

## SOURCES OF FUNDING SUPPORTING IRRIGATION INFRASTRUCTURE IN ROMANIA

Cristina Mihaela MINCAN<sup>1</sup>, Marius VLADU<sup>2</sup>

<sup>1</sup>University of Agronomic Sciences and Veterinary Medicine of Bucharest

Bd. Marasti no. 59, Sector 1, Bucharest; University of Craiova, Faculty of Agronomy, Department of Agricultural and Forestry Technology, 19 "Libertății" Street, Craiova

e-mail: [mincan.cristina@yahoo.ro](mailto:mincan.cristina@yahoo.ro)

<sup>2</sup>University of Craiova, Faculty of Agronomy, Department of Agricultural and Forestry Technology,

19 "Libertății" Street, Craiova 200583, Phone: +40744870085 Dolj County, Romania,

e-mail: [mariusvladu@yahoo.fr](mailto:mariusvladu@yahoo.fr)

Corresponding author email: mariusvladu@yahoo.fr

### Abstract

The Ministry of Agriculture and Rural Development (MADR) has developed the National Program for the Rehabilitation of the Main Irrigation Infrastructure in Romania (hereinafter referred to as the Program) aimed at adapting agriculture to climate change and reducing its effects on agricultural production, mainly but also on other environmental factors and population, by rehabilitating the existing main irrigation infrastructure. The program was developed by the Ministry of Agriculture and Rural Development based on data and information provided by the National Agency for Land Improvement, the Agency for Rural Investment Financing, and the General Directorate for Rural Development - Managing Authority for NRPD. At national level, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 432 projects were selected for funding in this sector with an eligible value of € 477,788,617. In Oltenia, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 62 projects were selected for funding for the development and modernisation of irrigation infrastructure, the most being in Dolj county, with 27 projects selected for funding with an eligible value of 95,839,431 euro.

**Key words:**modernization, irrigation, agriculture, infrastructure.

### INTRODUCTION

The irrigation sector is financed in the financial programming period 2014 - 2020 under sub-measure 4.3 'Investments for the development, modernization or adaptation of agricultural and forestry infrastructure'. The eligible beneficiaries for the obtainment of financial support under sub-measure 4.3 - Irrigation are organizations or federations of irrigation

water users (OUAI), made up of owners or users of agricultural land in accordance with the legislation in force. 'Even from the beginning, when we launched the guide for public consultation, we focused on the requests and proposals of our potential beneficiaries. We have had numerous meetings with the local OUAs which have given us the opportunity to identify problems encountered in the

implementation of the projects we finance and which help us to improve the procedural framework. As a result of our discussions, we have identified concrete solutions for the completion of these essential projects for Romanian agriculture within the deadlines set by the funding contracts, in order to prevent possible blockages or extensions, which would also involve penalties. Stimulating investment in irrigation systems is essential for increasing the competitiveness of the Romanian agricultural economy, for developing production and the quality of agricultural products. We are open to all proposals and comments received from beneficiaries, consultants and colleagues in the field, and all our efforts are directed towards improving the management and implementation of the Programme.

## MATERIALS AND METHODS

The purpose of this work is to highlight the projects financed by sub-measure 4.3 'Investments for the development, modernization or adaptation of agricultural and forestry infrastructure' of PNDR 2014 – 2020, in all regions of Romania, and the S-W Oltenia region is analyzed in detail.

The 2014-2020 NRPD proved that the non-reimbursable funds offered to private and public beneficiaries were easier to access than in the previous NRPD. On most of the measures launched under the new programme, EU funding was 100%. Only on one measure for investments in the creation and development of non-agricultural activities EU funding is 90% and co-financing of beneficiaries. At the end of 2018, half of the projects under the NRPD 2014-2020 had already been completed and 50% of the projects were still being implemented. On the new programme NRPD 2014-2020, several things have been changed, both in favour of the beneficiaries of the grants and in favour of the authorities. The most important change, according to the representatives

of CRFIR 4 Craiova, is that there is the payment of the amounts related to the invoicing of the product purchased through the project. Another change compared to the old programme, also in favour of the beneficiaries and the authorities, is that a database has been created at the level of the Rural Investment Financing Agency (RIFA) with the amounts that can be paid for various machines (from minimum to maximum), which has greatly shortened the implementation time of projects under the new NRPD.

## RESULTS AND DISCUSSIONS

Reallocation is done within the same measure, i.e. only projects submitted under that measure can be financed when savings occur. There will be two more measures in this funding programme that will be launched in 2019 for funding, namely Measure 4.3 "Irrigation", with €240 million, and Measure 4.1 "Investments in fruit farms", where a total of €70 million can be attracted.



Figure1. Sprinkler irrigation



Figure 2. Rehabilitated irrigation channel

Table 1

The numerical situation of the selected projects at the national level

No.	Year	Region							TOTAL
		1. N-E	2. S-E	3. S-M	4. S-V O	5. V	6.N-V	7. C	
1	2015	5	28	12	3	2	0	0	49
2	2017	4	65	34	29	2	0	0	135
3	2019	8	101	68	25	0	0	1	203
4	2020	5	24	11	5	0	0	0	45
	<b>TOTAL</b>	<b>22</b>	<b>218</b>	<b>125</b>	<b>62</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>432</b>

Source: Processing of data obtained from the RIFA database

Table 2

Value situation of selected projects at national level (Euro)

No.	Year	Region							TOTAL
		1. N-E	2. S-E	3. S-M	4. S-V O	5. V	6. N-V	7. C	
1	2015	5,334,782	26,219,577	10,993,763	6,730,132	1,997,293	0	0	51,277,562
2	2017	19,561,380	202,212	99,728,552	59,300,724	1,989,997	0	0	180,782,865
3	2019	7,969,751	99,318,636	68,280,316	24,817,195	0	0	998,201	201,384,099
4	2020	4,956,603	23,416,179	10,979,929	4,991,380	0	0	0	44,344,091
	<b>TOTAL</b>	<b>37,822,516</b>	<b>149,156,604</b>	<b>189,982,560</b>	<b>95,839,431</b>	<b>3,987,290</b>	<b>0</b>	<b>998,201</b>	<b>477,788,617</b>

Source: Processing of data obtained from the RIFA database

At national level, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 432 projects were selected for funding, with an eligible value of € 477,788,617. At the national level, in the period 2015-

2020, through Submeasure 4.3 - "Investments for the development, modernization or adaptation of agricultural and forestry infrastructure" of the 2014-2020 PNDR, 432 projects in this sector were selected for financing, most of them being in South-East Development Region, with 218 projects selected for financing.

Table 3

Numerical situation of selected projects in Oltenia

No.	Year	COUNTY					TOTAL
		DOLJ	GORJ	MEHEDINTI	OLT	VALCEA	
1	2015	1	0	0	2	0	3
2	2017	16	0	1	12	0	29
3	2019	9	0	4	8	4	25
4	2020	1	0	1	3	0	5
	<b>TOTAL</b>	<b>27</b>	<b>0</b>	<b>6</b>	<b>25</b>	<b>4</b>	<b>62</b>

Source: Processing of data obtained from the RIFA database

Table 4

Value of selected projects in Oltenia (Euro)

No.	Year	COUNTY					Total
		Dolj	Gorj	Mehedinti	Olt	Valcea	
1	2015	734,668	0	0	5,995,464	0	6,730,132
2	2017	43,791,729	0	997,432	14,511,563	0	59,300,724
3	2019	8,875,552	0	3,980,414	7,978,033	3,983,196	24,817,195
4	2020	997,271	0	999,993	2,994,116	0	4,991,380
	<b>TOTAL</b>	<b>54,399,220</b>	<b>0</b>	<b>5,977,839</b>	<b>31,479,176</b>	<b>3,983,196</b>	<b>95,839,431</b>

Source: Processing of data obtained from the RIFA database

In Oltenia, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 62 projects for the development and modernisation of irrigation infrastructure were selected for funding, most of them in Dolj county, with 27 projects selected for funding.

The Olt county has 25 projects selected for funding, followed by Mehedinți county with 6 projects, Valcea county with 4 projects, and in Gorj county there is no project selected for funding in the period 2015-2019.

At the level of the South-West Oltenia Development Region, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the 2014-2020 NRPD, 62 projects were selected for funding, with an eligible value of 95,839,431 euro.

The highest eligible value invested in the development and modernization of irrigation infrastructure is in Dolj county with 54,399,220 euro. Olt county is in second place with an eligible value of 31,479,176 euro. Mehedinți and Valcea counties have eligible values of 5,977,839 euro and 3,983,196 euro respectively. Gorj county does not have any project selected for funding, in the period 2015-2019, by NRPD 2014-2020, for the development and modernization of irrigation infrastructure.

## CONCLUSIONS

At national level, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 432 projects were selected for funding in this sector, most of them in the South-East Development Region, with 218 projects selected for funding.

At national level, in the period 2015-2020, through Submeasure 4.3 -

"Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 432 projects were selected for funding, with an eligible value of € 477,788,617.

Although the South Muntenia Development Region has 125 projects selected for funding, ranking second in terms of numbers, it has the highest eligible amount invested in the development and modernisation of irrigation infrastructure - €189,982,560.

At the level of the South-West Oltenia Development Region, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the 2014-2020 NRPD, 62 projects were selected for funding, with an eligible value of 95,839,431 euro.

At the level of the South-West Oltenia Development Region, in the period 2015-2020, through Submeasure 4.3 - "Investments for the development, modernisation or adaptation of agricultural and forestry infrastructure" of the NRPD 2014-2020, 62 projects were selected for funding, with an eligible value of 95,839,431 euro. The highest eligible value invested in the development and modernisation of irrigation infrastructure is in Dolj county with 54,399,220 euro.

## REFERENCES

Luca, Mihail, Andrei-Ştefan Sticea, și Nicolae Marcoie. 2021. „Rehabilitation and Modernization of Irrigation Plots for Current Operating Conditions”. <https://repository.iuls.ro/xmlui/handle/20.500.12811/3018> (12 septembrie 2024).

M, Vasileva, și Banishka N. 2018. „AND MODERNIZATION OF THE IRRIGATION INFRASTRUCTURE”. *Science. Business. Society.* 3(2): 71–74.

Preda, Maria Claudia. 2015. „IMPROVING IRRIGATION SYSTEMS AS

A SOLUTION FOR RURAL DEVELOPMENT". *Scientific Papers. Series E. Land Reclamation*: 192.

Robu, Alexandru-Dragoș, Carmen-Luiza Costuleanu, George Ungureanu, Mioara Borza, și Stejărel Brezuleanu. 2020. „Secondary Irrigation Infrastructure in Romania: Influence of the Water User's Associations Modernization on the Performance of Their Member Farms". <https://repository.iuls.ro/xmlui/handle/20.500.12811/1160> (12 septembrie 2024).

Badea, L. și colab., 2012. Geografia României, vol.I – Geografia fizică. Universitatea București, Institutul de Geografie. Editura Academiei RSR, București.

Badea, L. și colab., 2021. Geografia României, vol.I V, Academia Română,

Institutul de Geografie, Editura Academiei Române, București.

Canarache, E., 2019. Fizica solurilor agricole. Editura Ceres, București.

Coteț, P.V., 2005., Câmpia Română - Studiu de geomorfologie integrată. Editura Ceres, București.

Mateescu Elena, 2000. Studiul parametrilor agrometeorologici cu impact negativ asupra vegetației și productivității principalelor culturi agricole în contextual noilor cerințe de dezvoltare durabilă a agriculturii în România, Manuscris.

Posea, Gr. și colab., 2003, Relieful României, Editura Științifică, București.

<https://www.anif.ro/despre-noi/>

<https://www.afir.info/>

<http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>