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Sharing solutions for better regional policies

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I. Part 1 - General Information

1.1 Introduction

The agricultural sector accounts for almost 10% of greenhouse gas emissions in the EU, majority of which is caused by food production and transport. While there is an enormous potential to produce renewable energy on farms due to the availability of wind, sun, biomass and agricultural waste, important barriers and challenges remain. Recent studies have proven that the main barriers identified by farmers to produce renewable energy are: complex permits and subsidies' procedures, high investment costs, limited access to credit and doubts about profitability. Subsidies and feed-in tariffs are a key factor in encouraging farmers to shift towards a more environmentally friendly production and use of energy.

The re-emergence of the Romanian agricultural sector continues to provide employment and to contribute to the national economy. However, the agricultural sector is one of the higher emitters of C02, and this contributes to the pollution of the whole territory. Although the country has a strong performance in hydropower, other renewable energy sources have not been developed in such a way. Specially wind, solar and biomass are under-represented compared to other EU countries, these technologies, having a very high potential in rural areas.

Increasing the energy production from renewable sources is a challenge to meet EU 2030 targets and, in this way, we will be able to identify which RES are more cost-effective and have the greatest potential, and therefore should be promoted.

This document has been prepared in the **AgroRES** project – "**Investing in Renewable Energies for Agriculture**", with the financial support of the **Interreg Europe** programme.

1.2 The AgroRES project

Given the context presented, the **AgroRES** project - **Investing in Renewable Energies for Agriculture** financed by the **European Regional Development Fund – Interreg Europe**, aims to develop measures that encourage the production and use of RE in the agricultural and rural sector, by solving its energy needs in a sustainable, economically viable and socially responsible way.

Good cooperation between project partners and successful implementation of learning activities has led to a spread of knowledge and ideas from initiatives with high potential of transferability in all partner regions, as follows:

Project Partners

Extremadura Energy Agency, AGENEX (ES)
Regional Council of North Karelia (FI)
Institute of Technology, Sligo (IE)
Northern and Western Regional Assembly (IE)
ARSIAL (IT)
Lubelskie Voivodeship (PL)
Bucharest-Ilfov Regional Development Agency (RO)
Devon County Council (UK)

1.3 The Action Plan

A key output of AgroRES project is the development of **action plans** which will contribute in **promoting the production and usage of renewable energies in agriculture** in the region of each project partners. In order to achieve this output eight regions from seven different European countries will exchange ideas, knowledge and policies already implemented that should be adopted, altered or avoided.

The first step refers to the identification in each region of the existence of small energy production capacities in order to fulfil the own energy consumption – initiatives in agricultural sector, that have a high degree of transferability between partner regions which are the most important in drawing the regional action plan and also, for this type of exchange of experience projects.

The next step, the Interregional Learning Process, consists a core factor for the formulation of the action plan. The exchange of good practices among the project partners, the discussions and meetings, the study visits and the various project activities are the components for the development of actions suitable and necessary for each region based on the current situation and according to its needs and visions. Inspiration from the learning process and not transfer of a good practice is the key-point for developing a successful action plan. In addition, the conclusions of the studies conducted through the AgroRES project (regional self-assessment) will be the basis for the promotion of renewable energy sources that have a high development potential in our region, information verified also in our stakeholder's meetings.

After the identification of good practices and experience sharing among the project partners as well as the consultation with the regional stakeholders' group, each region will formulate, in the third step, an action plan which will contain the necessary actions that should be implemented in order to promote the production and usage of RES in the agricultural sector. It should be mentioned that all actions should be categorized in respective priority axes.

Finally, the fourth step refers to the implementation and monitoring (in phase 2 of the project) of the actions that are established and presented in the action plan.

1.4 Contact Details

Region Information	
Project:	AgroRES - Investing in Renewable Energies for Agriculture
Partner organization	Bucharest-Ilfov Regional Development Agency
Country	Romania
NUTS2 region	Macroregion three - RO32
Contact person	Stelian Nicu Cirnat
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1.5 SWOT Analysis and regional self-assessment conclusions

In order to be able to develop a well-argued and realistic action plan, as part of the learning activities developed through the project, a self-assessment was carried out in all regions of the partnership, presenting the stage in each of these areas in terms of concerns investments and the use of renewable energies in agriculture.

Given that natural resources are different in each region, every partner entity conducts an analysis of its own area, in an attempt to identify which sustainable energy source is more cost-effective and has a higher potential for development, and should therefore be supported its expansion through available policy instruments. The analysis was developed during two semesters and includes an analysis of the regional socio-economic framework, developments in renewable energy production at national and regional level, the degree of their spread in the agricultural sector or in rural areas, policies and programs that support the decarbonization of economic sectors, thus trying to map out the risks, vulnerabilities, strengths and opportunities that exist in terms of production and use of renewable energy in agriculture.

In this regard, as will be seen from the SWOT analysis but also from the regional self-assessment conclusions, the notion of implementing agricultural activities using renewable energy is almost non-existent in our region, this issue being completely absent from the public agenda and, through therefore, extremely poorly funded.

We present below the SWOT analysis for the Bucharest Ilfov region, carried out in close connection with the group of relevant local actors and presented, together with the regional self-assessment conclusions, during the meetings with them.

SWOT analysis	
	
✚ Rural development programs have included in the list of eligible expenditures the amounts needed for investments in renewable energy production systems, or award additional points in the evaluation to meet this condition. ✚ High potential for the development of photovoltaic and biomass energy ✚ Abundance of land available for the placement of photovoltaic panels ✚ High potential for exploitation of geothermal energy ✚ There are organizations involved in research - development of such facilities for the agricultural sector	✚ Low financial incentives for investments aimed at the development of renewable energy in the agricultural sector, although energy consumption is considerable ✚ Policy formulation could be clearer and sector-specific ✚ Inability to use the degraded agricultural fund for the cultivation of energy plants and their use for energy production ✚ Inability to use geothermal energy sources in the region ✚ Lack of sludge and manure processing facilities ✚ Lack of awareness-raising activities among the population on the benefits of renewable energy production and use in this sector

- High potential for solar energy use for irrigation
- Potential for cultivating energy plants as a raw material for biomass production
- Potential for the use of geothermal energy
- Potential for biogas production obtained in anaerobic digestion plants - with raw materials from agriculture or the food industry
- The need for awareness programs among farmers on the benefits of producing and using renewable energy in the implementation of agricultural activities

- Small-scale renewable energy installations may not be economically viable without financial or physical incentives
- Decreased agricultural incomes - lack of capital to invest and volatile cash flow
- Economic crisis and uncertainty due to Covid-19
- The still high price of purchase and installation of photovoltaic panel systems
- Bucharest's territorial expansion in the surrounding areas has significantly reduced the region's agricultural area

Therefore, based on the correlation of all the information available in this document, some conclusions have been established that describe the situation in our region, as follows:

- There is a high potential in the region in terms of the possibility of using geothermal, photovoltaic or biomass energy, a potential that is not supported by financial incentives to encourage investment in this direction.
- Although biomass is an important and truly rich resource in the country, it is not so widespread and used in the region.
- There is concern among regional actors regarding the development of renewable energy generation facilities for the agricultural sector.

- The low level of awareness of the benefits of producing and using renewable energy among farmers, coupled with income volatility and the lack of financial incentives to provide investment, determines the poor development of this sector.
- There is a lack of available strategies and funds for the construction of biogas plants for anaerobic digestion, using sewage sludge, manure sludge or food industry as raw materials.
- The territorial expansion of Bucharest increases the degree of urbanization of the region and therefore attracts the decrease of areas and agricultural activities.

II. Part II – Policy context

The Action Plan aims to impact:	X	Investment for Growth and Jobs programme
	☐	European Territorial Cooperation programme
	☐	Other regional development policy instrument

Name of the policy instrument(s) addressed: **Regional Operational Programme - BI ROP 2021-2027**

Further details on the policy context and the way the action plan should contribute to improve the policy instruments:

Taking all of the above into account and following discussions with our stakeholders and our management, we have focused our attention on the next Operational Programme (BI ROP 2021-2027) and we intend to link the results of our Action Plan in relation to it.

In this regard, the new PI addressed – ROP 2021 – 2027, which is in final draft version to be approved, has the general objective – to contribute to the strategic vision of the BI region by supporting smart, sustainable and inclusive economic development in order to improve living standards and increase resilience to societal challenges. At the same time, it aims to contribute to the achievement of the objectives set out in the 2030 Strategic Vision for the Bucharest Ilfov region, which aims to capitalize on its competitive potential and improve its ability to provide citizens and businesses with an attractive, sustainable, clean and inclusive environment they will want to live and invest, by promoting innovation, digitalisation, equitable access to modern public services, education and business opportunities, with a view to increasing energy

efficiency, reducing CO2 emissions and adapting to climate challenges. In addition, the smart specialization strategy for our region establishes, among the fields of specialization, the food industry and food safety, as a priority, and in this regard, this sector should be financed, among other funding sources, through Regional Operational Programme.

In relation to the project thematic, from the research carried out by the project team, a lack of financial allocations for the development of renewable energies in the agricultural sector emerged, in both PI analysed (2014-2020 and 2021-2027). Nevertheless, within the chosen policy instrument BI ROP 2021 - 2027, exists in priority 1 - A competitive region through innovation, digitalization and dynamic enterprises, Action - Supporting SMEs for the implementation of a technology transfer - funds needed to implement the results of research in areas of regional smart specialization in SMEs through technology transfer and the implementation of innovative solutions.

At the moment, the new ROP BI 2021-2027 is still a draft version and under negotiation with the responsible bodies. It is intended that the programme guidelines will be finalized in 2022 and after this step is accomplished the first calls are expected to be launched in the first trimester of 2023. We estimate that due to AgroRES project and the hereby Action Plan there are going to be 5 to 10 project proposals related to the subject. Therefore, in order to have good project proposals, it is necessary to build up the prerequisites leading to such a desirable situation. At the time BI RDA entered AgroRES project we took the concept of renewables energies in agriculture from scratch and no other regional public organizations were concerned about dealing with this subject. Due to the involvement in the AgroRES project, a novelty and important initiative for our region, we managed to highlight the importance of these concepts and also worked towards financing projects in this field. In order to develop our Action Plan, we analysed our stakeholders' needs, expectations and readiness, thinking about measures that will improve the adoption and implementation of renewables energies in agriculture while taking into account our regional context.

The Action Plan developed will improve the policy instrument through a type 2 change, where there will be a change in the management of the policy instrument by the creation of a new supporting scheme to provide technical and financial advice to implement new RES projects.

III. Part III – Details of the actions envisaged

ACTION 1:

Name of the action: **Establishment of RES Regional support services. Technical and financial assessment to increase the use of RE in agricultural sector through the specific grant from the BI ROP 2021-2027, by developing and implementing new projects.**

- **Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

Regarding the context of project implementation, the whole learning process proposed in this framework has a major importance in drawing up the regional action plan, but especially in drawing attention to the main decision-makers in the region on the importance of reducing GHG emissions in all economic sectors by developing a circular economy. As mentioned before, this topic was taken from scratch and every meeting with stakeholders or any other activity of exchange of experiences in which they participated meant a lot to our region in terms of bringing this topic on the public agenda and identifying a development direction.

Given the situation described, the whole complex of activities carried out within AgroRES (from the research of good practices, to regional self-assessment, study visits and interregional learning events) highlighted the lack of vision and action of our regional authorities to encourage and financially support the development of the agricultural sector in the region in a sustainable, economically viable and socially responsible way. In addition, as we began to look for good practices in the region, we noticed that there was a limited concern among stakeholders in the region regarding the implementation of agricultural activities using sustainable energy. Moreover, the conclusions of the regional self-assessment developed in close connection with a large part of the regional stakeholder group (both in the meetings held and through the exchange of information and feedback in the implementation of research activities on this topic) highlighted the absence of ideas and interest in the development of production and use of renewable energy in this sector. In fact, a conclusion of the regional self-assessment, confirmed by stakeholders in meetings, is the low level of knowledge, information and awareness about the benefits of producing and using such energy in any sector of activity. Moreover, most stakeholders do not understand the methodology and what steps need to be taken to benefit from non-reimbursable funding, especially to identify the funding programs currently available. The SWOT analysis identifies a high potential for the exploitation of renewable energy sources - photovoltaic,

geothermal or based on biomass and waste, potential not supported by an efficient promotion on the public agenda and by financial or fiscal instruments to encourage investments in this direction. The opportunity to participate in study visits, exchanges of experience events and, moreover, the involvement of our stakeholders in such activities was a major plus for our region to arouse their interest and attention in order to implement such initiatives and try to increases the level of awareness in the region. Moreover, all the good practices studied and visited were presented during the meetings with our stakeholders and the level of the degree of potential transferability in our region was analysed.

In this regard, the main action was decided after stakeholders' consultations, based on three good practices identified in partnership. The first, "Developing a guide to encourage production and use of RE in agriculture" in the "Power from Biomass" project by Finnish partners in the Regional Council of North Karelia, identifies the same need to harness the region's high sustainable energy potential, but also the lack of know-how relating to new technologies and the importance of the development of such energies, both from the point of view of business sustainability but especially from the point of view of the development of a circular economy, with low GHG emissions. Given the above situation, our initiative could support farmers and key players in the agricultural sector to implement such innovative solutions in their own businesses. At the same time, the regional services would advise about the different financing possibilities (including non-reimbursable funding) for these "new technologies", both when it comes to the type of investment (photovoltaic, geothermal, biomass, biogas or biochar) but also when we discuss the profitability of the business and the environmental benefits. Moreover, the choice of this action was based on another good practice of the same partners, that of Sirkala Energy Park which initiated, in the North Karelia region, promotion activities among the regional rural inhabitants, to encourage key stakeholders to shift towards a more environmental-friendly production and use of energy. A good practice of the Polish partners is also edifying in relation to the development of our regional action plan, "A nationwide system of advisory support for the public & housing sector and enterprises in the field of energy efficiency and RES", identified by Lubelskie Voivodeship, which has supported the implementation of such investments for the production and use of renewable energy. Also, during the study visits organized in Sligo, we were able to exchange views with the organizing partner - IT Sligo, regarding the implementation of some similar measures in their region to increase interest and support farmers to include in their area of interest and attention, sustainable energy production.

All the information presented, learning activities carried out within the AgroRES project, led to the idea of a need to improve the situation in the region in relation to the project theme by exposing this topic on the public agenda and further on by improving the management of the policy instrument which finally has the effect of new RES projects.

- **Nature of the action** (*please describe precisely the content of action 1. What are the specific activities to be implemented?*)

The context described above led to the conclusion that a precisely directed intervention targeting preparatory activities is the best way to enhance the PI and a necessity. Therefore, the proposed action refers to the development of support services to facilitate accessing ROP funds.

The regional services will provide to key local actors, practical information on most relevant financing sources and innovations in the field, with their positive effects on the profitability of the organizations but also on the environment. It will also provide guidance and support to farmers regarding the steps required by the entire process of installation and operation of the facilities, but will also provide information on accessing European funds to support these investments. By bringing to the fore the benefits of sustainable energy use, but also by presenting specific technological information and different types of renewable energy production facilities, we will ensure the transferability of know-how in our region, creating the premises for the development of this phenomenon. Moreover, by developing a Toolkit Guide we will also distribute successful examples that will have the role of demonstrating the effectiveness of the facilities and to convince potential users to shift towards a more environmentally-friendly mindset and to make investments in this direction. In addition, the guide will structure the information, from identifying problems in the agricultural sector (lack of energy for irrigation, high costs of operational processes carried out on farms or in production capacity, etc.), to the presentation of new technologies and innovations that have been adopted by other regions of the European Union, but will also make known the regional potential in terms of production and use of renewable energy for the implementation of activities in a sustainable way and will support stakeholders to know the general rules under which they can apply for ROP funding. We appreciate that only a successful implementation of the herein Action Plan will allow to the parties involved to access ROP financing, to present strong project proposals to be financed, therefore the policy instrument in hand being directly influenced. The action proposed will also contribute to the improving of the policy instrument addressed by creating, through the regional services, the competitional environment that will allow new projects dealing with this thematic to be proposed for financing under BI ROP 2021 – 2027.
The regional service shall be both in electronic and in person for whatever situation or reason for which the electronic format may not be accessible - to smooth the path for beneficiaries to gain knowledge and access financing through new projects in the framework of BI ROP 2021 - 2027.

However, we consider that the best concrete applicable action to influence the new BI ROP 2021 – 2027 is the development of support services, encouraging the adoption of renewables energies in the agricultural sector through a guide showcasing the potential financing sources and measures for developing this domain, and, in this way, stimulating potential beneficiaries to apply for funding under BI ROP 2021 – 2027 within the specific financing line, mention above, thus having a direct impact on the Policy Instrument. The main activity aims to encourage the production and use of RES in the implementation of agricultural activities, by addressing information – a roadmap – on new technologies used in Europe for the development of a sustainable agricultural sector, technological processes and installations for energy production from renewable sources with high potential in the region (photovoltaic, geothermal, biomass and waste based), but also the economic benefits & business sustainability and financing possibilities available for investments in this direction. It will also provide guidance and support to farmers on the entire process of installation and operation of the facilities but will also provide information on accessing European funds to support these investments. By bringing to the fore the benefits of sustainable energy use, but also by presenting specific technological information and different types of renewable energy production facilities, we will ensure the transferability of know-how in our region, creating the premises for the development of this phenomenon. Moreover, by developing this service we will also distribute successful examples that will have the role of demonstrating the effectiveness of the facilities and to convince potential users to shift towards a more environmentally-friendly mindset and to make investments in this direction.

Activities:
Having all this in mind, our intention is that by developing a regional support service, to smooth the path for beneficiaries to gain knowledge and access financing through new projects in the framework of BI ROP 2021 - 2027. In the previous Regional Operational Programmes (2007 – 2013, 2014 – 2020) there were no projects that tacked the subject of renewable energies for agriculture, so through our proposed action we intend to support the potential beneficiaries in the preparation and submission process of the first projects in this field during the implementation of the BI ROP 2021 – 2027. We envisage having between 5 and 10 projects, which is a very good start given the current state of this area in our region.

The main steps for the development of the regional support services are the following:

- Organization of the work process and setting a Toolkit Guide structure – stakeholder's feedback is needed
- Contacting all stakeholders from the region & partners for collecting information and input sharing (quadruple helix framework) – assessment of the current situation

- Web research activities – assessment of the current situation
- Introducing all gathered information in the Toolkit Guide and presenting the results to the stakeholder's group
- Maintaining close connection with regional stakeholders' group in order to receive a specialized feedback & for input sharing, from our experts in this field.
- Preparation of the first call for projects.
- Providing support services for potential beneficiaries consisting in availability of the BI RDA project team to offer supplementary information, contacts and details for a strong and direct guidance aiming to be developed later on strong project proposals to be financed
- Showcasing the potential financing sources and measures for developing this domain, and, in this way, stimulating potential beneficiaries to apply for funding under BI ROP 2021 – 2027 within the specific financing line mention above represents a direct impact on the Policy Instrument.
- Monitoring of new renewable energy projects in the agricultural sector thanks to the development of this new service. It is estimated that there are going to be 5 to 10 project proposals related to the subject.

- **Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action1 and explain their role)*

INMA Bucharest - The National Institute of Research - Development for Machines and Installations Designed for Agriculture and Food Industry is one of the most important and involved stakeholders in our region, in relation to the thematic project. In this regard we can mention that two of their organization's members participated in the Ireland cross-cut visits and their activity in closely related to machines and installations for producing sustainable energy in the agricultural sector. In this regard, their expertise is a major plus in the implementation of the action plan, given that with their help we will try to choose the most advanced processes and energy production systems considering the potential of the region. In fact, their experience in this field was fruitful during the project, having at our disposal updated information of interest in relation to the theme of the project.

Ilfov County Council – is one key stakeholder in the region being responsible by territorial administrative unit of the Ilfov county – which represents the major part of the territory of the Bucharest-Ilfov region. Some departments of this organizations participated in our regional stakeholder's meetings and were involved in the AgroRES learning process and these departments are the main connection with farmers and local public authorities from rural area. In this respect, their role in our endeavour – to encourage the production and usage of RE in the agricultural sector, will be very important and will act as a connection

bridge between AgroRES objectives and the rural population in the region. They also carried out several projects to capitalize on the geothermal potential of the region and, in this sense, we have the opportunity to transfer the know-how for the benefit of the target audience of AgroRES.

Ministry of Agriculture and Rural Development - through the Managing Authority for the National Rural Development Program, is another very important actor in relation to the implementation of the Action Plan, given that it manages most of the European funds available for agricultural and rural development in our country. They had a major involvement in the project, actively participating in the regional meetings and participating in the debate sessions related to the studies carried out within the project. Their approach to the implementation of the AgroRES project gives us confidence that this issue will be addressed more carefully in the next period, so that these investments can be financed through the programs they are currently carrying out.

University of Agronomic Sciences - another stakeholder involved in the project activities is an inexhaustible source of up-to-date information of interest in relation to the development of this guide and their expertise in education brings a clear added value to the implementation of the action plan.

EcoHornet - is one of the representatives of the business environment very present in the regional stakeholder group and which has a wide expertise in the production of small capacities to produce energy in a sustainable way. It commercializes pyrolysis plants, biomass and waste plants, resulting, from these chemical processes, biochar, used as an organic fertilizer in organic farming. With the help of this organization we will be able to provide farmers with detailed explanations regarding the costs of these installations, the technological processes carried out but also the savings and the benefit of the environment.

- **Timeframe** (*please specify the timing envisaged for action 1*)

These activities are going to be implemented in the second phase of the project, one year, between August 2022 – August 2023.

- **Costs** *(please estimate the costs related to the implementation of action 1)*

16.000 euro for the entire period

- **Funding sources** *(please describe how action 1 will be financed. Is it through the policy instrument(s) indicated in part II):*

The funds needed to cover the costs for implementing this action will be gathered from the local authorities in the Bucharest-Ilfov Region, through the Regional Development Fund (based on the Law 315/2004).

IV. Part 4 - Monitoring

AgroRES Action Plan - GANTT

		2022							2023						
		June	July	August	September	October	November	December	January	February	March	April	May	June	July
AgroRES	Establishment of RES Regional support services. Technical and financial assessment to increase the use of RE in agricultural sector through the specific grant from the - BI ROP 2021-2027, by developing and implementing new projects.	Organization of the work process and setting up Regional Suport Services and Toolkit Guide structure													
					Collecting information and input sharing from regional stakeholders group & web research - Assessment of the curent situation										
									Drawing the first steps of Regional Support Services and the Toolkit Guide						
										Preparation of the first call for projects					
												Providind support services for potential beneficiaries and ensuring increased visibility of the Toolkit Guide			
		Maintaining close connection with regional stakeholders' group in order to receive a specialized feedback													
		Monitoring the implementation of the purposed activities													

Date:07.07.2022

Name of the organisation(s) :

Bucharest-Ilfov Regional Development Agency

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