of aquatic ecosystems located near



coasts or estuaries or in gulfs or relatively closed seas, as their equilibrium is strongly influenced by the quality of the river basin waters flowing into them. The protection of water status within river basins will provide economic benefits by contributing towards the protection of fish populations, including coastal fish populations.

Over time, depending on the specific needs of this field, the WFD has been amended by more specific legislative acts, including Bathing Water Directive (76/160/EEC, to be repealed and replaced by the new Bathing Directive 2006/7/EC at least by 2014); the Drinking Water Directive (98/83/EC); Directive on Surface for Drinking Water Abstraction (75/440/EEC, integrated into the WFD and it was repealed under the WFD 2000/60/EC as from 22.12.07); Freshwater Fish Directive (78/659/EEC) integrated into the WFD, to be repealed under the WFD 2000/60/EC as from 22.12.12; Shellfish Water Directive (79/923/EEC); Urban Waste Water Treatment Directive (91/271/EEC) and related Decision 93/481/EEC; Nitrates Directive (91/676/EEC); Ground Water Directive (80/68/EEC) the Floods Directive and the "Marine Strategy Framework" Directive which were accompanied by other international agreements. According to experts in the field, the WFD is one of the first European directives in environmental policies to integrate economic aspects into achieving the objectives, given that water management is closely related to several policies. The WFD was finalized in December 2000 and provided a common target for all states that were to implement the "achievement of the good ecological and chemical quality" of water by 2015, a deadline by which waters must reach a minimum threshold of quality by reducing emissions from human, industrial and agricultural activities. From the current water policy of the European Union point of view, the European Commission admitted the principles: the need for a high level of protection, the precautionary principle; preventative action; rectification of pollution at source; polluter pays principles; the integration of environmental protection into other Community policies (agriculture); the promotion of sustainable development.

## II. REVIEW OF LITERATURE

The interrelations approach between the human society, economy, and environment represents a major concern of the researchers, organizations, and global civil society from the requirements perspectives of present modern time. In this respect, the notions and the themes like sustainability, environment, water, consumer, environmental impact, environmental audit, global environmental issues, environmental economics constitute only a part of the terms and concepts that dominate the scientific literature and the political discourse specific to the last decades. These problems were widely investigated both in the Romanian and foreign scientific communities with interesting results on

which we will insist in the study. Given the space allocated for this section of the article, the present research is like carrying on of my recent scientific studies, which have been disseminated in several specialized publications Pop (, 2018, 2019). From the perspective of the Romanian reference literature, we mention the following bibliographic articles and books signed by: Petrescu (2006, 2007, 2009, 2011, 2014); Petrescu-Mag and al. (2008, 2011, 2014), who treat essential issues regarding drinking water from the perspectives of Romanian water legislation in context and environmental legal instruments; policy and economic aspects with case-studies from Cluj-Napoca (Romania). Munteanu, Baci, and al. (2013) focused on sustainable development as an objective of European-funded projects.

Other theoretical approaches and applied representative studies from local literature are signed by Bălan, Munteanu, and al. (2009, 2014, 2017) focused on some considerations on the legal protection of water from the framework of the European and international legislation and how these norms were reflected in the Romanian legislation.

According to the information held by Hanley, Shogren, and al. (2007), there are some ways in which the economy and the natural environment are interlinked because every economic action can have some effect on the environment, and every environmental change can have an impact on the economy. The authors mentioned above understand by "the economy" - the population of economic agents, the institutions they form ( which include firms and governments), and the interlinkages between agents and institutions (markets) and through the environment is described biosphere, the atmosphere, the geosphere, all flora, and fauna. Siebert (2008) presented different policy approaches to the environmental problem and various economic issues, including neoclassical analysis, the public-goods approach, benefit-cost analysis, property-rights ideas, economic policy, and public-finance reasoning, etc. The publication signed by H. Siebert was accepted by the international academic community as a standard work in the economics of the environment.

Also, from the international reference bibliography, we mention the scientific approaches signed by Cato (2011), ed. Dietz, Michie, Oughton (2011), Segerson (2015) described the challenges and opportunities regarding the economics role in debates on interdisciplinary environmental policy, focusing on the relevance of economic in the protection of the environment, the implications of the decisions on the production and consumption within the human system to the natural system, etc.

## III. OBJECTIVES

The major objective of the current research is to highlight the efforts of our country in order to ensure the alignment at the European standards on the environmental policy and protection and also the

fulfilling of Romania's obligations as a member state of the European Union centered, in particular, on water quality and the efficient use of resources. Taking into account the allocated space for this scientific approach, the article does not propose an exhaustive centralization of all submitted projects for this segment of activity. Thus, we will carry out a descriptive analysis of the economic impact of these European funds absorbed by the companies and other specialized institutions. The degree of absorption of the structural funds emphasizes the position of our country in exceeding the dislocation of the regional disparities and the desire to increase the capacity of the representative institutions involved in contracting such financing instruments.

#### IV. MATERIALS AND METHODS

The research methodology resorts to that system of methods, processes, techniques, principles, and tools employed in a didactic vision that states the fundamental stages of the research. This approach is based on the study and analysis of the scientific article, specialized papers, European and national legislation, implicitly our own theoretical and practical experience. The interdisciplinary dimension of the article calls an integral research method that combines both quantitative and qualitative analysis which influences the current priority granted for the protection of the environment.

#### V. RESULTS AND DISCUSSIONS

##### *A. Romanian legislation framework*

In Romanian legislation, the WFD was transposed by Law no. 310 of 2004 for the modification and completion of the Water Law no.107/1996; Law no. 112/20016; Government Decision no. 1854/2006; Emergency Ordinance no. 3/2010 approved by Law no. 146/2010. Also, the National Authority for the implementation of the Floods Directive (FD) and the WFD requirements is the "Romanian Waters" National Administration (RWNA), in accordance with the provisions of the Water Law no. 107/1996 with subsequent amendments and completions. Through the 11 water basin administrations (WBA), the RWNA ensures the coordination and implementation of the river basin management (including river basin coordination), depending on the river basin development and management systems.

In accordance with Art. 13 of the WFD, each member state of the European Union was required to draw up a management plan for each river basin district, and if located in an international district, it was required to ensure coordination for producing a single management plan. Taking into account its location in the Danube basin, Romania contributed to elaborating the Danube River Basin District Management Plan.

In this respect, the first National Management Plan – The Synthesis of River Basin Management Plans was developed at the end of 2009, and a few months later, in March 2010, this plan was reported to the European Commission. By Government Decision no. 80/2011, the National Management Plan received the environmental approval for implementing the National Management Plan for the international part of the Danube river basin, which is included in the territory of our country.

In 2012, a report was released on implementing the program's measures established under the first Management Plan; the situation is reported to the European Commission in December of the same year. Since December 2013, efforts have been made to develop the second Management Plan for the 2016-2021 programming period, thus responding to the WFD requirements for identifying the most important river basin management issues.

On this occasion, The "Romanian Waters" National Administration drafted the document entitled "Important Issues of Water Management," which consists of the river basin management plans in Romania, a document that can be accessed on the site of the Romanian Water Administration.

In order to meet the requirements of Directive no. 91/271/EEC on the treatment of wastewater as amended by Directive no. 98/15/EC, the entire territory of the country has been designated as a sensitive area. A second requirement for the implementation of the Directive was that all agglomerations with more than 2000 equivalent inhabitants would be provided with urban wastewater systems, according to Art. 2 of the normative act.

The fulfilling of the requirements set out in these directives was achieved through a sustained effort of the Romanian authorities, which, through certain specialized institutions, have supported the environmental protection policies leading to economic growth and reduction of the existing disparities between different geographic regions of the country, and not only.

Among them, the Ministry of Environment, Waters, and Forests (from now on referred to as MEWF) established among its priority investment objectives the following: the defense against floods, the removal, and reduction of the effects of natural calamities caused by floods; the complex arrangement of river basins for the rehabilitation of existing water sources and the construction of new water sources for the population in deficient areas, as well as the development of water/ wastewater infrastructure, etc.

In order to achieve these objectives from the pre-accession period of Romania, which corresponds to the period between 2000-2006, external financing has been contracted through several financial instruments, among which we mention: the revised PHARE program which, after 2000, was oriented in investments targeting integrated regional development; the Instrument for Structural Policies

for Pre-Accession (ISPA) for the environment and transport infrastructure; the Special Accession Program for Agriculture and Rural Development (SAPARD).

The Global Environment Facility (GEF, also called the Global Environment Fund), joined by our country in 1994, has been a global financial support fund for global environmental protection. Until 2006, 20 such projects were implemented in Romania, which aimed to protect the Black Sea and Danube waters.

In the context of the European Union policy, Romania's alignment with the EU environmental standards meant adopting environmental measures consisting of environmental protection objectives included in the accession partnerships, the drinking water supply, the wastewater treatment, the solid waste management, and the air pollution management. We underline the fact that, unfortunately, in certain areas of Romania, drinking water does not have the required quality due to the inadequate treatment schemes and because both the sewage and the wastewater treatment do not exist. In the opinion of specialists in the field, without this external funding, most small operators would not have been able to comply with the Community acquis.

In order to comply with the required standards, Romania has been granted transition periods for the implementation of measures concerning the collection, discharge, and treatment of municipal wastewater: by 2015 for 263 agglomerations of more than 10,000 equivalent inhabitants, and by 2018 for 2346 agglomerations between 2,000 and 10,000 equivalent inhabitants. These transition periods have also been granted for the quality of drinking water until 2015 based on Directive 98/83/EC.

After integrating into the European Union structures, Romania has met the new requirements, among which we mention the necessity of regionalization of water services, a situation which has been solved by the creation of strong, economically viable, financially viable, and competitive regional operators. The main objective of the regionalization was the creation of regional companies (regional operators) to be performing in the water sector and through which the projects financed by the European Union could be implemented.

The main instruments are represented by several programs, including the *Environmental Fund*, an economic and financial instrument designed to support and conduct priority projects for environmental protection. The Environmental Fund aimed at a limited number of environmental investments of public interest, those included in the National Action Environmental Protection Plan, is a priority. The projects eligible for funding targeted those policies focused on preventing water and soil pollution, waste management, education, and public awareness on environmental protection. After Romania's integration into the structures of the

European Union, the main instruments of structural assistance for the implementation of the environmental policy were developed through the LIFE+ program and the European Fund of Regional Development, the Cohesion Fund, and the Solidarity Fund, etc.

For example, through the Solidarity Fund, during the 2008 floods, Romania benefited from the European Union of approximately € 11 million to cover the expenses for supporting the initiated emergency operations: the commissioning of water supply networks, the re-commissioning of rainwater collection systems, and wastewater installations, the restoration of road infrastructure.

Through the 2014-2020 Cohesion Fund for the environment, the main actions that were to be financed consisted of investments in climate change adaptation and risk prevention, investments in water and waste sectors, and urban areas.

Out of these, for our direct interest, the Sectoral Operational Program Environment aimed at reducing the existing gap between the European Union and Romania regarding the environmental infrastructure both quantitatively and qualitatively. This should take the form of efficient public services, considering the principle of sustainable development and the Polluter pays principle.

Among the specific objectives of this program, we can mention improving the quality and access to water and wastewater infrastructure by providing water supply and sewage services in most urban areas by 2015. The critical situation of treatment plants due to old sewage networks and sewage facilities, the modification of sewage capacity without its adaptation to the construction parameters, the poor managerial capacity, and the poor financial situation of the operators of public units have been emphasized.

The distribution of collection systems and treatment plants by regions (North-East, South-East, South Muntenia, South-West, West, North-West, Center, Bucharest-Ilfov) reflected that substantial investments are needed for the rehabilitation and the extension of collection systems and the construction of wastewater treatment plants. The most critical situation is in the Bucharest-Ilfov region because there is no wastewater treatment plant in Bucharest yet.

According to the provisions of Directive 91/271/EC, Romania has to comply with the obligations assumed in the negotiation process on wastewater treatment by 2018 with implementation costs amounting to approximately € 9.5 billion for investments, out of which € 5.7 billion for wastewater treatment plants and € 3.8 billion for sewage systems.

Concerning the public drinking water supply network, in the last two decades, there have been "major" mutations in Romania due to the increasing number of users connected to the current water networks from 29% of the country's population to 65% and the ration between urban and rural

population. The comparative research conducted between the European Union states, based on the data provided by EUROSTAT, highlighted the poor situation of the Romanian water and wastewater infrastructure. This situation is also explained by the fact that the uneven distribution of water resources in our country, the insufficient level of water flow regulation, the pollution of some inland rivers make certain important areas of the country lack sufficient water supplies throughout the year, especially during drought and in cold winters.

In addition to the aspects mentioned above, we can mention that, after 1990, at the country level, only a few of the 276 cities benefited from the investment programs for the rehabilitation of water and wastewater infrastructure. However, the Romanian authorities have developed programs to support local authorities to access international funding in small and medium-sized agglomerations in order to rehabilitate and modernize local water infrastructures and promote self-financing regional utilities by introducing cost recovery principles and streamlining them.

The Sectoral Operational Program Environment through Priority Axis 1, "the extension and modernization of water and wastewater systems," has pursued the development of water and wastewater infrastructure at the national level and the improvement of the efficiency of public water services. For example, within Priority Axis 1, the project "Rehabilitation and Modernization of Water Supply and Sewage Systems in Ilfov County" was developed. The beneficiary of this project, S.C. APA-CANAL ILFOV S.A, receives non-refundable financing for the eligible values of the investment under the financing contract no. 102834 signed on 22.11.2010 with the Ministry of Environment and Forests (now the Ministry of Environment and Climate Change) as Managing Authority for the Sectoral Operational Program "ENVIRONMENT".

The overall objective of the investment measures is the sustainable development of the water and sewage systems in Ilfov County by improving the quality of the existing services and reducing the negative impact of wastewater discharges under EU policies and practices and in the context of Priority Axis 1 of the SOP "ENVIRONMENT".

Internally, the strategic programming of the Structural and Cohesion Funds was implemented through the National Strategic Reference Framework (NSRF), following the strategic priorities set out within the National Development Plan for the 2007-2013 programming period. The implementation of the NSRF strategy was achieved through seven operational programs under the Convergence objective, including the Sectoral Operational Program Environment.

According to the Environment Administration website, from 2008 to 2017, 129 projects have been completed for the Program regarding protecting water

resources, integrated water supply systems, treatment plants, sewage, and wastewater treatment plants.

In 2008, 12 projects from Botoșani, Giurgiu, Harghita, Maramureș, Iași, Neamț, Satu Mare, Suceava, and Tulcea were financed. The maximum amount contracted by a single beneficiary was LEI 1.90.532,48 obtained by the Local Council of Târgu Neamț, from Neamț County. The same source mentions the contracting in 2013 of only two projects for this level of activity, and for next year, the number of projects submitted has been a steady increase. Thus, in 2014 several 5 projects covering the counties: Bacău, Covasna, Neamț, Olt and Vaslui were submitted in value of 16685582.1.

In 2015 several 19 projects were financed in value of 162000482.4 and the maximum amount contracted for a project being LEI 7,786,114,24, the beneficiary being the Orlea commune, from Olt County. Among the counties covered, we mention: Alba, Arad, Argeș, Buzău, Cluj, Dâmbovița, Harghita, Hunedoara, Mureș, Olt, Timiș and Vaslui.

In 2016, 26 such projects were contracted, the maximum contract for a single beneficiary being LEI 8,820,205.46 for Vișeu de Jos commune, from Maramureș County. The total value of these 26 projects were 133970474.1 LEI, which cover the counties Bacău, Botoșani, Cluj, Constanța, Covasna, Galați, Gorj, Hunedoara, Ialomița, Maramureș, Mehedinți, Neamț, Olt, Sălaj, Sibiu, Suceava, Teleorman, Timiș, Vâlcea and Vaslui,

In 2017, the total value of the completed projects was LEI 182156764.3 and the counties covered were: Arad, Bacău, Bistrița-Năsăud, Brașov, Cluj, Covasna, Dâmbovița, Gorj, Harghita, Hunedoara, Ialomița, Iași, Ilfov, Maramureș, Mureș, Neamț, Prahova, Satu Mare, Sălaj, Suceava, Teleorman, Tulcea, Vâlca and Vaslui. Within these projects, the eligible costs consisted in the construction of sewage networks, water distribution networks, water supply networks for territorial administrative units with a population of more than 2,000 inhabitants.

In 2018, the total value of the 40 projects was LEI 177316246.7 and the counties covered were: Alba, Argeș, Bacău, Bihor, Brașov, Bucurști, Cluj, Constanța, Călărași, Dâmbovița, Gorj, Harghita, Hunedoara, Iași, Ilfov, Maramureș, Mureș, Neamț, Olt, Satu Mare, Sălaj, Tulcea, Vâlcea and Vaslui.

In the light of the above data, there is an increase in the absorption rate of such projects, the maximum being reached in 2017, which has had a strong impact on the country's economy and the rational use of common natural resources. The contracted projects are vivid proof that, in the last period, we can talk about better use of the environmental policy instruments, from the economic and financial ones to the technical and legislative ones.

The community initiative INTERREG IV was attended by Romania alongside the other EU member states between 2007 and 2013. This program has contributed to the economic modernization and

strengthening of competitiveness in Europe in the fields of innovation, knowledge economy, environment, and risk prevention using interregional cooperation. The Priority Axis 2 of this program focused on environmental and risk prevention issues, including water management, waste management, etc.

The Large Infrastructure Operational Program 2014-2020 addresses the development needs in four sectors, including environmental protection alongside transport infrastructure, risk management, and adaptation to climate change, energy, and energy efficiency. Through this program, the Romanian Waters National Administration has proposed to finance several 16 projects whose implementation will solve the problems caused by floods in many areas of the country.

## VI. CONCLUSION

In the light of the specialized literature consulted, we affirm that Romania, through the entire range of steps taken before and after joining the European Union structures, has adapted to the environmental policy requirements elaborated by the European Community, supporting environmental protection by implementing a sustainable management strategy, and also the sustainable development in close correlation with the socio-economic evolution of the Romanian population.

## REFERENCES

- [1] A.M.Pop., Romania and the Impact of the European Environment Funds on the Country's Economy, in Proceedings book of the 1st International Conference „The Holistic Approach to Environment, September 13th – 14th, ed. Anita Strkalj, Croatia, Sisak, (2018) 603-611.
- [2] Dr.A.M. Pop, The Impact Analysis of the European Funds in Romanian Agriculture- Economic Approach, International Journal of Business and Management Invention (IJBMI), 8(3) (2019)18-24.
- [3] P.Burny, D. C. Petrescu, Environmental economics: studies and research. Cluj-Napoca: Editura Fundației pentru Studii Europene, (2008).
- [4] R-M. Petrescu-Mag, Environmental policies and legislation: studies and research. Cluj-Napoca, Gembloux: Bioflux, Les Presses Agronomiques de Gembloux, (2008).
- [5] R-M. Petrescu-Mag, D. C. Petrescu, Ph. Buy Ed., Environmental Issues in the Context of Sustainable Development, Cluj-Napoca: Bioflux Publishing House, (2011).
- [6] R-M. Petrescu-Mag, D. C. Petrescu, Drinking water: legislation, policy, economic aspects: case studies from Cluj-Napoca (Romania). Cluj-Napoca: Presa Universitară Clujeană: Bioflux, 2014.
- [7] D.C.Petrescu, Clean water and polluted water: from confusion to awareness. A survey carried on in Cluj-Napoca, Environment&Progress, Cluj-Napoca, Bistrița: Efes, 8 (2006) 299-307.
- [8] D.C.Petrescu, Bringing the EU environment standards in Romania: ISPA measure, rehabilitation and modernization of the water supply and sewerage system in the area of Cluj. Environment&Progress. Cluj-Napoca: Efes, 6 (2006) 380-385.
- [9] D.C.Petrescu, Comportamentul consumatorului: mecanisme interne, influențe externe, impact asupra dezvoltării durabile. Cluj-Napoca: Mega, (2011).
- [10] D.C.Petrescu, G. Vlad coord., Consumatorii și protecția mediului: atitudinea consumatorilor față de microstațiile de epurare a apelor uzate-The costumers and the environment protection: costumers' attitude towards the wastewater treatment microplants. Cluj-Napoca, Efes, (2009).
- [11] D.C.Petrescu., Managementul apelor uzate și protecția mediului la SC Compania de Apă Someș SA (Cluj-Napoca), Environment&Progress. Cluj-Napoca, Bistrița: 10 (2007) 335-341.
- [12] R-M Petrescu-Mag, Protecția mediului în contextul dezvoltării durabile. Cluj-Napoca: Editura Bioflux, (2011).
- [13] N.Hanley, J. F. Shogren, B. White, Environmental economics. New York: Palgrave Macmillan, (2007).
- [14] L.L.Bălan, A. Munteanu, G. Grijac, E. Galatescu, Considerations on the Legal Protection on Water., Metalurgia Internațional, 14 (2009) 35-37.
- [15] L.L.Bălan, Reflectarea legislației internaționale și europene privind protecția atmosferei, apei și solului în legislația din România: protecția mediului în contextul prevenirii și combaterii poluării. București: Editura Universitară, 1 (2014).
- [16] L.L.Bălan, S. G. Barbu, A.. M. Ciobanu, Consecration, at a European level, of the Information Principle and Public Participation in Environmental Decision Making and Access to Justice in Environmental Matters, Conf. Int'l Dr. 54, 2017/Conferinta Internaționala de Drept, Studii Europene și Relații Internaționale, (2017) 54-60.
- [17] M.S.Cato, Environment, and economy. London, Routledge, (2011).
- [18] S.Dietz, J. Michie, C. Oughton, The political economy of the environment: an interdisciplinary approach. London: Routledge, (2011).
- [19] K.Segerson, The role of economics in interdisciplinary environmental policy debates: opportunities and challenges. American Journal of Agricultural Economics, 97(2) (2015) 374-389.
- [20] F.Bran, Relația economie-mediul la începutul mileniului al III-lea. București: Editura ASE, (2002).
- [21] Claudia Diana Sabău-Popa, Bugetul Uniunii Europene și fondurile comunitare, București, Editura Economică, (2010).
- [22] J.A. Darabos, M. Rozenberg, J.I. Baga, Dezvoltarea infrastructurii de apă/apă uzată în Regiunea 6 Nord-Vest. Pro Environment 2 (2009) 261-265.
- [23] A.Dobrescu, E. Pavel, Managementul proiectelor finanțate din fonduri europene pentru perioada 2014-2020, Pro Universitaria, București, (2014).
- [24] <https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32000L0060&from=RO>, accessed on 10 December 2018, 10 am.
- [25] [http://www.europarl.europa.eu/atyourservice/ro/displayFtu.html?ftuId=FTU\\_2.5.4.html](http://www.europarl.europa.eu/atyourservice/ro/displayFtu.html?ftuId=FTU_2.5.4.html), accessed on 20 May 2018, 5 pm.
- [26] <https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=celex:32000L0060>, accessed on 20 May 2018, 5 pm.
- [27] <http://apepaduri.gov.ro/wp-content/uploads/2014/07/directiva-cadru-apa-site-rev-11-final.pdf>, accessed on 24 May 2018, 6 pm.
- [28] <http://www.rowater.ro/Program%20Operational%20Infrastructura%20Mare%20POIM%2020142/Forms/AllItems.aspx>, accessed on 2 June 2018, 4 pm.
- [29] <http://www.rowater.ro/SCAR/Probleme%20importante%20de%20gospodarirea%20apelor.aspx>, accessed on 19 May 2018, 10 am.
- [30] <http://www.mmediu.ro/categorie/minister/6>, accessed on 27 May 2018, 12 am.
- [31] <http://www.fonduri-structurale.ro/Detaliu.aspx?t=mediu>, accessed on 4 June 2018, 8 pm.
- [32] [http://www.fonduri-structurale.ro/Document\\_Files//mediu/00000029/g71qf\\_POS\\_Mediu\\_RO.pdf](http://www.fonduri-structurale.ro/Document_Files//mediu/00000029/g71qf_POS_Mediu_RO.pdf), accessed on 4 June 2018, 8 pm.
- [33] <https://www.acilfov.ro/index.php/investitii-fonduri>, accessed on 4 June 2018, 9 pm.
- [34] [https://www.afm.ro/canalizare\\_proiecte\\_finalizate\\_2008.php](https://www.afm.ro/canalizare_proiecte_finalizate_2008.php), accessed on 28 May 2018, 5 pm.
- [35] [https://www.afm.ro/canalizare\\_proiecte\\_finalizate.php](https://www.afm.ro/canalizare_proiecte_finalizate.php), accessed on 28 May 2018, 5 pm.
- [36] <http://www.fonduri-ue.ro/poim-2014>, accessed on 15 June 2018, 8 pm.