

The project is co-funded by the European Union and by the National Funds of the participating countries



Movement for the environment MOLIKA DOM Bitola

SIMPLIFIED TENDER DOSSIERS FOR SERVICES – SINGLE TENDER

Name and address of the Contracting Authority:

Project "Symbiotic networks of bio-waste sustainable management" – SYMBIOSIS

Co-funded by the European Union and by the National Funds of the participating countries under the INTERREG IPA Cross-border Cooperation Programme Greece –Republic of North Macedonia 2014-2020

Reference number of Subsidy Contract: SYMBIOSIS – CN1 – SO1.2 – SC017

Tender Issued by the Movement for the Environment MOLIKA DOM Bitola (PP5)

Title of the tender: DEVELOPMENT OF CAMPAIGN VIDEO & AUDIO MATERIAL

Reference number: SYM_PP5_TD.03/2019

SYMBIOSIS

Description of the project

Project title: Symbiotic Networks of Bio-Waste Sustainable Management (SYMBIOSIS)

Background of the project

Greece produces more than 4.5 million tons of residential and commercial urban waste annually with commercial and industrial waste steadily increasing. This is equivalent to 440 kilograms per person. The Republic of North Macedonia, on the other hand, produces more than 750 kilotons of urban waste equivalent of around 350kg/person.

At the area of question only 5-6% of waste is recycled in the Greek part, where on the other side of the borders is about 1%.

In both regions no treatment or use of organic waste is made; all the bio-waste is led to the landfills. Apart from urban waste, both regions are characterized by large extent of agricultural activities which produce large quantities of agro-waste but also important quantities of manure from animal breeding (estimated at 100ktons/year in Florina district

and 70ktons/year in Bitola and Novatsi district areas). Again, no special treatment or exploitation of that material is made.

Apart from some quantities of residues like straw, which is used in the form of silage for animal feeding, all other organic material is either burnt or partly used as fertilizer.

On the other hand, the 'users' of bio-waste e.g. fodder, district heating, bio-energy, fertilizer, greenhouses etc. companies and agricultural processing businesses are very much interested to find and use those wastes either as a raw material or as a fuel to their activities.

Industrial Symbiosis (IS) is an innovative approach that brings together companies from all business sectors with the aim of improving cross industry resource efficiency through the commercial trading of materials, energy and water and sharing assets, logistics and expertise. In order to achieve this, a powerful technological tool will be developed that can manage the waste flows (characterized by types, locations, volumes and seasonality) in relation with the costs of acquisition and transportation, also taking into account the environmental burden, to provide accountable bio-energy networks and increase cross-industry resource efficiency. Symbiosis capitalizes the knowledge on symbiotic practices (eSymbiosis), the Symbiosis bio-energy network in Thessaly (AI4B- www.ai4b.gr/), the biomass processing routes for regional development (BIOCORE/FP7 on lignocelluloses' biomass, GABE project for the biomass exploitation in CBC area) and a long list of models and knowledge available on processing paths.

By changing behavior and common practices against wastes and turning waste into a resource, SYMBIOSIS offers a key to a circular economy in the CBC project area.

The objectives and targets set in the 7th Environment Action Plan, are the key drivers of SYMBIOSIS project for the improvement of waste management, stimulate innovation in recycling, promote trade and use of bio-waste, limit the waste lead to landfills, and create incentives to change consumer behavior.

SYMBIOSIS promotes re-manufacturing, reuse and recycle, and transforms one industry's waste to another's raw material and/or fuel, to pave the way for a more circular economy for the regions, where waste is eliminated and resources are used in an efficient and sustainable way.

The project main objective is to set up an integrated, sustainable, bio-waste management and trading scheme between the partner regions of Western Macedonia in Greece (former pref. of Florina) and the municipality areas of Bitola and Novatsi in Republic of North Macedonia following the Industrial Symbiosis concept.

SYMBIOSIS will develop symbiotic networks bringing together companies and stakeholders from all business sectors, aiming to improve cross industry resource efficiency through material trading and sharing assets in an environmentally sustainable way.

Planning and regional development infrastructures, and matchmaking and retrieval services are key means in SYMBIOSIS to set up cost-effective biomass supply chains.

The project specific objectives are:

1. To set-up a cross industry resource efficiency through organic material trading and sharing

assets;

2. To create industrial sustainable networks especially in the agro-food industry;
3. To achieve maximum efficiencies in energy and water use;
4. To have a reference point where the demand will meet the offer of bio-waste materials in CBC area;
5. To improve the local policies on the management of bio-waste streams and tackle this issue individually following the directions of the EU policy for less bio-waste to the landfills and better utilization for other uses;
6. To improve the environmental benefits by reducing the bio-waste streams that were disposed into landfills;
7. To generate tangible social benefits to local communities by better use of bio resources from the food industry in favor to social activities;
8. To improve the cooperation among sectors and businesses in cross-border area thus improving the local economies and boosting entrepreneurship;
9. To support the local economies by safeguarding raw materials or fuel coming from bio-waste;
10. To promote job creation in the regions into question by exploring the trade opportunities and using the waste as a resource.

SYMBIOSIS activities are grouped within 6 work packages:

WP1: Project Management & Coordination

The scope of this WP is the smooth and on track project implementation, the continuous control and monitoring of project progress and the necessary adaptations and adjustments of the project plan if it is deemed necessary.

WP2: Communication and Dissemination Activities

Scope of this WP is to communicate the project results to the local stakeholders and the direct beneficiaries of the project tools and capabilities. In addition, priority set to the establishment of a public dialogue with the local communities and their sensitization about bio-waste treatment and exploitation.

WP3: Collection and management of data for bio-waste streams

The scope of this WP is to collect all on-the-spot info about bio-waste production and its use.

After the collection of the information an analysis will take place about the benefits in economic and environmental terms from the implementation of cross sectorial bio-waste use.

WP 4: Develop and operate the Symbiosis platform

Scope of this WP is the development of a powerful tool for achieving resource efficiency in CBC area.

WP5: Develop an Action Plan for bio-waste exploitation

The scope of this WP is to report on the national policies on Waste Management and the current level of their implementation in regional level, explain the poor results in bio-waste treatment and recycling, develop an Action Plan for the integration of Symbiosis networks

to the regional strategies and explain how bio-waste fully exploitation could support employment & regional GDP's

WP6: Pilot activities of waste composting

Scope of this WP is to set-up the organic composters and other equipment for organic waste collection and treatment to the selected areas, make a pilot implementation of the composting units for 6m and report of the operation.

SYMBIOSIS target groups:

- “Big producers” like food processing facilities and suppliers, tourist operators (hotels, restaurants, etc.);
- Farmers, field crops, fruit & vegetable growers, bio-organic agriculture associations;
- Citizens; School age youth.
- “Bio-waste users”
- Local authorities and municipalities;
- Ministries: Environment, Tourism, Agriculture, Rural Development, Education
- Environmental protection organizations, Civil society organizations, etc.

SYMBIOSIS expected results are:

- 1) Create new employment in bio-waste sector. According to international standards measuring the impact to the employment on the bio-waste sector, at least 1 person will be employed for the execution of the agreement between a bio-waste producer and a bio-waste user. Therefore if the project succeeds 10 such agreements (in a conservative case) in CBC area this result in the creation of 10 new jobs.
- 2) Create implementation strategies on a decision making level. Due to the development of an Action Plan for exploitation of bio-waste resources in the target regions, the promotion of bio-waste business will flourish creating benefits for the local businesses and the local communities binding the local Action Plans with the National Waste Management Plans.
- 3) Reducing of bio-waste lead to the landfills. Bio-waste is not for disposal. Therefore, through the implementation of the pilot activities, the overall bio-waste will decrease, creating useful fertilizer for the agricultural activities. More importantly, the pilot demonstration activities will show the way towards the integrated and sustainable solutions in bio-waste management and treatment.
- 4) Create economic benefits through the use of a powerful networking tool, the Symbiosis platform. Through the Symbiosis platform every company operating in the area will have the ability to go through the platform and to examine business opportunities raised by finding and securing cheap raw material for his/her business. Apart from the resource information, cost analysis of transfer, handling and process will be available.
- 4) Reducing the environmental burden. For every ton of bio-waste that is not lead to the landfill or it is not burn in open-fires at the field, there is a reduction in Carbon dioxide (CO₂) and/or methane (CH₄) emitted to the atmosphere. If we set a target for better treatment of 10.000tons/year in the CBC area this results to 300 tons reduction of methane emissions or 6300 CO₂ tons eq.

SYMBIOSIS Partnership

1) Public Enterprise KOMUNALEC Bitola (Overall Lead Partner)

<http://www.komunalecbt.com.mk/>

2) Waste Management of Western Macedonia DIADYMA SA Greece (Partner)

<http://www.diadyma.gr>

3) Public Enterprise for communal works KOMUNALNA HIGIENA Novaci (Partner)

4) InnoPolis – Centre for Innovation and Culture Greece (Partner)

<http://www.innopolis.org>

5) Movement for Environment MOLIKA DOM Bitola (Partner)

<http://www.molika.mk>

6) National Technical University in Athens Greece (Partner)

<http://www.ntua.gr/en/>

For more information regarding SYMBIOSIS, visit project's web site:

www.symbiosis.eu