



SUWANU
EUROPE

Target region PLOVDIV (Bulgaria)



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CHARACTERISATION



- ✓ 57.8 % agricultural land
- ✓ 31.2 % forest land
- ✓ Transitionally continental climate
- ✓ 5.942 hm³ renewable freshwater resources, 100% internal runoff
- ✓ EARBD exist 23 large dams (3,105 hm³) and many small dams (523 hm³)
- ✓ Ordinance No. 18 for the Quality of water used for irrigation
- ✓ 13 urban WWTPs with 49 hm³ of treated effluent
- ✓ Water reuse of 2.4 hm³
- ✓ Private initiatives: poplars, roses, lavender, some vegetables

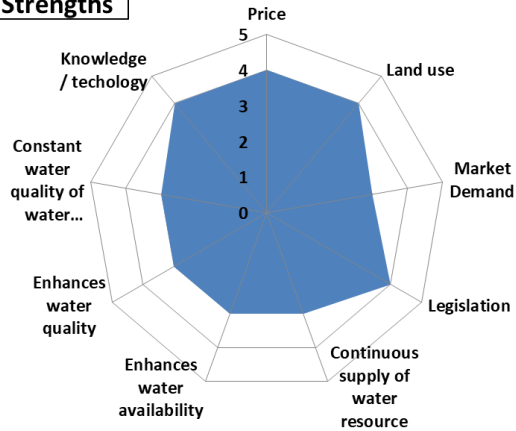


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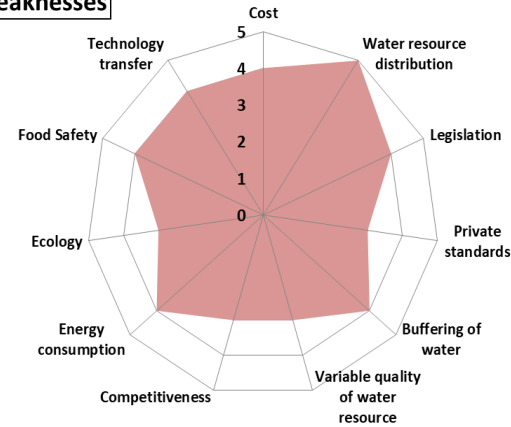
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SWOT ANALYSIS

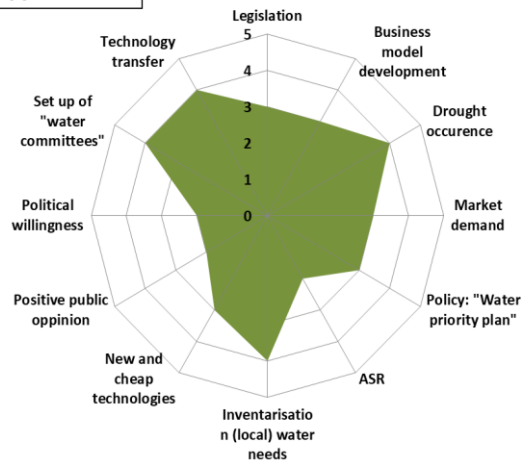
Strengths



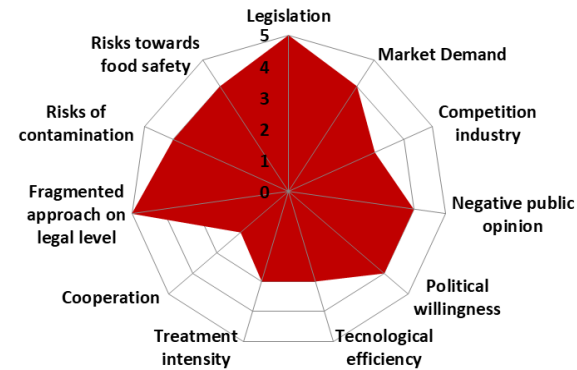
Weaknesses



Opportunities



Threats



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SWOT ANALYSIS

Main barriers identified



1. The average rate of water loss is 57.3%, but in some areas it reaches 70-75% due to worn infrastructure
2. The strong fragmentation of agricultural land is a major barrier to agricultural development in many areas and leads to poor access to the irrigation infrastructure
3. Low and seasonal availability of the treated effluent in some areas
4. Insufficient information in the society about the reclaimed water, its quality and effects on agricultural products
5. The widespread and, in some cases, illegal use of groundwater sources has led to little interest from farmers
6. Low efficiency on the science-business axis

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SWOT ANALYSIS

Main barriers identified (cont.)



8. Lack of innovations and implementation of new technologies in the infrastructure in state company Irrigation Systems EAD and the Regional Irrigation Associations
9. Lack of sufficient number of specialists to maintain the irrigation infrastructure
10. A small number of practical cases of reclaimed water use in Bulgaria as a “successful example”
11. Uncertainty in public opinion in Plovdiv region regarding the reclaimed water use in agriculture
12. Higher costs for production, distribution and application
13. Fragmented legislation and responsibilities regarding water management

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Main opportunities



1. Governmental support for reconstruction of water distribution infrastructure
2. Existing market demand for alternative water sources
3. Operating irrigation associations in some areas
4. Existing access to water reclamation technologies
5. Consultation on irrigation possibilities and preparation of project applications from the National Agricultural Advisory Service that is a valuable opportunity for farmers
6. Existed water demand in agriculture is important opportunity that could stimulate the reuse

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Main opportunities (cont.)



7. Reconstruction of irrigation canals can lead to an overall reduction in operating and maintenance costs
8. Most of the WWTPs are in close proximity to agricultural land
9. Irrigation Systems EAD cannot meet the demand of water for all farmers
10. Society and farmers are aware of the problem of water scarcity

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Action plan Plovdiv, Bulgaria (1)

to promote the reuse of water for irrigation



Legal measures

Consultations of state bodies with local stakeholders on the implementation in Bulgarian legislation of Regulation EU 2020/741 on minimal requirements for water reuse.

Transposition of mandatory requirements for risk planning, emission limits, frequency of monitoring in order to protect the components of the environment from pollution.

Dissemination of management practices developed at SuWaNu Europe to ensure efficient water use, incl. reduced water losses, improved irrigation practices and efficiency, water reclamation and storage.

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Action plan Plovdiv, Bulgaria (2)

to promote the reuse of water for irrigation



Administrative procedures

Active participation of stakeholders in the development, discussion and adoption of the Procedure by the competent authority for water reuse for irrigation.

Providing technical assistance to facilitate the documentary work of farmers who implement a project for irrigation with reclaimed water.

Explanatory campaigns among wastewater producers and end-users of reclaimed water on administrative procedures.

Training of administration for acquaintance with the problems and with the latest scientific achievements in the irrigation with reclaimed waters.

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Action plan Plovdiv, Bulgaria (3)

to promote the reuse of water for irrigation



Public and private incentives

Study of the attitudes of the decision-making bodies (politicians, EWRC, ministers) regarding the possibility of subsidizing (applying preferential prices) the electricity for the water reclamation facilities.

Preparation of a set of proposals to the relevant competent authorities (ministries) on direct economic incentives for farmers when irrigate with reclaimed water.

Increasing the reuse practices in industrial crops production through information campaigns and training.

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Action plan Plovdiv, Bulgaria (4)

to promote the reuse of water for irrigation



Investments

Preparation of proposals to various ministries for the need of programs to support the research in the field of reclaimed water use for irrigation.

Creating an appropriate working environment (incubator) for cooperation and sharing information on water reuse in agriculture in Plovdiv district

Preparation of a position on the needs of investments in reclaimed water facilities even with EU funds in 2021 – 2027 programs period to the different ministries (MoEW, MAFF).

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Action plan Plovdiv, Bulgaria (5)

to promote the reuse of water for irrigation



Social acceptance and networking

Promotion of international exchange and dialog to expand the flow of existing results and best practice of reclaimed water use.

Conducting information and awareness-raising campaigns showing the benefits of reused water, as well as, information events.

Dissemination of successful examples (lighthouse) from SuwanuEU, as well as, world practice concerning the water reuse.

Including water reuse for irrigation in lectures and training modules in Universities and Institutes.

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Agricultural university – Plovdiv



Thank you for your attention!

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