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L. Chryniewicz,
Warsaw University of Life Sciences
M. Wojtaszek,
Warsaw University of Life Sciences
D. Kyryliuk,
National university of life and environmental sciences of Ukraine

# THE EUROPEAN UNION WATER FRAME DIRECTIVE AND ITS IMPACT ON THE ECONOMIC DEVELOPMENT OF RURAL AREAS IN POLAND

Л. Гриневич,
Варшавський університет наук про життя
М. Войташек,
Варшавський університет наук про життя
Д. Кирилюк,
Національний університет біоресурсів і природокористування України

## РАМКОВА ДИРЕКТИВА З ВОДНИХ РЕСУРСІВ ЄС ТА ЇЇ ВПЛИВ НА ЕКОНОМІЧНИЙ РОЗВИТОК СІЛЬСЬКИХ ТЕРИТОРІЙ В ПОЛЬЩІ

**Використання води в якості сировини не тільки сприяє зниженню якості водних ресурсів, а й призводить до зникнення природних водних і наземних екосистем, пов'язаних з водним середовищем.**

**Таким чином, сучасний підхід до питань управління водними ресурсами та його впливу на регіональний розвиток вимагають спеціальних рішень, що повинні бути корисні не тільки для навколишнього середовища, але і для економічного зростання міст і провінцій, де вода відіграє істотну роль.**

**У статті основну увагу буде приділено розгляду основних положень Рамкової директиви з водних ресурсів. Також ми спробуємо дати відповідь на головне питання: чи ця директива блокує регіональне економічне зростання, чи просто змушує використовувати альтернативний шлях розвитку.**

**Treating water as a raw material not only has contributed to degradation of water resources, but also extremely valuable to the disappearance of natural aquatic and terrestrial ecosystems associated with the aquatic environment. Thus, modern approach to issues of water management and its impact on the regional development require a special solutions, which should be beneficial for the environment but also for economic grow of the towns, cities and provinces, where water plays a significant role. This article will focus to introduce into the topic of basic regulations of WFD, as well as it will try to give answer for the main question: if this directive is blocking regional economic growth or it just force to use alternative path of development.**

*Ключові слова: рамкова директива, економічний розвиток, сільські території.*
*Key words: water frame directive, economic development, rural areas.*

### 1. ABSTRACT

Treating water as a raw material not only has contributed to degradation of water resources, but also extremely valuable to the disappearance of natural aquatic and terrestrial ecosystems associated with the aquatic environment. Thus, modern approach to issues of water management and its impact on the regional development require a special solutions, which should be beneficial for the environment but also for economic grow of the towns, cities and provinces, where water plays a significant role. This article will focus to introduce into the topic of basic regulations of WFD, as well as it will try to give answer for the main question: if this directive is blocking regional economic growth or it just force to use alternative path of development.



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## 2. INTRODUCTION

The Water Framework Directive (WFD) 2000/60/EC is a response to the many efforts of the European Union in order to protect more effective the waters by the establishing an integrated European Water Policy, which will be based on clear, effective and coherent legislative framework. The WFD organizes and coordinates the existing European water legislation. It also introduces a holistic organic approach to the assessment of the water planning and the river basin management; in accordance with the principles of sustainable development and subsidiary. Therefore, it establishes a framework for action for the protection of inland surface waters, transitional waters, coastal waters and groundwater, but it gives also possibilities of alternative economic growth.

## 3. GENERAL OUTLINE AND IMPORTANCE OF THE WATER FRAME WFD

Already at the outset, it was found in the Directive, that water cannot be "subject to commercial, but is good overall, which should be defended, protected and treated as a legacy[1]". The adoption of this fundamental principle requires all users for rational use and protection of water resources in accordance with the principles of defined as a strategy for sustainable development. Management Structure life and operation of society — governments countries, local government agencies — are required to organize activities and to stimulate the conservation and rational subordinate use of water an integrated policy on water European Union. The success of these efforts found to be dependent on close cooperation and coherent action at Community level, member States and local, as well as the quality and circulation of information, on the efficiency of public consultation, the involvement public, especially members waters.

## 4. PURPOSE OF THE DIRECTIVE

The general guidelines are discussed in detail in the article nr 1 of the Directive, indicating the protection of inland surface water, groundwater and coastal marine waters and territorial waters by:

— preventing further degradation, protecting and improving the state of ecosystems water and land, especially wetlands;

— promotion of sustainable use Water-based long-term protection of water resources;

— quest for enhanced protection and improvement the aquatic environment, inter alia, by progressive reduction of discharges, emissions and harmful substances in particular[2];

— cessation or gradual elimination discharges, emissions particularly hazardous waste;

— progressive reduction of pollution groundwater;

— to contribute to reducing the effects of floods and droughts, which measures to ensure the supply of good quality water sources surface and groundwater[3].

## 5. ECONOMIC RULES DIRECTIVE

Many economists have recently discovered that the problem of water recourses management is an important and interesting area of application of the tools of economic theory and econometrics[4] . A rule allowed the introduction of a rational policy in the field of water management, expressing predominantly to conserve water and the pursuit of long-term policy water services. The economic analysis indicates cost-effective programs of action necessary to achieve the environmental objectives Water Framework Directive. The Art 5 the Directive contains the findings regarding to represent the authorities and procedures for the management of the including water planning and reporting. We consider that the fundamental unit of a river basin is considered to Directive river basin[5]. Additionally this matter is supported by one of Annexes. Annex III sets out what must be included[6]. This analysis is based the completion of the two following articles. Article 9 takes into Directive by requiring Member States to take into account principle of cost recovery including environmental and resource cost[7] . Therefore, the estimation of prices and costs associated with water services recognizes the need for taking into account the specificities of countries dates, regional characteristics. As a basic underlined the following rules: 1) need for integration and sustainable management of water used in the economy, transport, energy, agriculture, fisheries, recreation and tourism, taking into account the role of water as shape factor of regional policy and land use; 2) obligation to environmental damage at the source of their formation and the principle of "polluter pays" principle. Polluter Pays principle means that polluter should be charged with the cost of pollution prevention and control measures[8].

The Water Framework Directive required to develop analysis economics of water management, also introduces the principle of full cost recovery of water services, which should be taken into account when the rate of water charges. The European Commission inter alia said policy Member States should take into account.

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[1] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

[2] Referred to as a "priority", that is, to a rapid elimination.

[3] Directive 2000/60/EC.

[4] Pashardes — P. (edt.): Current Issues in the Economics of Water Resource Management: Theory, Applications and Policies, [in]: Business & Economics, Springer, Apr 30 2002.

[5] The area of the total outflow of water surface followed by a natural water.

[6] Chave — P.A. The EU Water Framework Directive: An Introduction, 2001, IWA Publishing, p. 188.

[7] Chave — P.A. The EU Water Framework Directive: An Introduction, 2001.

[8] OECD, The Polluter Pays Principle: Definition, Analysis, Implementation, 1975, OECD Publishing, p. 6.



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The following types of costs are:

— The cost of universal service water services[9]

— Environmental costs[10]

— Resource Costs[11]

Thus, the European Communication forced calculated formula of total charges for water (O), paid by the user, as:

$$\sum O \equiv A \pm A \pm BZ,$$

where:

A — the element related charges; fixed costs due for unit of water

B — claim produced used per unit;

O — the total amount of used water;

Z — total amount of produced impurities.

This formula is based on the assumption that reduce of the amount of water used or pollutant emissions involves result in lower water bills paid by the user, which should encourage them to make effective use of water resources and to reduction of pollutants discharged with wastewater. It is very important to determine contained Water Framework Directive, therefore created some opportunities for non compliance of the provisions of paragraph 1 of Directive in respect of the water usage where does not jeopardize the attainment of the objectives of the Framework Water Directive.

## 6. ROLE OF EU FUNDS IN THE FINANCING OF INVESTMENT

Investors in 2007—2013 had the opportunity to benefit from the support of the Operational Programme Innovative Economy. Implemented by the Ministry of Economy action 4.5 under Priority 4. Investments in innovative projects include primarily the co-financing of projects in the implementation of the results of R & D and investment of considerable importance to the economy. Funding could obtain projects from both the manufacturing and service. In the Financial Perspective 2014—2020 entrepreneurs can benefit from the measures in the framework of the Operational Programmes. Basic support for them will be located in the Operational Programme Development of Intelligent (allocation of 8.61 billion euros), To a limited extent it is possible to use also from the Operational Programme Infrastructure and Environment (27.41 billion euros). Entrepreneurs are also beneficiaries of the programs in the field of agriculture and fisheries. Support in this area concerns the economy, resource efficient and environmentally friendly and conducive to territorial and social cohesion. More than half of the available allocation will be used for investments in transport infrastructure on a national and international level, but also locally. The biggest increase in spending compared to the previous financial perspective, however, will be in the area of innovation and support for entrepreneurs, especially in reducing final energy consumption and reduce emissivity, and the judicious use of natural goods.

## 7. REGIONAL DEVELOPMENT: CASE OF ZULAWY WISLANE

In connection with the Poland accession to the European Union, Poland was bound to bring the legislation into line with Community requirements. The implementation of a number of directives related to the overall protection of the environment in a relatively short period of time led to changes in the environmental policy of the state. The Directive does not introduce restrictions on the use of water for navigation, if conditions are fulfilled. Values of natural and cultural landscape and biodiversity covered by the region had made more accessible and attractive waterways will be an important contribution to the economic development. Therefore, the most environmentally friendly nature are activities that foster the development of maritime shipping on the trails of Zulawy Wislane as Project "Loop".

Positive role in the wider issues of the environment also plays for the mobilization of public passenger and car ferry of this area, local transport links trams and passenger ships cruise tourists on the trail of the "loop". The modernization project "Loop" which forms part of the International E-70 Seaway, which fits into the European and the national strategy for the development of water transport[12]. Furthermore, is one of few possibilities of economic developed of region thus of directive masseurs.

## 8. CASE STUDY OF PLANNED INVESTMENTS

In plans there is an investment with value of over 180 million euros, including 70 spurs on the Vistula River. It is planned for 2020 in the second stage of the program called "Program Zulawski — 2030". During the first stage of the Program completed 60 tasks with a value of nearly 110 million euros. 85 percent. of this amount came from the EU.

For "Comprehensive flood protection Zulawy — 2030", the most urgent tasks for the planned construction of a passed gate flood, against storm on the Tuga River, which greatly improve the safety of Nowy Dwor Gdanski and the purchase of four icebreakers.

The idea is that this region could be developed, so that people do not feel the threat. What is interesting if people will feel very safe, they will be able to develop different sectors of the economy. The most important realized investments include: reconstruction of the mouth of the Vistula River (including the extension of the so-called. Handlebar eastern 200 m), reconstruction of 11 spurs on the Vistula.

The reconstruction of 76 km levees (on the rivers Vistula, Tuga, Elblag and lake Druzno) and the

[9] The capital costs and operating costs.

[10] Referred the size of the losses caused by pollution of water resources.

[11] Calculated as a loss of some opportunities as a result of exploitation of water resources in excess of their ability to self-reproduction, including, among others costs incurred for increasing retention.

[12] Tyszecki — A. (Edt.): PROGNOZA WPLYWU NA SRODOWISKO PROJEKTU "PETLA ZULAWSKA" — ROZWOJ TURYSTYKI WODNEJ, Gdansk, pazdziernik 2008 r.



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reconstruction of 35 pumping stations, 10 km of the river and 53 km Radunia other riverbeds. It created a system for monitoring the risk of flooding.

The surface area covered by the flood protection in the framework of the projects is approx. 215 thousand. ha, on which he lives approx. 120 thousand. people.

Marshes cover an area of more than 2.1 thousand. sq. km, of which over 450 are areas of depression. In this area, which is used largely for agriculture, lived 250 thousand. humans. They are considered one of the most flood-prone area Polish. Possible flooding could threaten including residents of Gdansk Nowy Dwor Gdansk and Elblag, but also — if there has been flooding the refinery or heaps of phosphogypsum in Wi?linka — cause an ecological disaster.

Deeper involvement of foreign investors was apparent not only in the scale of investment, but also in their forms. Significant acceleration of capital inflows to Polish after 2003 was associated with accession to the EU. Today, the European Union countries are the largest investors in Poland. Out of the total amount of over 171 billion that was invested in Poland until the end of 2014, the largest share came from European Union countries — 91.5%. The biggest direct investors were companies: the Netherlands, Germany and Luxembourg. These three countries are responsible for a total of more than 45% of the stock of FDI in our country.

Foreign capital was an important factor supporting economic growth in Poland, and also contributed to the improvement of business efficiency, technology diffusion, and produce and export more capital-intensive goods highly processed.

From the point of view of the further economic development of the Polish important it is to attract investment that will strengthen our innovation and will permanently increase the added value. For this reason, we need to strengthen our competitiveness in order to attract projects that will allow us to. These are investments involving greater area of research and development, boosting the cooperation of the private sector with research and development centers. But what is important, companies must be willing to take risks, because it is inscribed in innovation activities. This in turn requires certain capital resources.

Poland remains a country with high investment attractiveness, which is confirmed by rankings of international centers and institutions, and is currently planned structural changes should result in a significant improvement in the level of non-price competitiveness. The priority of economic policy is also to improve the conditions for doing business. This means the elimination of regulatory and bureaucratic barriers for companies operating on Polish territory.

Programs and instruments affecting raise the level of knowledge and competence, attitudes conducive to innovation should contribute to the improvement of the competitiveness of the Polish economy and result in an increase in its attractiveness in the eyes of foreign investors and business partners.

## 9. CONCLUSION

General assumption is transferred to the level of understanding of on the right of Member States and the development and implementation of national legislation. The plans will have impact not only on the development of water management, but also on other sectors of the economy, as industry, agriculture, forestry, public utilities, transport, fisheries and tourism. Appropriate strategies and guidelines for water management are necessary for the formulation and implementation of suitable management of water recourses[13]. Water management plans should be included in planning documents at national and regional levels, for example in the concept of spatial land management, development strategies provinces, provincial land use plans. The water management plans to address the particular role of action programs, which should be completed in a river basin in order to ensure the maintenance or improvement of water quality for all by 2015[14]. The activities described in the plans relate to the specific investment projects, as well as, the measures for administration, economic research, general information and education.

The implementation of Water Frame Directive into the regional management plans has an impact on the economical development of the regions and country. It is therefore an essential element of the planning process is to obtain acceptance of the entire population.

References:

1. Chave, P.A. (2001), The EU Water Framework Directive: An Introduction, IWA Publishing, London, UK.

2. Official Journal of the European Communities (2000), "Framework Directive of the European Union on Water Policy, No. 2000 /60/EC, by document No. 327 I.", available at: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:327:0001:0072:EN:PDF (Accessed 20 June 2016).

3. Koundouri, P. (2006), Water Management in Arid and Semi-arid Regions: Interdisciplinary, Edward Elgar Publishing, Cheltenham, UK.

4. Pashardes, P. (2002), Current Issues in the Economics of Water Resource Management: Theory, Applications and Policies springer science & business media, Berlin, DE.

5. OECD (1975), The Polluter Pays Principle: Definition, Analysis, Implementation, OECD Publishing, Paris, France.

6. Tyszecki, A. (2008), "Forecast of environmental impact project "Loop Zulawska" — tourism development of water", available at: http://www.pomorskie.eu/res/turystyka/projekty/petla_zulaw/prognoza_p_tla__-u_awska.pdf (Accessed 20 June 2016).

7. Website Polish National Water Management Board (2016), available at: http://www.kzgw.gov.pl (Accessed 20 June 2016).

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[13] Koundouri — P. Water Management in Arid and Semi-arid Regions: Interdisciplinary, 2006, Edward Elgar Publishing, p. 3/

[14] This is a final year of implementation given period.



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