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Annex to Resolution No. 4/2018

of the Regional Board of the Wielkopolska Region of November 28, 2018

with the Amendment of June 27th, 2019 in the form of the Resolution No. 940/2019 of the Regional Board of the Wielkopolska Region

**Action Plan for the EcoWaste4Food project
for Policy Instrument 1, i.e. the Regional Operational Programme for the
Wielkopolskie Voivodeship 2014-2020**

Part I – General information

Project: EcoWaste4Food

“Supporting eco-innovation to reduce food waste and promote a better resource efficiency economy”

Partner organisation:

Wielkopolska Region with the seat of the Marshal Office of the Wielkopolska Region in Poznań

Other partner organisations involved (if relevant):

Stakeholders, entities listed within each activity

Country:

Poland

NUTS2 region:

Wielkopolskie

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Part II – Policy context

The Action Plan aims to impact:

- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

Name of the policy instrument addressed:

Regional Operational Programme for Wielkopolskie Voivodeship 2014-2020

Permanent cooperation between the EcoWaste4Food project team and representatives of the Regional Policy Department performing tasks related to ERDF management (Regional Policy Department) has been established, following two axis:

- Promote an active involvement of the Regional Policy Department in the process of issuing opinions on the Action Plan in order to connect this Department to the dynamic introduced by the AP of the EcoWaste4Food project for the two coming years. In this regard, vouchers for innovations limiting food waste might pave the way to a future call for proposals under ROP,
- Introduce explicit reference to innovations in the field of food waste reduction as eligible actions in

some 2019 calls of proposals of the ROP and dissemination of information about these open suitable calls among the SH group members as well as other small and medium size entrepreneurs from Wielkopolska. To go on this way, the PP2 has engaged concrete support to innovation to show entrepreneurs that resource efficiency and innovations limiting food waste or food losses are not something impossible to do and to encourage firms to innovate in food processing sector, enhancing by the way the cooperation between university (students and scientists) and small and medium size entrepreneurs from Wielkopolska.

All these elements are basis for the development of strong and operative recommendations for next regional development strategy.

Introduction:

The Action Plan for the Wielkopolska Region consists of three trial actions that constitute a long-term support system for reducing food waste in Wielkopolska.

The EcoWaste4Food project, launched on January 1, 2017, brings together regions and cities aware of the needs arising from growing food waste in various regions of the European Union. The leading partner of the project is CIHEAM-IAMM (International Centre for Advanced Mediterranean Agronomic Studies - Mediterranean Agronomic Institute in Montpellier, France.) The project includes representatives from the French Provence-Alpes-Cote d'Azur region, the Italian city of Ferrara, the Greek region of Western Macedonia, the Finnish region of Southern Ostrobothnia, English Devon County and the Spanish region of Catalonia represented by the Waste Agency of Catalonia.

Europeans are wasting 88 million tons of food a year [FUSIONS, UE project, 2016]. This corresponds to 173 kg of wasted food per person, with the total amount of food produced in 2011 accounting for 865 kg / person [<http://faostat3.fao.org/download/FB/FBS/E>]. Taking into account the number of inhabitants of Poland, it was estimated that the amount of wasted food could be as much as 7-9 million tons per year (that's about 238 kg / person), which places us at the 5th position in the EU [Eurostat, 2006]. According to research, the food products most often discarded are sausages, bread, vegetables and fruits. However, it was found that the structure and amount of food waste varies depending on the region and the wealth of the inhabitants. It was confirmed that the highest percentage of wasted food concerns wealthy people living in big cities, while older

people, students, and people living in rural areas definitely waste less food.

Thus, an average of 20% of food is wasted in the EU, of which the largest share 72% can be attributed to households (about 47 million tonnes) and food processing (about 17 million tonnes), the remaining 28% comes from gastronomy (about 11 million tons), primary production (about 9 million tons) and wholesale and retail trade (about 5 million tons). When summarizing the above data, it should be emphasized that they do not include losses originating from agriculture, fisheries and other sectors of food production, which noted significant differences in the definition of food waste. A lack of reliable and current data allows us to estimate that the actual scale of the issue is several times larger than previously estimated.

Costs related to food waste in the EU are estimated at 143 billion euros, of which 98 billion euros come from households in which the largest amount of consumable food is discarded (data from 2012). The results of the evaluation confirmed that food waste in gastronomy is equal to about 20 billion euros, while processing and wholesale and retail trade respectively contribute about 13 and about 10 billion euros annually. However, it should be noted, that unfortunately there is no reliable data covering various sectors of the economy, resulting in the dynamic fluctuation of food waste estimates as more reliable data is progressively obtained. In addition, it should be noted that the costs related to food waste are also costs associated with its disposal, which leads to the emission of over 170 million tons of CO₂ and the consumption of over 26 million tons of resources annually.

Due to the nature of the issues it is worth noting that the only coordinated activities, such as planning, exchange of experience and knowledge are a guarantee of achieving smart, sustainable and inclusive growth. Furthermore, active participation in the selection of good practices to be adopted in a given region and approval of the action plan is of key importance in the project.

The following definitions related to the discussed food wastage are adopted in the Action Plan:

Food and foodstuff - in accordance with Article 2 Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, means any substance or product processed, partially

processed or unprocessed, intended to be, or reasonably expected to be ungested.

Food waste - in accordance with Article 3, point 4a of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives, food waste means all food as defined in Article 2 of Regulation (EC) 178/2002 of the European Parliament and of the Council, that become waste (waste means any substance or object which the holder discards or intends or is required to discard).

By-products - in accordance with Article 5 of the Directive 2008/98/EC of the European Parliament and of the Council as well as Article 10 of the Act of 14 December 2012 on waste, by-products are substances or objects resulting from a production process, the primary aim of which production of that item, may be regarded as not being a by-product only if the following conditions are met:

- a) further use of the substance or object is certain;
- b) the substance or object can be used directly without any further processing other than normal industrial practice;
- c) the substance or object is produced as an integral part of the production process; and
- d) further use is lawful, i.e. the substance or object fulfils products, environmental and health protection, requirements for the specific, and use will not lead to overall adverse environmental or human health impacts.

Food waste - in accordance with the European Parliament resolution of 19 January 2012 on how to avoid food wastage: strategies for more efficient food chain in the EU (2011/2175 (INI)), food waste mean all the foodstuffs discarded from the food supply chain for economic or aesthetic reasons or owing the nearness of the "use by" date but which are still perfectly edible and fit for human consumption and in the absence for any alternative use, are ultimately eliminated and disposed of, generating negative externalities from an the environment pointof view economic costs and loss of revenue for businesses.

Cross-visits in individual partner countries indicated new development paths towards reducing food waste through better use of resources, which in the long term has a direct impact on lower costs of bioorganic waste utilization. It should be noted that food waste could be a source of a resource-efficient and environmentally friendly economy in the territories participating

in the project. Among eco-innovations that were presented during cross-visits, the most inspiring for the Wielkopolska Region are:

I. Spain, Catalonia

- ✓ Food Management „Gestió Alimentària” - recovery line of fresh food (transferring fresh food that is not suitable for the retail market to economically disadvantaged families) and ready meals (collecting from catering companies and school canteens for further distribution among users indicated by social services). People with intellectual disabilities are involved in the provision of services through special employment centers, helping to increase their social and professional activity.
- ✓ Food Recovery „GastroRecup” - initiative aims to encourage restaurants to prepare meals at market prices with food that has been excluded from commercial circulation in order to raise public awareness of the importance of active commitment to the fight against food waste.
- ✓ Weigh and think „Pesa i Pensa” - created to enable children and young people to learn good habits that will accompany them throughout their lives and which they will pass on to their families as well (waste segregation, weighting, recording, thinking, setting monthly goals).
- ✓ Food Bank in Barcelona „Fundació Privada Banc dels Aliments” - recovery of food products excluded from sale due to overproduction, expiration date, packaging or aesthetics and distribution within a timeframe making them useful for consumption by people in need through social welfare entities.
- ✓ Gleaners „Espigoladors” - reducing food waste by collecting overabundance of food from farmers and distribution companies and passing them on to those in need; conducting awareness raising activities (information campaigns, training, providing tools), so that everyone can offer their own solution to the problem.
- ✓ Micro-donations project “Caprabo” - handing over products that are still fit for consumption to nearby social organizations registered in the Food Banks.

- ✓ Food Bridge project „Pont Alimentari” - creating an interaction network (bridge) between donors and entities receiving support, with positive impact on the prevention of food waste through an educational campaign about the environment, based on the values of solidarity and the effective use of natural resources. The goal is achieved by the diagnosis of the amount of food thrown away at households, catering and restaurant retail distribution sectors, raising awareness about reducing food waste and providing suggestions for improvement.
- ✓ DISA The Pantry of Solidarity Food – an organization whose aim is to satisfy the basic nutritional and hygienic needs of families at risk of marginalization and / or social exclusion by offering monthly food supplies and personal hygiene items.

II. Italy, Ferrara

- ✓ ActivECOLab "learning by doing", open training for local community who learn about ways to reduce food waste in households through reusing the remains of food, explore creative ideas against food waste by learning the use of edible ingredients considered as waste.
- ✓ Brutti ma buoni – “Il Mantello” - the practice of recovering food waste and passing on food that is still edible albeit with small imperfections to people in need; supported by supermarkets and involving many charities as beneficiaries.
- ✓ Cibo Amico - recovery of unused meals in canteens and their distribution to non-profit organizations.
- ✓ RistoriAMO1 "Zero waste restaurant" - reducing food waste by promoting good practice - taking the uneaten remains of meals in restaurants and eating them at home (alternative for “doggy bag” action, allowing to reduce the food leftovers in gastronomy). The initiative is very popular among restaurateurs due to tax benefits associated with limiting the waste production.
- ✓ Last Minute Market - favors creating so-called “Solidarity” networks in the region and contacts between non-profit institutions and enterprises,

promoting the recovery of food excess, training for schools, companies and institutions, communication and marketing.

III. Finland, South Ostrobothnia

- ✓ Ilmajoki Primary School - the prevention of food waste programme among students by the continuous education of children in the field of waste reduction, encouraging children to place on their plates optimal portions of food at the canteen.
- ✓ Seinäjoki University of Applied Sciences – creation of new study modules related to food, agriculture and food technology implemented through practical applications and cooperation with private companies (courses related to food waste in restaurants, management in the food industry and packaging know-how for engineering students).
- ✓ Lakeuden Etappi Oy (Regional Agency of Waste Management) - legal advice on municipal waste, sorting and handling of waste and waste reduction, the creation and distribution of educational materials for food waste implemented at schools (zero waste program for schools – school which produced the least food waste was presented with an award).
- ✓ Atria Finland - food company leading the program "Waste is unnecessary!" - creating indicators to monitor total waste, specific waste, waste of finished products, re-use and quality-related losses, creating a corporate culture against food waste (quality control of raw materials and employees as well as calibration of production processes, significant impact of each employee on the production chain, increasing job satisfaction by preventing food waste).
- ✓ Omenahaus - fruit excess transport service: each owner of a backyard garden can order fruit picking boxes, and the Omenahaus company collects it and transports fruit to its own mill, where they are processed into juice.
- ✓ Alavuden öljynpuristamo – intelligent and innovative management of by-products of rapeseed oil production to ensure profitability and long-term existence for the company, and to reduce the production of bio-waste through sale of rapeseed oil by-products to farms as animal feed and

through their conversion into thermal energy.

- ✓ ResQ club – mobile application allowing for restaurants that sell their leftover meals through discounted offers for customers who collect orders personally from restaurants within the time frame set by the restaurant.

IV. France, Provence-Alpes-Côte d’Azur

- ✓ Hospital canteen in Avignon - reduction of food waste in hospital is conducted by applying new production techniques, buying locally grown plants, optimizing the patients’ daily meal portions, donation of unconsumed meals to the Red Cross, use of organic waste biodegradation tanks, lesser food variety in exchange for meal quality.
- ✓ Local en bocal – processing and preservation of fruits and vegetables from products purchased from local suppliers (wholesome vegetables and fruits, too small size or inadequate shape), produced soups are sold to school canteens and local shops.
- ✓ Imagine84 - the center of packaging and redistributing aims to reduce fruit and vegetable waste by improving and developing the process of food donations, providing a tax reduction system for donors, and preventing social exclusion of the unemployed through training.
- ✓ Fondalim PACA and Proxidon - mobile application associating and encouraging solidarity activities of food companies for the benefit of organizations involved in the distribution of food aid, to allow everyone access to a variety of good quality food.
- ✓ Supermarket Auchan - implements a program of broadly defined recycling and pro-ecological activities, manifested by: segregation of products withdrawn from shelves (torn packaging, upcoming shelf life), transmission of relevant products to charities, providing bread for animal feed, the conversion of biodegradable waste into compost.
- ✓ Regional open application program: „Reduce food waste” - program that grants support to projects that fit in with the following objectives: reducing the loss during the primary production, processing, storage and distribution

of food; reuse or redistribution of food; reducing food waste in gastronomy; potentially food waste processing for animal feed.

- ✓ Regional open application program: „Filidechet” – co-financing of applications supporting and promoting innovative and experimental projects, among others those focused on closed-circuit economies, reducing the amount of waste to be stored and combusted, optimizing recycling.
- ✓ ARPE – „ Sustainable school canteens” – project of Regional agency for the environment and ecological development aimed at education of employees in canteens in kindergartens, primary schools and in nurseries. The module included subjects such as: food waste, production, local supply, sanitary and commercial standards in local supply chains, ecological and local cooking methods, education and communication in the field of "sustainable" food.
- ✓ CETA – „Vegetable processing workshops” – project in which farmers are developing a transformational process to use unsold fruits and vegetables from their own production. The goal is to process them into canned food and then sell a new product throughout the year, and not only during the season. The organization's headquarters will contain all the equipment necessary to process fruits and vegetables into products in jars, in accordance with hygiene rules.

V. Greece, Western Macedonia

- ✓ BOROUME - non-profit organization, aimed at limiting of food waste and malnutrition, by increasing awareness of food waste at home and in the field, education in school students, combining local beneficiaries with suppliers.
- ✓ ARSIS Kozani - Association for the Social Support of Youth, which is in a difficult situation or danger and in defense of their rights, preventing the marginalization of youth, by growing their own vegetables, independent harvesting of vegetables at a lower price, promoting the purchase of food by wealthy people and passing them on to the poor.

- ✓ A.S.O.P. Velventos Dimitra – zero waste in fruit processing through close cooperation with the juice factory.
- ✓ Kourellas SA – anticipated eco-innovation is related to the use of waste from the cheese production process, which is used for the production of other types of cheese, as well as for the production of animal feed.
- ✓ From First Hand (Apo Proto Heri) - manufacturers sell milk from a distribution machine thus bypassing intermediaries. Consumers can buy milk using their own glass bottles or using plastic bottles suitable for recycling.

Taking into a consideration the above mentioned eco-innovations, the particularly important elements of future activities are aspects related to:

1. identification of the problem of food waste in the Wielkopolska region as well as on a national scale (consumer and producer surveys showing the scale of the problem),
2. identification of factors shaping the size and structure of wasted food (way of buying food, frequency of purchases, cost structure, reading the label, awareness of the possibility of processing raw materials, etc.),
3. economic consequences of food wastage in the functioning of households as well as companies producing food,
4. acquiring knowledge about the structure of wasted food (quality, packaging method, shelf-life date, product composition, labeling, etc.),
5. implementation of trial educational programs in the field of counteracting wastage of food products and effective use of raw materials and resources (wide range of social structures targeted - mainly addressed to young citizens whose habits can be shaped through the use of appropriate teaching techniques and workshops on conscious use of resources and the potential use of different fractions arising during industrial food production (optional classes, workshops, trainings, brainstorming, design thinking, etc.).

To fulfill the needs and expectations it is therefore necessary to take action towards:

1. limitation of waste by educating the correct and optimal use of available resources to limit overproduction and over consumption,
2. raising consumer and producer awareness of the convergence of interests in the aspect of food production (demand - supply, market shaping),
3. developing system solutions that increase the attractiveness of solutions that prevent food waste (loyalty programs, tax benefits, etc.),
4. development and optimization of systems for the sourcing, distribution and use of low-processed products and high-quality products by food banks,
5. creating a convenient space for cooperation between the private sector and science in order to develop innovative instruments supporting optimal use of food resources (development of new production technologies, modernization of machine parks, designing innovative devices for disposal of organic waste),
6. raising the competitiveness of producers through the adaptation of eco-innovations that limit food wastage.

BACKGROUND AND SUMMARY OF 1st phase of EcoWaste4Food FINDINGS

The project entitled "Supporting eco-innovation to reduce food waste and promote a better resource -

2. the monitoring and implementation of action plans and recommendations on the regional policy.

This document closes stage 1 and defines the action plan for the support of proper utilization of biomaterials and food in the local industry as well as households. In the years of 2017-2018, the participants in the EcoWaste4Food project exchanged best practices, knowledge and experience in order to determine how to develop effective measures and regional strategies with a view to streamlining regional stakeholders ecosystem through strict cooperation between private sector, universities, and other stakeholders in the partner regions.

The project partners, based on the experience and best practices collected from respective regions and with the cooperation experts and leaders can focus their efforts on the following subject areas (SA):

SA1. education as part of the Wielkopolska week of reducing food waste.

SA2. enterprises combating the mindset and establishing competencies in reference to the food waste problem.

SA3. Campaign for the implementation of food banks (food distribution to the final beneficiary).

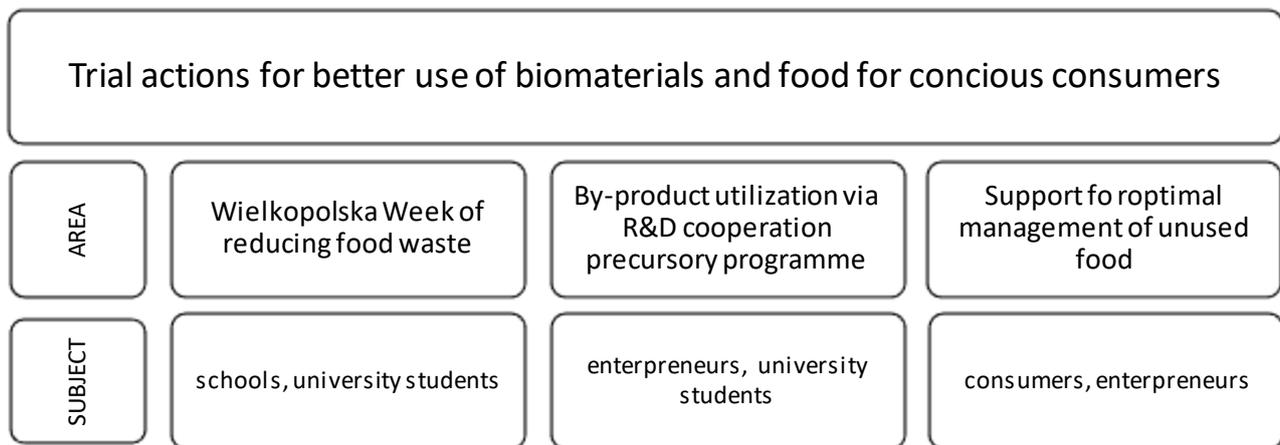
Out of the areas listed above, the representatives of the Wielkopolska region have chosen good practices which were implemented in the partnering regions and produced measurable outcomes not only for the organisations themselves but also for broader stakeholders groups, including the local community. Supporting the knowledge, competences and business oriented approach (SA1) constitute substantial aspects of supporting the reduction of food waste in the Wielkopolska region. The institutions merited for the preliminary definition of good practices were: e.g. Poznań University of Life Sciences, Food Bank. At the same time, awareness-raising campaigns need to be carried out, addressed both to clients and food producers as well as to the general public, in order to support changes in behavior and attitudes to food waste.

Support for new approaches in consumers and industry education in order to combat the food waste problem mindset and increase competence is an equally important aspect of supporting the community by the fusion of research and business (R&B) cooperation (SA2). Nevertheless at this stage it is necessary that other tools are used and more target-oriented problem solutions are employed. Again, it was noted that institutions and food producers which would implement the good practices in their activity had been very interested in easy, costless, and fast process of food production optimization in order to reduce the food waste.

The situation of Food Banks in outlying areas important for proper organisation and food distribution tends to be rather complex and business undertakings do not always turn out successfully. The implementation of a campaign for the support of food banks (SA3) is a prime example of where and how good practices can be implemented, and in a way shows the methods of counteracting improper food utilization in areas which are not attractive for food producers and where the free transfer of food is impossible. That situation could be the result of unclear legal solutions or insufficient tax relief. The Food Banks organize a number of theme-specific events, e.g. building a cooperation network with commercial traders, providing food as part of assistance, occasional food collection and many other campaigns, to the active engagement of all locals,

actively supporting the optimal use of food resources, counteracting the non-resourcefulness of life and prevention of food waste. Diagnosing and implementing food distribution methods to the final beneficiary is important for optimizing the process of resource use and addresses the bioethical issues of society and the entrepreneurs' interest for eco-innovation in the production and consumption of food.

The following figure shows actions developed for Wielkopolska region, divided into thematic fields defined by the EcoWaste4Food project.



Dedicated trial activities for determining the causes of food waste include a proposed consumer questionnaire and a survey addressed to food producers.

The **Consumer questionnaire** is aimed at understanding what is the cause of food waste in the Wielkopolska region, which is considered the most economically developed in Poland. As a result of meetings of the Wielkopolska stakeholder group of the EcoWaste4Food project, questions were raised regarding several issues:

1. What is the issue of managing a household fund for food (what is the distribution of funds, possible structure)?
2. How are that have not been fully consumed treated (storage, processing, utilization)?
3. How many products are subject to termination and what are the product groups?
4. What is the waste of food in multi-person and single-person families, how does this process look depending on the wealth of the respondents?

It is also crucial for the diagnosis and further action plans to know:

1. Whether the consumer reads the labels or understands them (whether it affects the subsequent use of the product, whether the composition can further direct its use, or

throw away, because it has, for example, a lot of E additives)?

2. Does the consumer have knowledge of what actions can be taken to extend the shelf life of leftovers, can they identify potential uses of such leftovers, or would they require some support in this matter (later we could propose a series of training and workshops on food waste prevention and their further use and impact of such activities on health, family budget and the environment - ecological aspect)?

On the basis of survey results, the recommendations for the consumer could be created, as to prevent food waste and reduce losses associated with lack of knowledge as to potential further use of food (e.g., brochures, popular publications, etc.).

Target group: students in their 3-5 year of studies, high school students, students of other patron schools, students of the third age university of Wielkopolska region.

The survey addressed to food producers is aimed at answering the question related to what is the cause of food waste and what system tools should be introduced to reduce this process:

1. Identification of needs and goodwill for further utilization of products (e.g. non-compliant recipients: apple shape, its size or incorrect product label, etc.) or post-production waste for use in other products, not necessarily for food, or even in supplements (seeds from brewing plants - fruit, etc.),
2. Development of preliminary recommendations and production best practices that optimize the use of resources both by distributors and final recipients, i.e. consumers: development and an attempt to implement the so-called "Good practice of multi-format food management".

Target group: Wielkopolska region food industry companies, catering companies, gastronomy (schools, canteens, restaurants, etc.).

LIST OF TRIAL PRIORITY ACTIONS

On the basis of the analysed best practices implemented by other EcoWaste4Food project partner regions and opinions of experts from Wielkopolska and other regions, three trial actions were selected for inclusion in the Action Plan for Wielkopolska:

Action I: Wielkopolska Week of Food Wasting Prevention.

Action II: Developing innovation and entrepreneurship in the area of reducing food waste.

Action III: Raising awareness of Wielkopolska inhabitants in the field of food waste in Wielkopolska - instruments of regional policy.

The goals that can be achieved thanks to the trial actions taken supporting eco-innovation to reduce food waste and promote a better resource efficiency economy covering social, economic and environmental benefits.

Social benefits:

1. supporting the community in searching for food waste problem solutions through projects supporting the increase of awareness,
2. education of children in the field of eating food in a responsible manner,
3. distribution of information leaflets for parents - the message of the project also reaches adults,
4. increased consumer awareness and taking actions to counter wasting food in households and among caterers,
5. change the behavior and habits of consumers and their approach to food wastage,
6. help reach people without economic resources, prioritizing families with children and people over 65; increase in professional activity of people with intellectual disabilities,
7. training and creating job opportunities for groups at risk of social exclusion,
8. creating a multidimensional cooperation network that creates strong social relationships beyond the framework of the project, increasing awareness of food wastage,
9. increasing the safety of food distribution to the needy.

Economic benefits:

1. increasing the demand for shapeless products that would otherwise be thrown away,
2. creating a production model for the commercialization of food products, which generates jobs,
3. coordinating relations between companies and social entities,
4. facilitating periodic donations of surplus food,
5. eliminating the need to generate such a large amount of food, because food is consumed that would otherwise be thrown away (rational demand, promotion of regional culinary patriotism),

6. savings in waste treatment that are no longer generated,
7. social care savings for those who no longer need economic assistance (partly) due to the fact that certain food needs are met,
8. increasing the efficiency of using resources for food production.

Ecological benefits:

1. reducing CO2 emissions by reducing the amount of biodegradable waste produced and / or more efficient technological processes,
2. saving the earth's resources,
3. the savings in terms of costs of processing and storage of organic waste

The proposed participants of action 1 to 3 will have signed cooperation agreements with the Marshal Office of the Wielkopolska Region for the implementation of specific tasks listed in the EcoWaste4Food Action Plan. In the event of a given entity's resignation from cooperation in the implementation of the planned task, the Contractor will conduct the process of selecting a participant with similar competences. Involved participants in the framework of the implementation of tasks will be required to provide their own contribution, regulated by relevant agreements.

Part III – Details of the activities

ACTION 1 - WIELKOPOLSKA WEEK OF REDUCING FOOD WASTE

1. The background

In Catalonia, various programs have been developed and implemented to reduce food waste, such as "Pesa and Pensa" (Weigh and Thought) implemented by the catering company Campos Estela from Barcelona. The method of "Pesa and Pensa" is addressed to primary school children who in the canteen learn to segregate uneaten leftovers of dinner, weigh them (data is entered into the computer system - on their basis you can follow the "progress" of individual schools in reducing food waste), and then the leftovers are thrown into the composter.

This method consists of five steps:

1. segregation - division of waste from the school canteen into four containers

(packaging, inedible organic waste, edible organic waste, water);

2. weighing individual waste every day in a systematic and precise manner;

3. data logging using a special application: served meals, generated waste;

4. thinking: analyzing data related to generated waste;

5. setting the goal - defining the quantitative goals to be achieved for the next month, adjusted to the possibilities of individual age groups.

The pilot test started in 2014 and from the second month it gave positive results. In a permanent way waste of food in school canteens was reduced by 35%, and the amount of waste generated fell by 50%. 7 schools participated in the first year of the program (2014). In the last school year (2017/2018), 13 schools participated in the program. This type of program can also be offered to local governments in Wielkopolska.

In addition, during the study visits in Barcelona and Ferrara, which took place in the fourth quarter of 2017, representatives of Wielkopolska had the opportunity to familiarize themselves with eco-innovations ("GastroRecup" and "ActivEcoLab") aimed at the use of food leftovers.

2. Action

Task 1: *Development and implementation of specialized educational activities for children and youth related to reducing food waste based as inspired by the "Pesa and Pensa", "GastroRecup" programs from Catalonia (Spain) and "ActivEcoLab" from Ferrara (Italy).*

Children and adolescents are a group of consumers whose education can be the most effective. The effectiveness is based on their unestablished eating habits and curiosity about new flavors and preparing meals through play. In this way, it is possible to shape the future activities and eating habits as fast and as long as possible.

Educational activities are aimed at the awareness of the need to care for food and the natural environment, which is why children and youth will be subjected to such activities that will require them to make a decision. The direction of this decision will have a tangible effect they will

become familiar with the consequences of their decision and action. The main focus will be on financial losses in the short and long-term periods, as well as on the awareness of the amount of waste generated and the impact of adverse activities on the natural environment.

Education will be based on three pillars: prevention, mindfulness, and processing. During the educational session, emphasis will be placed on making participants aware of how large are the quantities of food waste they produce, and thus how to prevent it. Thanks to mindfulness, i.e. care for the quantity and quality of prepared meals they will learn that you can effectively reduce losses in later stages of food consumption as food will be processed or re-used to prepare new, wholesome dishes. Ways of processing, preparing new dishes and creating a book with recipes will be one of the results of this task. A group of students taking part in educational activities conducted in the teaching rooms of the University of Life Sciences in Poznań will include schools from the Wielkopolska region.

Scheduled educational activities are a continuation of previous Marshal Office of the Wielkopolska Region cooperation with the University of Life Sciences in Poznań, which was based on the availability of seminar and lecture halls and audiovisual equipment for the study visit for foreign partners, organized by the Wielkopolska Region. The contribution of the University of Life Sciences in Poznan is a scientific, research, and organizational background adapted to the profile of activities 1. The workshops will be conducted in lecture halls and equipped in accordance with the PN ISO guidelines of the sensory evaluation room and the gastronomic laboratory.

Task 2: *Organizing workshops / trainings for consumers regarding issues related to counteracting food waste, eg:*

2.1. culinary workshops - re-use of food leftovers,

2.2. training to increase consumer awareness in terms of sensitivity to external factors during shopping (eg the size of baskets),

2.3. training to promote the purchase of high quality food as a way to reduce food waste.

Workshop / faculty - "Food waste management" will include in its content several issues: identification of waste sources in food, current status and what activities should be undertaken to minimize them (production, processing, optimization of storage chain conditions, etc.). The organization of workshops for a pilot group of students will be based on increasing awareness of

the nutritional value of kitchen waste, mainly leftovers of fruit, vegetables, as well as the directions of non-consumed food utilization, eg soups, vegetable sauces for pasta. In addition, the main core of the workshop will be meetings during which students will be able to propose new dishes based on the above-mentioned raw materials and knowledge gained during the practical preparation of meals from leftovers of food products.

The next stage of mindfulness workshops during the selection of food raw materials will include practical measures to increase the conscious selection of raw materials, both their quality and quantity. The trainees will learn what factors influence the purchasing decisions in the field of food and how the consumer's psyche contributes to these choices.

The promotion of shopping optimization and its minimization in order to reduce food waste will be the last link of the workshop. This activity will be focused on education informing consumers that the price of the product is not always adequate to its quality (eg vegetables and fruits that do not meet the calibration requirements, high-efficiency cold meat at a very low price, highly processed food with a limited shelf life, e.t.c.). Considering the next stage, consumers will be subjected to a series of tests that will consolidate their knowledge and potentially change the way they think about wasting food.

The target group of workshops and trainings are school children and youth.

Task 3: *Open day of the food bank for schools*

Food banks, thanks to their activity in the field of food waste prevention, are a reliable and necessary link in the process of educating consumers and distributors of food. During the open day, pupils of primary and secondary schools will have the opportunity to become familiar with the huge social needs and the scale of the problem of wasting food. It is planned to organize at least two open days during which students will take part in culinary workshops and lectures, indicating the need to care for raw bio-materials and reduce waste production. Particular attention will be paid to the indication of the reasons for the generation of waste, mainly from the consumer, who can shape the food policy of the region, as well as the local community, with conscious purchases.

During open days, short workshops will be held for a few hours during which it will be possible to get acquainted with the activities of the unit and the possibilities of cooperation, for example as part of volunteering efforts.

Task 4: *Organizing an educational campaign for consumers:*

4.1. to reduce food waste (including advertising spot)

4.2. in the area of excessive consumption counteracting

4.3. increasing consumer awareness of vulnerability to external factors during shopping (eg size of shopping trolleys),

4.4. transferring surplus food withdrawn from retail trade but safe for the consumer.

Consumer education launched in task 1-3 will be continued to a much wider extent in the environment, where wide-ranging actions will be proposed informing about the possibilities and ways of limiting food wastage. The aim is to acquire skills leading to responsible decisions in the area of excessive consumption and protection against the impact of external factors to which consumers are currently particularly vulnerable. The campaign should be run in consultation with universities, schools, kindergartens and food banks, throughout Wielkopolska, experimentally once a year, for a few days (eg occasional fete, public lectures, games). As part of the task, the organization of several promotional days is planned, during which competitions of knowledge about ways to reduce food waste will be organized – contests with prizes. In addition, it is planned to organize art, film (advertising spot), recital or theater performances, where elementary, middle, and high school students will take part as artists. The topics of the competitions will be closely related to the reduction of food waste and will cover issues relevant to the age of the participants. The winners will be selected in the competitions who will receive prizes, including the opportunity to take part in a regional study visit organized by the project team together with councilors and representatives of the voivodship authorities.

Thanks to the huge activity of food banks it will be possible to carry out educational activities as part of the campaign among people using their help. The campaign should also reach food producers, retail stores, and wholesalers. These entities, thanks to the appropriate tools proposed, will be able to transfer more surplus food withdrawn from the retail market, but safe for the consumer. Knowledge and shaping consumer habits that create less waste are always a good alternative to lack of knowledge or ignorance.

The trial program will also include a media campaign that will address the problem of food waste (the campaign will be linked to **Action III**). Plans include the organization of a so-called "Press breakfast" or "media incubator" to which media representatives will be invited (TV, press, etc.). During the meeting, the achievements of school and university youth in the form of school performances and advertising spots on food waste will be presented.

3. **Players involved**

- 1) Marshal Office of the Wielkopolska Region - coordination and supervision over the implementation of tasks, including the provision of classrooms (task 1-4), promotion of activities.
- 2) University of Life Sciences in Poznań, Poznań University of Medical Sciences, Poznań University of Technology, Poznań University of Economics, University of Adam Mickiewicz in Poznań: providing lecture halls and rooms that meet sanitary and hygienic requirements to ensure health safety of the workshops (catering rooms) and audiovisual equipment for the needs of the workshops and cooperation in the field of consumer education (task 1-4).
- 3) Wielkopolska region students - participation in the implementation of the educational project (task 1-4).
- 4) Catering company - demonstration workshop on food waste, participation in an educational campaign (task 2, 4).
- 5) Food bank - task 3, participation in the implementation of the education campaign for consumers (task 4).
- 6) Wielkopolska enterprises limiting food wastage – participation in the implementation of an educational campaign regarding the transfer of excess food surplus from retail trade (task 4).
- 7) Local self-governments - assistance in organizing the participation of students in workshops and the open door of a food bank (tasks 1 and 3).
- 8) Board of Education in Poznan - participation in the promotion of educational tasks - information for schools and assistance in the recruitment of students and the implementation of visits to primary schools (task 1-4).
- 9) Entities whose participation proves to be justified or necessary during the implementation of the task.

4. **Timeframe**

2019 - 2020

5. **Costs**

± 115 000,00 PLN

6. **Funding sources**

budget of the Wielkopolska Region

ACTION 2 - DEVELOPING INNOVATIVENESS AND ENTREPRENEURSHIP IN THE SUBJECT OF LIMITING FOOD WASTE

1. The background

The inspiration for this action is the regional call for proposals for "Reduce Food Waste" implemented by the French region of Provence - Alpes - Cote d'Azur in cooperation with the French Agency for Environmental and Energy Management and the delegation of the Ministry of Agriculture in the DRAAF region (Direction Régionale de l'Alimentation, de l'Agriculture et de la Forêt Grand Est - Regional Directorate for Food, Agriculture and the Great Forest) focused on granting support for projects (local governments, non-profit organizations and entrepreneurs) aimed, for example, at reducing losses during the processing, storage and transport of food, as well as during its distribution, or reducing losses by improving sales channels, re-using food or redistributing it to food banks. Support as part of the project is granted for two types of eligible expenses: research, activities and awareness raising efforts, and some investments (equipment).

Financial support under the project will apply to non-profit enterprises and organizations belonging to Wielkopolska food clusters, the Wielkopolska Cluster Center (WCK), or the Culinary Heritage of Wielkopolska Region (SDKW), which is inspired by the activities in France. Therefore, the support will cover groups of producers with a similar business profile or similar needs, which in effect will improve their competitive potential for new processes, products or services related to the reduction of food waste. In this respect, support will enable, among others, establishing cooperation with science through the acquisition of solutions as a result of conducted research regarding the implementation of production, technological, organizational, IT and eco-efficient solutions. Support will also provide the possibility of acquiring the results of existing scientific work carried out at universities, which may involve students developing test products. The support is addressed to micro, small, and medium enterprises that are associated in the Culinary Heritage of Wielkopolska Region and / or subject directly or indirectly to the Wielkopolska Cluster Center - food clusters.

2. Action

Task 1. Creating an offer of testing products for Smart Specialization I:

- 1.1. *Biomaterials and food for conscious consumers (safe bioproducts and healthy food).*
- 1.2. *Modern food production technologies.*
- 1.3. *Innovative methods of selling and distributing high-quality food.*
- 1.4. *Organic food production and waste management.*

The analysis of the expectations of food producers related to the management of by-products or waste generated in the production process, indicates the need to develop and implement long-term activities combining business and science stakeholders. These activities will be focused on optimizing the use of resources and bio-resources in enterprises to obtain tools to reduce the amount of waste generated and to achieve savings in waste treatment. Full-value by-products or so-called post-production waste (by-products) may, according to current scientific knowledge, be a valuable source of substances, improving the nutritional value, functionality and pro-health attributes of the final product.

Schedule for task 1:

1. Market research covering the types and forms of by-products of the food industry.

The first stage of activities includes acquiring knowledge about the needs of producers, both in the field of biosources utilization as well as the readiness to implement new technologies to obtain food for conscious consumers. During the production of food, some by-products and wastes are generated, which may be subject to further disposal for the benefit of producers and the environment. Many of these by-products are, for example, shapeless vegetables and fruits that have not been successfully calibrated, fruit and vegetable peelings, fruit pomace, etc. These fractions would be discarded, but they can be an important element of the composition of other products, such as biscuits, breads, beverages, desserts. The planned activity will be connected with conducting face-to-face interviews or surveys with stakeholders, whose interpretation will allow for the optimization of further activities.

2. Analysis of the possibility of using by-products for enrichment of new products (eg creation of the so-called loop of optimal utilization of raw materials - POUS).

Knowledge about the type and quality of by-products and post-production waste of the

food industry can be obtained through the evaluation of the questionnaire and direct conversations with food producers. It should be understood that not all by-products are a good source of material for further utilization, which is caused by the degree of processing, microbiological quality and the technologies used with the use of chemical substances. The selection of components for further utilization is therefore a difficult task and requires extensive cooperation between the production and scientific sectors. As a result of the activities carried out, the selection of the most advantageous models for the use of biosurplets for the design of new technologies will be made.

3. Creation of teams developing new technologies for the production of foodstuffs enriched with selected raw materials from POUS.

The planned development of food production technology requires the creation of a team coordinating the work of at least two working groups. These groups will include, for example, 9-person teams of students from public universities, which will meet at least twice a month, for 4 months to finalize and substantive development of technological, economic and marketing issues and recommendations. Teams will have the task of developing ready-to-implement production technology for designed products.

4. Organization of technological workshops for students aimed at developing new technologies and their production on a laboratory scale.

Created project teams will participate in meetings during which progress will be discussed and technological problems will be consulted. The consultations will be conducted by specialists in a given field, which will positively influence the integration of the scientific community. As a result of the consultation, detailed descriptions of new technologies and machinery will be created and marketing activities will be proposed. As a result of the workshops, test products will also be prepared. An analysis of the composition of the test products will also be made.

5. Coordination of the project team's achievements with the possibility of implementing developed solutions in local manufacturing companies.

During the implementation of task 1, it is planned to organize an event during which project teams will conduct presentations on the developed products. It is expected, that in the group of interested recipients - food industry companies and producers of food supplements,

there will be an exchange of observations that will help to improve the effects of the task.

6. Organization and supervision of relations between the university and companies interested in the purchase of technology.

Establishment of legal tools and mechanisms (consultancy, lectures, etc.), economic and marketing etc., eg co-financing via vouchers, which will support the decision to accept and implement the presented solutions. In cooperation with the Marshal's Office of the Wielkopolska Region, meetings with entrepreneurs will be organized, for which the Councilors of the Regional Assembly of the Wielkopolska Region will also be invited. During the meetings, the developed technologies and test products will be presented, and a measurable effect will be the cooperation of working teams with entrepreneurs interested in purchasing new technologies.

7. Commercialization of developed food products.

Thanks to cooperation between industry and science during the rollout of the task, products will be developed, intended for commercialization in any food category compatible with the current Regulation (EC) No. 1333/2008 of the European Parliament and of the Council of December 16, 2008 on food additives. It is anticipated that the commercialization of the developed products will bring tangible benefits to producers, society, and the natural environment. The next group of beneficiaries of the task will be students who during the workshops will acquire practical skills related to the process of food design and potential benefits resulting from the use of unconventional ingredients. In addition, they will gain invaluable knowledge on how to implement new technologies and cooperation with the industry, which will be a valuable experience during their start in the labor market. The effect of the action will be to create the so-called "science / business bridge", which will allow to relaunch joint actions in the future. The issue of intellectual property rights will be resolved during the finalization of the purchase of technology by interested producers who will be required to pay remuneration to each student developing the acquired technology. Payment of remuneration and the contract concluded between the parties will be equal to securing the property rights of students and transferring them to the producer for which the entrepreneur will be responsible. It is also assumed that producers will be interested in cooperation with students as part of potential apprenticeships, aimed at implementing recommendations to prevent food waste being a result of the project.

Task 2. Cooperation with food clusters and the Culinary Heritage of Wielkopolska Region (SDKW) - vouchers for innovations

In the implementation of objectives related to the implementation of new solutions aimed at limiting food waste, according to the EcoWaste4Food project assumptions, food clusters and the Culinary Heritage of Wielkopolska Region (SDKW) become particularly important.

On the basis of the conducted analyzes, particular activity of enterprises belonging to food clusters or SDKW related to the meat, fruit and vegetable, dessert and bakery sectors was demonstrated. These are industries whose operation is related to the generation of a large number of by-products, as well as those characterized by the production of fresh food, whose distribution in the logistics chain is all the more difficult and generates a lot of problems related to food waste, which results mainly from the expiration date. The concept of cooperation with food clusters and SDKW as a tool affecting a wider group of related enterprises allows to reach by means of a developed instrument not one, but also up to several entities. Therefore, the following activities dedicated to clusters and SDKW are planned, which can give a measurable effect in reducing food waste:

2.1 VOUCHERS for innovative solutions limiting food waste.

The task "VOUCHERS for innovative solutions limiting food waste" is the official Pilot Action financed by the EcoWaste4Food project – "Supporting eco-innovation to reduce food waste and promote a better resource efficient economy" from the Interreg Europe program.

A focused interview as part of meetings of working groups and meetings with stakeholders as part of the EcoWaste4Food project activities allowed for the selection of support instruments. The impact will be, for example, vouchers for innovative solutions to reduce food waste (dedicated to food clusters from the Wielkopolska region and SDKW). According to the project, the vouchers will be defined as subsidies. Therefore, operational strategy regarding the implementation of the effects of the EcoWaste4Food project will be based on cooperation with food clusters and SDKW with respect to impacting one or several enterprises through innovation in the reduction of food waste.

As part of the project, it is planned to launch a minimum of 2 vouchers, which constitute

financial support for the implementation of innovation in the food production and distribution chain in enterprises belonging to food clusters and SDKW.

The contractor for the service, i.e. vouchers for innovative solutions limiting food waste for enterprises in clusters or in the SDKW, may be scientific entities within the meaning of art. 2 point 9 of the Act of 30 April 2010 on the rules of financing science having its registered office in the territory of the Republic of Poland, non-profit organizations and enterprises belonging to the food cluster in Wielkopolska and / or the Culinary Heritage of Wielkopolska Region.

The purpose of vouchers' realization refers in particular to:

- development of new methods for the use of secondary raw materials, development of new products based on them for use in feeding people, animals or the production of fertilizers,
- development or improvement of food processing machinery / technology limiting food waste,
- limiting the generation of waste materials through the optimization of manufacturing processes,
- optimization of distribution and logistics operations to extend product life by maintaining the temperature chain,
- optimization of deliveries to large wholesalers in order to limit the stay of unused products in trade as total waste or for reuse,
- development of new methods of food preservation through the use of safe in the nutrition of additives to extend the life of the product and possible long exposure in the sale,
- development of new solutions in gastronomy enterprises or cooperating with HoReCa to limit returns and quantities of waste through their reuse, distribution, new sales methods,
- developing innovative ways to raise awareness of residents in reducing food waste.

Support in the form of a voucher will enable their beneficiaries to obtain:

- access to experts and current scientific knowledge,

- solutions enabling the implementation of innovations and increasing the competitiveness of the company, followed by applying to the Regional Operational Program (RPO),
- the possibility of including end users in creating new products and services.

Cooperation with WCK and SDKW as part of the voucher process, and thus with enterprises associated in their network, will become one of the forms of regional policy implementation, aimed at strengthening and accelerating the Region's economic development. The idea of implementing vouchers for innovative solutions related to the reduction of food waste is formal cooperation, which will take place as a result of connections between enterprises belonging to clusters or affiliated within the network or SDKW, as well as between them and cooperators, business environment units, educational institutions, research and development units as well as local administration units or residents.

The Marshal Office of the Wielkopolska Region has experience in implementing financial instruments such as vouchers. So far, however, they have focused on implementing broadly understood innovation and were dedicated for companies from various industries organized into clusters (they were not typically addressed to the SDKW). On the basis of the program's goals, conclusions resulting from the diagnosis of investment needs and additional analyzes, it is possible to properly target activities and appropriately address development support vehicles like vouchers. Thanks to the support in the form of a voucher, measurable effects will be achieved in the region related to the reduction of food waste.

2.2 Lectures

Another recommendation (action) in terms of program impact in cooperation with clusters and the Culinary Heritage of Wielkopolska Region is a series of lectures realized by scientists from universities and research units whose scope of activity is consistent with the policy of limiting food waste. In this respect, a series of meetings is planned at which proposals for new solutions and current trends will be presented in the operation of food industries to reduce food waste. Due to the diversity of enterprises belonging to cluster initiatives and to the SDKW network, cooperation with cluster coordinators is planned at the initial stage and a network coordinator, to collect surveys on the preferences of substantive meetings of entrepreneurs

belonging to the cluster / Network. Organized lecture series will take place in previously used locations, i.e. business centers, etc., where clusters 'and networks' meetings take place periodically. The cyclical meeting series will be enriched with lectures related to current trends in the food industry in terms of limiting food waste in the production and distribution cycle. The first cycle will include thematic lectures lasting 20-40 minutes, which will be organized for clusters, the Wielkopolska Cluster Center (WCK) and the Culinary Heritage of Wielkopolska Region (SDKW). The trial action assumes carrying out 1 or 2 cycles.

2.3. Press breakfast

As part of the project, the so-called "Press breakfast" will be held to promote solutions limiting food waste in enterprises belonging to the WCK to food clusters and to the Culinary Heritage of Wielkopolska Region. During the breakfast, new solutions and innovations favoring the reduction of food waste will be presented, which will be the result of, among others factors a cooperation with science made possible by the voucher programme. Apart from representatives of cluster institutions and the SDKW Network, media will be invited to press breakfast (regional and local press, TV, radio) and representatives of the Wielkopolska Region local government. Thanks to the publicity and cooperation, the results of vouchers will be made public in the Wielkopolska region, and the event itself will promote the results obtained in the EcoWaste4Food project.

Task 3. Support for scientific and industrial consortia in the process of establishing cooperation.

The current strategy implemented in Wielkopolska (Strategy for the Development of the Wielkopolska Region until 2020) assumes the pursuit of integration with the objective of building a competitive economy. The activities of the region are therefore focused on the impact of the established change instruments on raising the quality of life and spatial order as well as sustainable development. In the area of these goals and activities, the aim is to reduce food waste, which is a direct expected effect of the implementation of the EcoWaste4Food project, where the proposed activities include:

1. Implementation of instruments of impact in the region in the dimension of initiation and establishment of scientific and industrial consortia in the process of establishing close

cooperation. The purpose of the consortia is the implementation of projects that will be able to apply / be submitted for relevant competitions under the Wielkopolska Regional Operational Program (WROP) in the current or future perspective, covering the thematic scope related to reducing food waste. Projects thematically will be able to address issues such as:

- development of new methods for the use of secondary raw materials, development of new products based on them for use in nutrition, people, animals or the production of fertilizers,
- limiting the generation of waste materials through the optimization of manufacturing processes,
- optimization of distribution and logistic operations to extend product life by maintaining the temperature chain,
- optimization of deliveries to large wholesalers to limit the use of products not used in trade as total waste or for reuse,
- development of new methods of food preservation through the use of safe in the nutrition of additives to extend the life of the product and possible long exposure in the sale,
- adaptation of the machine park to solutions that increase the efficiency of resources used in the production process,
- developing new solutions in gastronomy enterprises or cooperating with HoReCa to limit returns and quantities of waste through their reuse, distribution, and sales methods.

2. Interviews and research as part of the work in the project allowed to conclude that currently in Wielkopolska there are many institutions involved in information, training, consulting, as well as cooperation with scientific and research units. Economic information centers, consultancy centers, business incubators, innovation and technology centers, parks as well as chambers of commerce remain at the disposal of entrepreneurs. Considering that Poznań is a significant research, and academic center in the country, cooperation should be successful. Businesses (stakeholders) involved in the project from EcoWaste4Food repeatedly emphasized, however, the low level of use of a large scientific and research potential of the Region. This applies in particular to the food industry, where, together with the increase in consumer expectations for consumed food, there is a need not only to develop new products, but also to ensure ecological aspects related to with food processing. The consumer expects a product that is healthy, attractive from a sensory perspective, produced with good quality raw materials using optimized production lines, where the post-production waste pollution and the emission of

gases is minimized. Therefore, a need was identified for cooperation with science on the implementation of research projects and the creation of research consortia, the effects of which can be implemented for companies in order to increase their competitiveness. Activities in this area were already carried out by the City of Poznań Office, which as part of the project appointed the Academic Entrepreneurship Promoter at universities in Poznań. The aim of the initiative was to strengthen the links between the research and development sphere in Wielkopolska with the business sector through the promotion of the university as a source of solutions for enterprises and support for the cooperation of Wielkopolska's research centers with business. The project's partners were the University of Adama Mickiewicza in Poznan, University of Arts in Poznan, Academy of Physical Education E. Piasecki in Poznań, Poznan University of Technology, Poznań University of Economics, Poznan University of Environmental and Life Sciences, and Medical University in Poznań K. Marcinkowski in Poznań, as well as the Institute of Logistics and Storage in Poznań and the Metal Forming Institute in Poznań. Therefore, actions as part of EcoWaste4Food include help for Entrepreneurs in establishing cooperation with the Plenipotentiaries of the above-mentioned universities, which are concerned with the implementation of projects strictly related to food wastage.

Plans include the organizing of panels, press conferences or debates with appointed Plenipotentiaries and Entrepreneurs concerned with related issues wasting food. Debates will take place at universities, at the UMWW or in a television studio.

The meetings will include representatives from UMWW, clusters, Wielkopolska Cluster Center (WCK), Culinary Heritage of Wielkopolska Region (SDKW), Wielkopolska Council 30 and other entities and associations of companies as well as entrepreneurs themselves operating as business organizations. Dashboards, press conferences and debates will be organized. The effect of these activities should be the establishment of new consortia that will be able to apply for support under the current financial instruments proposed by national and regional funds.

3. For the years 2010-2020, a Regional Innovation Strategy has been developed, which foresees, among others, appointment of the Marshal's Plenipotentiary for Innovation. The document includes a vision of Wielkopolska, which uses intellectual potential, and considers innovation as one of the main factors of the socio-economic growth of the voivodship. Activities in EcoWaste4Food in this regard will include the implementation of the project by the Marshal's Office of the Wielkopolska Region, which will strengthen the popularization of the scientific

achievements of experts by entrepreneurs in their business activities related to the reduction of food wastage. There will be new instruments in the form of discussion panels during workshops, whose activities will be to facilitate cooperation with scientific units in the field of signing contracts in accordance with the established rules. These activities will cover enterprises whose projects are part of the strategy to reduce food waste. Therefore, the project plans to initiate cooperation regarding support for enterprises in order to obtain projects implemented especially in consortia, which will be created as a result of the implementation of R & D works created at universities and scientific units. In this respect, the planned workshops and trainings concern formal requirements related to WROP applications. As part of the support, the help in writing of applications for WROP will cover highly innovative ideas for projects (implementing process, product and non-technological innovations). Training on writing application forms in competitions under the WROP will be carried out periodically in accordance with the schedule of the call for proposals in subsequent years.

In summary, all the activities described above strive to develop Wielkopolska's network of connections and implement projects focused on activities related to the operation of to reduce food waste while increasing the innovation of the entities involved. Substantive support in the mentioned activities the task will cover micro, small and medium enterprises that meet the conditions set out in Annex 1 to Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain types of aid to be compatible with the internal market pursuant to Art. 107 and 108 of the Treaty.

Task 4. *Support for local non-governmental organizations whose main activity is to distribute food to those in need (the so-called last link in the distribution network).*

Currently, in Poland, about 7-9 million tons of food is wasted in total, both on the side of farmers, producers, retail chains, or households. It is advantageous when such food goes to food banks, and even more advantageous when, as a result of the activities of banks, it reaches the people most in need. Therefore, the banks cooperate with food producers, but also with the retail chains themselves. Food banks operate with non-governmental organizations that mediate between the bank and people in need of this support.

As a result of stakeholder meetings within the framework of the EcoWaste4Food project, the topic of good cooperation of banks with enterprises and trade networks was repeatedly discussed. The storage capacity of food banks is at a very good level. However, the success of activities related to the distribution of groceries depends on the possibilities related with food transport. Therefore, the priority in the task at EcoWaste4Food is to take into account the needs of organizations such as non-governmental organizations that distribute food to those in need and care for their stronger transport potential than ever before.

Therefore, the recommendations within the framework of the activity include:

1. Support in the promotion of charity activities of food banks among transport companies and help in finding additional related opportunities among them with the transport of dry, fresh and ultra-fresh products. These activities will include the development of information materials dedicated to transport companies and their dissemination.
2. Food banks in Poland are carrying out projects aimed at stopping food wastage. An example of a project implemented on the European platform is "Bank of ideas related to counteracting food waste - how to increase the effectiveness of cooperation with retail chains". The assumptions of the project do not include support for food transport. Therefore, in the Action Plan in EcoWaste4Food, support is planned for non-governmental organizations, ie local transport security in connection with the distribution of food for charges, for example, the Municipal Social Welfare Center (MOPS) / Municipal Social Welfare Center (GOPS). Financial support is also planned, covering part of the costs necessary to carry out food transport in the pre-Christmas period during the implementation of the Action Plan.

3. Players involved

- 1) Marshal Office of the Wielkopolska Region - organization support and coordination of tasks (tasks 1-4) and supervision over contacts, science-entrepreneur communication (task 1), implementation of task 4, promotion of activities.
- 2) University of Life Sciences in Poznań, Poznań University of Medical Sciences, Poznań University of Technology, Poznań University of Economics, University of Adam Mickiewicz in Poznań: provision of lecture rooms and rooms that meet sanitary and hygienic requirements

to ensure the health safety of the workshops (catering rooms) and audiovisual equipment for the needs of the workshops and cooperation in the field of consumer education.

- 3) Food Bank - participation in the implementation of the support program for local non-governmental organizations (task 4).
- 4) Wielkopolska enterprises limiting food wastage – participation in the implementation of workshops and cooperation between project participants (tasks 1-4).
- 5) Entities whose participation proves to be justified or necessary during the implementation of the task.

4. Timeframe

2019 - 2020

5. Costs

Task 2.1 VOUCHERS (...) - EUR 44 700 - financing under the EcoWaste4Food project from the Interreg Europe program
Other tasks PLN ±125,000.00

6. Funding sources

budget of the Wielkopolska Region
budget of the European Union - European Regional Development Fund under the Interreg Europe Program

ACTION 3 – RAISING AWARENESS OF WIELKOPOLSKA INHABITANTS IN THE AREA OF THE PROBLEM OF FOOD WASTE IN WIELKOPOLSKA - REGIONAL POLICY INSTRUMENTS

1. The background

The proposal of educational campaigns was submitted during the discussion on the Action Plan during the second meeting of the Wielkopolska stakeholder group of EcoWaste4Food project on October 10, 2017 in response to estimates according to which households account for about 32% of wasted food.

Eliminating the effects of food waste inspired by study visits and information from partners provided during meetings within Interregional Stakeholder Workshops took the form of

actions aimed at preparing recommendations to the Development Strategy of the Wielkopolska Region thanks to expert opinions prepared by industry experts and further lobbying of measures limiting food waste.

2. Action

Task 1. *Preparation of recommendations for the Development Strategy of the Wielkopolska Region which has an impact on the next ROP in connection with the problem of food waste.*

The preparation of recommendations for the Development Strategy of the Wielkopolska Region will be based on the accumulated experience and materials from the current implementation of the project EcoWaste4Food (EW4F), including best practices from field research and proposals of EW4F project stakeholders.

As part of the analysis of available information, it is necessary to provide expertise (eg by a professional team of experts in the nutrition, environmental protection and economics with the participation of the UMWW), defining the scale and consequences of food wastage in Wielkopolska.

Task 2. *Lobbying to counter food waste.*

Waste food is a problem to inform and educate society about reducing it. For this purpose, a group of representatives of the project team will be established, which will promote actions to counter food waste. The group will include representatives of:

- Marshal Office of the Wielkopolska Region,
- Wielkopolska universities and research institutes,
- Wielkopolska entrepreneurs,
- representatives of food banks in Wielkopolska.

Activities of project representatives will be focused on:

1. Developing the foundations and conditions for creating an environment conducive to the development of trends in the scope of limiting food waste at the level of producer, processor, distributor, seller and consumer. The role of the project team representatives boils down to promoting cooperation between entrepreneurs, scientific institutions and

consumers from the region, as well as business environment institutions and local and regional authorities. The new lobbying instruments for counteracting food waste will therefore include support for entrepreneurs who have been working with scientific units as part of setting up consortia and implementing vouchers. Representatives of the project team will create an information brochure promoting entrepreneurs who managed to obtain planned results to counter food waste. Interviews and company presentations at thematic fairs will also be prepared.

2. Study visits for members of the Wielkopolska Regional Parliament and other persons responsible for the development of entrepreneurship, innovation and the directions of activities in the voivodship will be organized. Study visits will be organized to places that as part of the project, received support in the form of vouchers or non-governmental organizations that distribute food to those in need, or to entities that established cooperation and undertook joint actions aimed at reducing food waste and other places where innovative solutions to reduce food waste function.
3. Active participation of representatives of the project team in the events dedicated to Smart Specialisation I: "Bio-based raw materials and food for informed consumers" and Smart Specialization III: "The Industry of tomorrow" (Specialized technologies, machines, devices and their components for the agri-food industry) - this action will affect to disseminate information about good practices and innovations limiting food waste collected as a result of the EcoWaste4Food project.

Task 3. *Building awareness on the Internet.*

Wasting food raises important social problems. Paradoxically, it causes an increase in demand, which translates into a rise in food prices. This in turn leads to the situation, in which people cannot afford basic food products. The media are beginning to see the importance of the problem by starting a discussion. Current campaigns are conducive to building awareness on the web. Therefore, the project plans to use the media to promote good practices related to reducing food waste by:

1. Creating a subpage on the UMWW homepage constituting an information point illustrating the current activities related to the reduction of food waste (basic information about the problem of food waste, examples of good practices and innovation, information on how to

pass food to charity and related tax exemptions resulting from regulations and ordinances, contact details of related institutions and organizations, links to information pages, etc.). In addition, social media will be added to the subpage (Facebook, Twitter, Instagram, Pinterest, etc.). The subpage will include necessary links to entities and people who work to reduce food waste. The path of action for:

- the consumer: with proposals of behaviors and actions that limit wasting - shopping methods, ways to prepare dishes, ways to store food, ways to support non-governmental organizations operating with food banks,
- distributor: proposals for solutions for cooperation with networks, with producers, with other distributors, with non-governmental organizations operating in cooperation with food banks,
- producer: ways to reduce the amount of post-production waste in various industries, effective ways to effectively operate with networks, logistics centers, food monitoring.

2. Participation in nutrition conferences of EcoWaste4Food project members taking place in Poland, to lobby for best practices related to reducing food waste and promoting well-executed projects. Thanks to the development of the Internet there are new promotional tools that can be used to disseminate project results:

- traditional media (radio, television, press),
- internet - websites (own and industry),
- printed materials (reports, brochures, leaflets, brochures, publications, exhibitions, etc.),
- events (conferences, exhibition vernissages, galas, seminars, etc.).

3. Organization of press breakfasts in the convention "culinary creations of taste - the second life of products and dishes". Press breakfasts assume the presence of representatives of local government institutions, enterprises involved in the implementation of activities in the EcoWaste4Food project, as well as representatives of scientific organizations and research institutes who were stakeholders in the project and who support activities in the region. Press breakfasts will be broadcast in the media (TV, radio press). It is planned to involve regional cooking chefs during the breakfast, who can provide ideas on efficient food preparation using products offered in the regional assortment, fresh products that are often not used entirely in households due to their storage properties at home, portion size and specificity of use. The chefs will present in two editions the culinary ways and possibilities of

using products often bought in excess, which are a source of waste in households. This way, the media will share a way to create new flavors and new compositions that can limit the wastage of excess products in homes.

4. Those who use the Internet rarely or not at all will be an important group targeted by the projects efforts. The project will reach them using traditional media by organizing presentations at regular events, such as Flavors of Regions (Smaki Regionów) in Poznań. On this occasion good food management practices will be promoted, competitions will be organized on the radio - for example, for a poem, recipe, game or drawing.

3. Players involved

- 1) Marshal Office of the Wielkopolska Region - coordination and implementation of tasks 1-3, promotion of the activity.
- 2) Stakeholders of Intelligent Specialization 1 and Intelligent Specialization 3 of the Innovative Wielkopolska Program - task 2.
- 3) Food Bank - task 2.
- 4) Wielkopolska enterprises limiting food wastage, including SDKW members - tasks 2 and 3.
- 5) University of Life Sciences in Poznań, Poznań University of Medical Sciences, Poznań University of Technology, Poznań University of Economics, University of Adam Mickiewicz in Poznań - Faculty of Law and Administration - participation in tasks 1 and 2.
- 6) Entities whose participation proves to be justified or necessary during the implementation of the task.

4. Timeframe

2019 - 2020

5. Costs

± 95 000,00 PLN

6. Funding sources

budget of the Wielkopolska Region

Costs under each of the three main ACTIONS are estimates and relate to the period of two years of implementation of the EcoWaste4Food Action Plan and security in the budget of the Wielkopolska

Region. Cost estimates do not include the own contribution of the other proposed participants involved in the implementation of individual tasks.



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Certified translation from Polish

Resolution No. 4/2018 /-
of the Board of the Wielkopolska Region /-
dated November 28, 2018 /-
on adoption of /-
„the Action Plan within the framework of the EcoWaste4Food project /-
concerning the Policy Instrument 1, /-
i.e. Regional Operational Programme for Wielkopolskie Voivodeship for 2014-
2020” /-

On the basis of art. 41 clause 1 of the Act of June 5, on the local self-government of the voivodeship (i.e. Dz.U. of 2018, item 913 as amended) the Board of the Wielkopolska Region resolves as follows; /-

§1

„The Action Plan within the framework of the EcoWaste4Food project concerning the Policy Instrument 1, i.e. Regional Operational Programme for Wielkopolskie Voivodeship for 2014-2020”, attached hereto, is hereby passed. /-

§ 2

The execution of the Resolution shall be entrusted to the Director of the Department of Agriculture and Rural Development. /-

§ 3

The Resolution comes into force as of its adoption. /-

[Stamp:] Marshal of the Region, Marek Woźniak /- signature /-



**Justification /-
to the Resolution No. 4/2018 /-
of the Board of the Wielkopolska Region /-
dated November 28, 2018 /-
on adoption of /-
„the Action Plan within the framework of the EcoWaste4Food project /-
concerning the Policy Instrument 1, /-
i.e. Regional Operational Programme for Wielkopolskie Voivodeship
for 2014-2020” /-**

The main objective of the four-year project “EcoWaste4Food - supporting eco-innovation to reduce food waste and promote a better resource efficient economy” lasting from January 1, 2017 to December 31, 2020, co-financed from the European Funds under the Interreg Europe Programme, is to find proposals of solutions aiming at reducing food waste and demonstrating that food waste could be a source of a resource efficient and environmentally friendly economy in the territories of the regions participating in the project. In addition to the Wielkopolskie Voivodeship, the project partners are the French Provence-Alpes-Côte d'Azur region, the Italian city of Ferrara, the Greek region of Western Macedonia, the Finnish region of South Ostrobothnia, the English county of Devon and the Spanish region of Catalonia, represented by the Waste Agency of Catalonia. The leading partner of the project is the International Centre for Advanced Mediterranean Agronomic Studies - Mediterranean Agronomic Institute of Montpellier (CIHEAM-IAMM). /-

The implementation of the project results from the concluded contracts: /-

- the co-financing agreement of December 2, 2016 between the lead partner CIHEAM-IAMM (the International Centre for Advanced Mediterranean Agronomic Studies - Mediterranean Agronomic Institute of Montpellier, France) and the Centre International de Hautes Etudes acting on behalf of the Monitoring Committee of the Interreg Europe Programme for the implementation of the PGI02134 EcoWaste4food project “Supporting eco-innovation to reduce food waste and promote a better resource efficient economy”, /-



- the partnership agreement of February 24, 2017 concluded by the Wielkopolskie Voivodship with CIHEAM-IAMM concerning the conditions for the implementation of the PGI02134 EcoWaste4Food project. /-

The project was divided into two phases. The first one, lasting two years, focused on the interregional exchange of experience and shared learning on measures taken to reduce food waste. Some of the eco-innovations presented by the partners became an inspiration for actions that are planned to be piloted in the Wielkopolska Region. The first phase will end with the adoption of the Action Plan and its promotion, while the second phase will focus on the implementation of the Action Plan. /-

“The Action Plan within the framework of the EcoWaste4Food project concerning the Policy Instrument 1, i.e. Regional Operational Programme for Wielkopolskie Voivodship for 2014-2020” was developed on the basis of experience gained from the project regions and conclusions developed by the Wielkopolska Stakeholder Group of the EcoWaste4Food project. /-

In the European Union, 88 million tons of food are wasted each year. This corresponds to 173 kg of wasted food per person, and the total amount of produced food /-

[next page]

the amount of wasted food may amount to as much as 7-9 million tons per year (ca. 238 kg/person), which infamously places us fifth in the EU. /-

“The Action Plan within the framework of the EcoWaste4Food project concerning the Policy Instrument 1, i.e. Regional Operational Programme for Wielkopolskie Voivodship for 2014-2020” is in line with the following objectives formulated in the “Updated Development Strategy of the Wielkopolskie Voivodship by 2020”: /-

I. Strategic objective 2. Improving the condition of the environment and rational management of its resources /-

- 1) Operational objective 2.9. Improvement of the natural conditions for agriculture /-
 - Support of agricultural education and promotion of high quality food and traditional and regional products. /-
- 2) Operational objective 2.10. Promotion of environmental attitudes /-
 - Supporting and promoting social initiatives in the sphere of protection of natural environment.



- Propagating cooperation in the relations business – education – public administration – society, within the scope of use and protection of natural environment resources./-
 - Popularizing environmental attitudes. /-
 - Environmentally-friendly programmes and campaigns, also among entrepreneurs. /-
 - Supporting actions favourable to improving condition of the natural environment undertaken by public institutions, private businesses and ordinary citizens. /-
 - Promotion and implementation of programmes of social and environmental responsibility of entrepreneurs. /-
- II. Strategic objective 6. Strengthening the economic potential of the region /-
- 1) Operational objective 6.1. Increasing innovation of enterprises /-
- Increasing the awareness and needs of enterprises in terms of introducing process and product innovations and increasing the attractiveness of products and services. /-
- 2) Operational objective 6.2 Strengthening the role of science and research for innovation and economic growth /-
- Supporting commercialization of innovative products and industries /-
- 3) Operational objective 6.3. Development of network and cooperation in the economy of the region /-
- Promotion of networking and creating cooperative relations in the economy./-
 - Support for joint marketing actions of enterprises. /-
- 4) Operational objective 6.5: Creating conditions for growth of smart specializations, including support for creative industries in the economy /-
- Support for key smart sectors of the economy, resulting from the Regional Innovation Strategy. /-
 - Development of education for smart regional specializations. /-
- 5) Operational objective 6.10. Improvement of conditions for development of agriculture and agricultural processing /-
- Support for development of the sales network of traditional and regional products /-



III. Strategic objective 8. Increasing resources and equalizing social potentials of the region/-

1) Operational objective 8.6. Strengthening the system of services and social assistance. /-

- Support for non-governmental organizations dealing with social welfare and active integration. /-

Moreover, "the Action Plan within the framework of the EcoWaste4Food project concerning the Policy Instrument 1, i.e. Regional Operational Programme for Wielkopolskie Voivodeship for 2014-2020" is part of "the Waste Management Plan for the Wielkopolskie Voivodeship for 2016-2022 together with the investment plan" concerning the following directions of activities in the field of waste prevention and shaping the waste management system: /-

5.1 Municipal waste, including food waste and other biodegradable waste /-

- 4) organizing and conducting educational and information activities at the voivodeship and commune level aiming, inter alia, at: /-
 - (a) raising public awareness of the prevention of waste, including biodegradable waste, with particular emphasis on proper, i.e. sound planning of food purchases to prevent food waste). /-

The Action Plan will be implemented within the budgetary possibilities of the Self-Government of the Wielkopolskie Voivodeship and available funds obtained from external sources. /-

In view of the above, the adoption of this resolution is justified. /-

[Stamp:] Deputy Marshal, Krzysztof Grabowski /- signature /-

I, the undersigned, Grażyna Jabłońska, sworn translator of English, registered by the Minister of Justice under No. TP/4603/05, certify that this is true and complete translation of the presented document in Polish.

Warsaw, December 10, 2018

Register No. 1301/2018

