THE IRRIGATION WATER USERS' ASSOCIATIONS IN NORTH BRĂILA TERRACE AREA

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Abstract: *In Romania, the Irrigation Water Users' Associations (IWUA) concept was set up in order to diminish competition in relation to the access to and utilization of irrigation water, as well as to facilitate the transfer to end users (farmers) of the administration and utilization mode of the existing intermediary and final land improvement infrastructure, the public utility facilities (water accumulations, main canals, pumping stations) being managed by the National Land Improvement Agency (NLIA). The purpose of the present paper is to investigate the institutional and legal framework under which the IWUAs from Brăila county carry out their activity; in this area, the largest part of the irrigation system built up in the communist period is still working, unlike the situation in other counties from Romania, where both the water pumping stations and the water delivery canals have been almost completely destroyed.*

Key words*: water, irrigations, associations, competitiveness*

INTRODUCTION

Irrigation is vital to Romanian agriculture; it offsets rain deficits in the country's semi-arid southern and eastern regions; it minimizes the climate risks affecting agriculture; it ensures the stability in production necessary for commercial farming. It can also encourage private farmers in certain areas to convert to higher value crops such as vegetables. Water managers and food producers aim to establish innovative and new service capacities for the irrigation water management user community with the vision of bridging and integrating sustainable food production with fair economic competitiveness, and within wise water governance scenarios that prevent water conflicts.

MATERIALS AND METHODS

The purpose of this paper is to assess the irrigation water management and sustainable food production in the 6 Irrigation Water Users' Organizations, situated on the Terrace of North Braila. The information used was from: the National Land Improvement Agency (NLIA), the Office for Regulation of the Land Meliorations Organizations within the Ministry of Agriculture, Forestry and Rural Development, the Ministry of Environment etc, as well as a series of statistical data on counties and relevant governmental reports for the approached subject. As methodological instruments, I used the comparative analysis and synthesis of available information.

RESEARCH RESULTS

At present, in Romania, the water for irrigation management is complying with the requirements of the European Union, which regulates the action, cooperation, coordination and implementation frame of the common norms regarding the sustainable water and soil utilization. Among these, the *Frame Directive for Water - 2000/60EEC* represents a new approach in the field of water management, basing itself on the basin principle and imposing strict terms for the measure programme realization. It establishes more integrative principles in the field of water management, including among others the public participation in the water management and integraton of the economic aspects. According to this Directive, the Member States in the European Union must ensure the attaining of the welfare' of all the surface waters until the year 2015.

The administration and use of the irrigation infrastructure is developing on two stages on the basis of a legislation under continuous dynamics. Thus:

1. *The administration of irrigation settlements in the public or private state domain, declared as public utility* (water accumulations, main cannal, pumping stations, irrigation settlements; the drainage settlements with pumping and/or gravitational evacuation; settlements for soil errosion control; the production and administrative buildings etc.) is ensured by the National Land Improvement Agency (NLIA), according to the *Land Melioration Low no. 138/2004* – a fundamental legislative instrument of the irrigation water sustainable management.

NLIA is a public institution, legal entity, funded through its own revenues and subsidies from the state budget, under the subordination of the Ministry of Agriculture and Rural Development. In the year 2012, the 296 complex irrigation facilities administered by 12 county branches covered a total land area of 2,991,943 ha (Table 1). The land areas equipped with irrigation facilities in Romania are endowed with constructions ensuring irrigation water supply, transport and distribution, with an installed power of the pumping stations of 4,134 MW (Table 2).

Table 1

Land equipped with irrigation facilities in the year 2012

Total irrigated area	2,991,943 ha
out of which:	
- sprinkler irrigation	2,665,594 ha
- furrow irrigation	276,624 ha
- submersion irrigation	49,725 ha

Source: http://www.anif.ro/

Table 2

Main constructions on the land equipped with irrigation facilities

- water supply and distribution channels	10,630 km
- buried pipeline networks	26,700 km
- floating and fixed pumping stations	2,710 pieces
* basic floating stations	53 pieces
* basic fixed stations	171 pieces
* boosting stations	349 pieces
* pressure stations	2,137 pieces
- hydrotechnical constructions	
* sluiceways	4,856 pieces
* automatic hydraulic valves	480 pieces
* culverts	4,801 pieces
* chutes	2,781 pieces
* lateral spillways	466 pieces

Source: http://www.anif.ro/

2. *Administration and utilization of existent intermediary and final irrigation infrastructure* passed, by transfer, into the ownership and administration of the final users *(the farmers)* organized, according to the *Government Emergency Ordinance no.147/1999,* approved with alterations and completions *Law no. 573/2001,* into *associative structures called* Organizations of the Irrigation Water Users (OUAI) and Federations of Irrigation Water Users Organizations (FOUAI), which own and administrate: water plugs, pumping stations (including the electric power network for feeding them with energy), water transport and distribution cannals, the network of subterranean pipes as well as the drainage infrastructure, soil errosion control and defense

against floods; these carry out one or more of the following activities of public interest: a) irrigation water delivery, operation, maintenance and repair of an irrigation, drainage and desiccation system that serves several land owners; b) maintenance and repair of facilities for flooding and soil erosion control and development of other land reclamation activities that protect the soil on the land area of several land owners.

These organizations and federations are legal entities of public utility, without patrimonial purpose, which take over, for the land users' interest, both the ownership right and the right of use of the water users' association on the irrigation infrastructure into state ownership or of the administrative-territorial units, consisting of pumping stations, pressure stations, hydro-technical constructions, together with the related facilities and land, underground pipe lines, as well as other goods on the organization's territory and the correlative obligations.

The administration and use of the intermediary and final irrigation infrastructure located on the area of the irrigation system Terasa Brăilei from the county Brăila is at present ensured by a total number of 26 Irrigation Water Users' Organizations (IWUOs), according to the data from the National Registry of the Land Reclamation Organizations, kept by the Office regulating the land reclamation organizations under MAFRD (Table 3).

Table 3

Organization forms and total gross area of hydro-melioration systems in the county Brăila, in the year 2012

Crt no	Hydro-melioration system	Total gross area	Land Reclamation Organizations					
			IWUO		DDO		FLRO	
		ha	no	ha	no	ha	no	ha
1.	Terasa Brăilei	34332	26	34332				
2.	Terasa Ialomiței	18905	19	18905				
3.	Terasa Viziru	19482	16	19482				
4.	Nămoloasa-Maxineni	13224	12	13224				
5.	Ianca Surdila Greci	13600	5	13600				
6.	Incinta BH Călmățui	9608	4	9608				
7.	Insula Marea a Brăilei	211200	1	68934	1	69241	2	73025
8.	Terasa Latinu Vădeni	4075	6	4075				
9.	Grădiștea-Făurei-Jirlău	8877	3	8877				
10.	Călmățui-Gropeni	11533	4	11533				
11.	Incinta Lunca Rau Buzău	2070	2	2070				
12.	Incinta Brăila-Dunăre	3784	3	3784				
13.	Incinta Noianu Chișcani	787	1	787				
	TOTAL	351482	104	355266	1	69241	2	73025

Note: IWUO – Irrigation Water Users' Organizations; DDO – Drainage and Desiccation Organizations; FLRO – Federations of Land Reclamation Organizations.
Source: National Registry of the Land Reclamation Organizations, Land Reclamation Directorate, MAFRD, September 4, 2012

These organizations are legal entities of public utility, with no patrimonial purpose, established in conformity with the provisions of the Land Reclamation Law no. 138/2004, as well as of Government's Emergency ordinance no. 147/1999, modified and completed by Law no. 573/2001. Their establishment was encouraged by the world context of the last years, determined by the concentration or development strategies. Thus, farmers have to face a fundamental strategic decision, namely to choose how to act better under uncertainty conditions in order to have viable, profitable holdings, to face competition on the market and to be efficient in accessing the financial funds. Their statute contains provisions referring to: name, headquarters, patrimony, object and purpose of activity, management

and control bodies, conditions of entry and withdrawal from association, rights and obligations of the association members.

The analysis of these aspects is supported by the existing situation on the territory of 4 communes located in the area Terasa Brăilei: Cazasu, Siliştea, Tudor Vladimirescu and Vădeni, located near the Danube River. The investigated Irrigation Water Users' Organizations are: Pietroiu, Tevesil, Petrosu, Agro Dunărea, Danova Leg and Nova Prod Terra, served by 6 pressure release stations: PRS Pietroiu, PRS SV1 Silistea, PRS 24, PRS 25 and 27, PRS 26. The total area of these organizations, as registered in the Ministry Register, is 4780 ha (Table 4).

Table 4

Irrigated area of the IWUOs from the pilot zone

Crt. no.	IWUO name	Area		Establishment order	
		Gross ha	Net ha	Number	date
1.	Pietroiu	1 152.00	1 152.00	485	6/17/2005
2.	Tevesil	2 166.00	2 166.00	485	6/17/2005
3.	Petrosu	120.00	120.00	560	6/30/2005
4.	Agrodunărea Tractor Service	1 067.00	1 067.00	560	6/30/2005
5.	Danova Leg	170.00	170.00	1224	11/16/2005
6.	Nova-Prod-Terra	105.00	105.00	100	01/10/2006
		4 780.00	4 780.00		

Source: The National Registry of the Land Reclamation Organizations, MAFRD, 2012

The association can be liquidated in the conditions in which its objectives cannot be fulfilled or if, out of other reasons, its existence is not necessary any more and this is registered in the Associations' Register from the court in the area where the association is located. The way of distributing the social patrimony of the association, at the end of the liquidation process, is decided by the general meeting, by the vote of the majority of members, on the condition these own or use over more than half of the area of the association's territory. The decision of the general meeting for the association liquidation must also include the appointing of one or more liquidators .

The court makes public the decision to liquidate the respective association, at its own expense, in order to permit the creditors to register their outstanding debts upon the assets in the association's ownership. After the association liquidation, the Ministry of Agriculture, Food and Forestry will approve the transfer of the infrastructure into the administration of NLIA.

According to the legislation into effect, *the irrigation water is delivered to the associations by NLIA*, on farmers' demand, on the basis of contracts for services with successive execution concluded on long term, named multi-annual contracts, as well on basis of irrigation water delivery contracts with immediate execution, named seasonal contracts.

The multi-annual contracts are signed for a period ranging from 3 to 5 years. The payment is made on the basis of an annual fee for irrigation water delivery, calculated by NLIA for each point of irrigation water delivery to beneficiaries. This fee covers the estimated costs for repair and maintenance of the irrigation infrastructure in the public and private domain of the state, under NLIA administration, and its value is established for each irrigation water delivery point, previously to signing the multi-annual contract.

The structure of the irrigation water delivery fees, their periodical adjustment modality, the date when the beneficiaries will be informed about the value of these fees,

the date of signing the multi-annual contracts and the deadline for payment of the annual fee by the beneficiaries are established by the methodological norms regarding the calculation and payment of the fees for the land reclamation services, which is approved by Minister's Order, with the acknowledgement of the Public Finance Ministry. NLIA fee established for each agricultural year is published in the Official Journal. This parameter value can show the extent to which the delivery to IWUO can variate.

Another procedure is to sign *some irrigation contracts on credit* between the farmers who are members in the association and the IWUO they are affiliated to. The contract provides for the application of a certain number of irrigations on credit, with the date due in September, when the farmers sell their production. After signing the contract, the IWUO sends a copy to the electrical mechanic from the station and gives the farmer the personalized tickets for the number of irrigations established by contract. On the basis of tickets, the farmer goes to the station and applies the respective irrigations. After finishing the tickets, he can no longer irrigate on credit, but only by immediate cash payment. This irrigation modality contributes to the increase of returns and of the volume of water used.

The most irrigated crop on the land with IWUO irrigable potential from the pilot zone is maize, closely followed by wheat, industrial crops, vegetables and seed crops. Seed crops bring considerable profits for the farmers who cultivate them, if the irrigation subsidies are taken into consideration. The small grains and maize are crops that incurred losses due to the need for certain agro-technical measures. Sunflower is profitable to a certain limit. Although there are farms where the irrigation of these crops led to profit, without the irrigation cost diminution, their cultivation on most farms will suffer significant diminution.

The crop structure cannot vary very much from one year to another, even though certain agro-technical measures are imposed (crop rotation, in the first place). As a result, the way in which the farmers adjusted their cropping plans according to the profit obtained by each crop represents the most important indicator of the payment capacity.

In the investigated area, the irrigation practice is determined by the farmers' experience in agriculture. The long experience indicates that the farmers do not consider agriculture a conjunctural activity, but on the contrary, a long-lasting one.

Most farmers who use irrigation equipment are commercial farmers, who practice large-scale agriculture, who got associated with the small subsistence farmers on the IWUOs. These commercial farmers afford to purchase irrigation equipment and to apply irrigations for crops with high economic value.

The IWUO revenues are grouped into two categories: own revenues, consisting of the water delivery tariff to users, membership fees and contribution to the annual water delivery tariff, and revenues from subsidies, consisting of the subsidy for security ensurance, as well the NLIA delivery tariff, the annual NLIA tariff, for energy payment at the delivery point level and for the payment of maintenance and repair costs.

The main problems the farmers are facing in their farming activity in the investigated irrigated area are the delay in receiving the subsidies, the current situation of the irrigation infrastructure and the payment delay penalties applied to the energy supplier and NLIA.

CONCLUSIONS

The reform process of the Romanian agricultural sector also included measures for restructuring the modality of administration and utilization of the intermediary and final land reclamation infrastructure, by transfer into the ownership and administration of final users (farmers). These got organized into associative structures named organizations and federations of organizations in land reclamation in order to develop one or more of the

following activities: irrigation water supply, exploitation, maintenance and repair of flood and soil erosion control works.

The organizations and federations can become a platform to continue the reform of the Romanian agricultural sector by the opportunity these organizations represent in view of structuring the process of collaboration among farmers.

The obsolete character of the association and cooperation concept is due not only to the communist period, but also to the post-1990 period to a larger extent, when association and cooperation meant in reality some leaders of such "associations" getting rich to the detriment of the other members and on the basis of the production factors that belonged to all the "associated" members. These negative experiences considerably contributed to the absence of this method in the farming activity development in Romania.

Maybe the terms "association" and "cooperation" should be replaced by the term "collaboration". The enlargement of the activities that the irrigation organizations and federations can carry out would lead to the consolidation of the organizations through the takeover of input acquisition for all the members and mainly by ensuring the selling of products in common. If this solution is put into practice by the Ministry of Agriculture, the concentration of power should be avoided and the non-profit status must be maintained, which will immediately affect such collaborations by the current habits by which "someone" on the top position within the organization figures out methods to trick the others. On the other hand, the necessary incentives should be identified, so that the farmers get used to the idea of collaboration.

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