

After LIFE Communication Plan

Development and demonstration of an innovative household dryer
for the treatment of organic waste

LIFE 08 ENV/GR/000566



Project Beneficiaries



National Technical
University of Athens

DRYWASTE



Papagos- Cholargos
Municipality

INTRODUCTION

This After Life communication plan of DRYWASTE project constitutes a very important part of the project as it is involved with all the foreseen activities that need to be performed in order to enhance the dissemination and diffusion of the project objectives, actions and results after its completion. It is clear, that a waste management/treatment project of this importance will be of limited value if there is no general awareness to the public and the stakeholders on the developed prototype technology. Therefore, the After Life communication plan incorporates a detailed description of all the appropriate actions aiming to ensure the effective dissemination and communication of the project results after its completion, by informing relevant stakeholders and target groups about the DRYWASTE LIFE+ project technology that was developed and demonstrated at the Municipality of Papagos-Cholargos in Athens. More specifically the actions that will be implemented after the end of the project are listed in Table 1.

Table 1. Actions aiming to continue to communicate and disseminating the project after the end of its duration

Action	Action Title	Objective	Timeframe	Partner /Funding
1	Project Web-Site continuous update	To disseminate the project objectives, activities and findings at National and International level	Minimum five (5) years after the end of the project implementation	PAPAGOS and NTUA/Own funds
2	Notice boards maintenance	To disseminate the project objectives and targets at regional level and the NTUA scientific staff	Five (5) years after the end of the project implementation	PAPAGOS and NTUA/Own funds
3	Technology application at large scale	To make use of the technology at large scale in Municipalities in Greece and Europe	This action will continue throughout the following years	PAPAGOS and NTUA/Own funds
4	DVD film distribution	To disseminate the DRYWASTE technology through the media and the world wide web	This action will continue throughout the following years	PAPAGOS and NTUA/Own funds
5	Publications to scientific magazines and conferences	To disseminate the project findings through the scientific community	This action will continue throughout the following years	NTUA/Own funds
6	International conference organization	To disseminate the project findings through the scientific community and the relevant stakeholders	This conference will take place every two (2) years for the next four (4) years	NTUA/Own funds
7	Research results/reports distribution	To disseminate the project findings through the scientific community and the relevant stakeholders	This action will continue throughout the following years	PAPAGOS and NTUA/Own funds
8	Continuation of raising awareness campaigns	To raise awareness to the public at local and national level	Five (5) years after the project implementation	PAPAGOS and NTUA/Own funds
9	Continuation of research at the NTUA premises and other universities	To continue the research in order to further improve the efficiency of the DRYWASTE technology and also research alternative uses for the final dry product	This action will continue throughout the following years	NTUA/Own funds
10	Communication with the EU	To have a constructive communication with the EU instruments in order to further improve the after Life communication of the project	Five (5) years after the project implementation	NTUA/Own funds

AFTER LIFE COMMUNICATION STRATEGY



[Conference on Sustainable Solid Waste Management, 28th & 29th June 2012, Papagos-Cholargos City Hall - Confer](#)



Picture 1: DRYWASTE project web-site

Action.1 (Project Web-Site continuous update): The [DRYWASTE](#) project web site (**picture 1**) that was created by the National Technical University of Athens (NTUA) during the project implementation, providing updated information to every interested party, shall be updated for at least 5 years after the project.

News and recent reports on the evolution of the domestic waste drying technology will be published through the **media** web-page of the web-site every 3 months while most of the technical information obtained throughout the project implementation, will be available on line for every interested party in Greek and English language. The latest communication activities involving the DRYWASTE waste dryer (press conferences, newspaper articles, press releases, etc.) will also be published through the **media** web-page. Recent articles about the national and international on-going research carried out on the domestic waste drying technology will also be uploaded on the new web-page entitled: **Domestic Waste Drying Technology Update**. On the **contact** web-page the user shall also be able to communicate through email, telephone and fax with the research team in order to obtain more details on the waste drying technology. The active link of the web-site will be available on other project web-sites implemented by the NTUA and Papagos-Cholargos Municipality.

Action.2 (Notice boards maintenance): The (4) notice boards (**picture 2**) that were erected in selected areas of the Papagos-Cholargos Municipality and the National

Technical University of Athens will be maintained for at least 5 years after the end of the project thus the objectives, the actions and the results of the project will still be disseminated to the wider public after the project ends.



Picture 2: DRYWASTE project notice board erected at the former Papagos Municipality City Hall

The notice boards will provide to the public information on the objectives of the project, its budget, its findings and results. The notice boards shall remain at Papagos-Cholargos Municipality and National Technical University of Athens premises for at least 5 years after the end of the project.

Action.3 (Technology application at large scale): This action focuses on the efforts that will be made by the project team to apply the DRYWASTE technology at large scale. Papagos-Cholargos Municipality is focusing in applying the waste drying technology in the future to a large part of the Municipality. The main problem associated with the successful implementation of such a task is the lack of funding sources, whereas the exploitation and the market potential of dried biomass still remains a challenge. The Municipality with the technical knowledge of the NTUA has already applied four proposals in the following funding sources i.e. Green fund and ESPA, in order to become the first Municipality worldwide that has installed and operates a domestic bio-waste drying scheme while producing high quality by-products. Aspropyrgos Municipality has also applied for funding to the Green fund for the procurement of the DRYWASTE bio-waste dryers. This action will significantly contribute in increasing the project's dissemination and promoting the developed technology. It is expected that the first full scale implementation of the bio-waste drying scheme will be considered as a good case study on alternative and sustainable bio-waste management that can be applied to other municipalities internationally aiming to achieve the set policy and legislative targets. It must be noted that many municipalities in Greece have already shown great interest in testing or even applying at large scale the domestic bio-waste drying technology (e.g. Saronikos

Municipality, Municipality of Nea Smirni, Municipality of Aspropyrgos, Municipality of Athens, Municipality of Nestos Municipality of Naxos etc.)

Action.4 (DVD film distribution): The 8 minute DVD film (**picture 3**) that was produced during the project implementation will continue to be distributed to various target audience through the project’s web-site and popular web-sites such as U-Tube and Vimeo throughout the years. The film will continue to be distributed to various media in order to provide feed material for reportages concerning the DRYWASTE technology by NTUA, PAPAGOS and the project’s steering committee.



Picture 3. Part of the DVD film presented in SKAI news in Greece on January 2012.

The film has been produced in both Greek and English language in order for everyone to be able to become familiar with the DRYWASTE technology. The DVD film will also be distributed to the public and the scientific community in upcoming events organized by the NTUA in the framework of its activities (i.e. conferences, workshops, academic lectures etc). The NTUA organizes events at least twice per year disseminating its technologies including waste management and treatment technologies. The DRYWASTE technology will be on top of the list in all the events. Papagos-Cholargos Municipality will also promote the technology through local articles and events that regularly take place in the Municipality.

Action.5 (Publications to scientific magazines and conferences): The projects' findings will continue to be disseminated by the NTUA through presentations in conferences, international journals and workshops. More specifically, two scientific articles, regarding the results of the preliminary experiments and the results of the demonstration action, have been developed and accepted in international peer reviewed journals. It should be noted that no publications concerning domestic waste drying have been found, thus every relevant publication in the near future will have reference on the project results through the accepted publications thus achieving highest dissemination and impact of the technology to the scientific community. Scientific articles have already been sent to four International Conferences. Three (3) articles have been presented in the ATHENS 2012 **"INTERNATIONAL CONFERENCE ON SUSTAINABLE SOLID WASTE MANAGEMENT"**

which was organized in the framework of the DRYWASTE project in Athens on the 28th and 29th of June 2012. One article has been sent to the 4th International Conference of the «[HELLENIC SOLID WASTE MANAGEMENT ASSOCIATION](#)» which will take place in Athens on the 30th November until the 1st of December 2012. Finally, one more article was sent and accepted to the Fourth International Symposium «[On Energy from Biomass and Waste](#)» which was held in Venice (Italy) on the 12th -15th of November 2012. One more scientific article was also sent to the «[PAN HELLENIC ASSOCIATION OF CHEMICAL ENGINEERS](#)» journal after request of the association and it was published in August 2012. The DRYWASTE team is planning to send more articles in the near future in International and National Conferences promoting the new technology and the results of the pilot scale demonstration in order to further disseminate the project's objectives and findings.

Action.6 (International conference organization): The ATHENS 2012 «[INTERNATIONAL CONFERENCE ON SUSTAINABLE SOLID WASTE MANAGEMENT](#)» which was organized in the framework of the DRYWASTE project (**picture 4**) was decided to be held every two (2) years aiming to establish an international conference in Greece focusing on solid waste management. The events will be organized by the NTUA («Unit of Environmental Science and Technology») whereas special workshops shall be envisaged for municipal representatives aiming to promote new and promising technologies on MSW management such as DRYWASTE. The 2nd International Conference on sustainable solid waste management ATHENS 2014 «<http://athens2014.biowaste.gr/>» shall be carried out in 12th to 14th of June 2014 within the framework of EU LIFE+ project «ATHENS BIOWASTE». Considering the high level of dissemination achieved in the first conference (three TV broadcasts on national TV and more than 35 newspaper and internet articles) the achievements of the project are expected to be disseminated throughout the following years.



Picture 4: «ATHENS 2012» International Conference on Sustainable Solid Waste Management

The **ATHENS 2012** conference web-site (<http://uest.ntua.gr/athens2012>) will also be on the World Wide Web until the next **International Conference (i.e. ATHENS 2014)** thus providing information to the visitors on the results of the conference organized in the framework of the DRYWASTE project and information on the project's findings and training seminar which took place during the two days of the Conference, through the Conference Proceedings which remain available online for every interested party.

Action.7 (Research results/reports distribution): The project beneficiaries have already produced various reports for the public and relevant stakeholders: the evaluation of the systems performance, the economic feasibility study, the LCA analysis, the environmental and social benefits of the use of the system, the suggestions for the use of the system at a large scale, the suggestions for the use of the final dry product, etc. All scientific information obtained and evaluated throughout the project implementation provides thorough information on the bio-waste drying process and technology. This information is available to all interested parties in electronic format and hardcopy thus facilitating beneficiaries' efforts to introduce this technology in the society as part of its waste management culture. For further information on the project and its findings the users can communicate with NTUA and Papagos-Cholargos working team (contact information is given to all informative materials and to the project's website).

Action.8 (Continuation of raising awareness campaigns): The NTUA and Papagos-Cholargos Municipality will continue raising public awareness (picture 5). The informative material developed during the project implementation (leaflets, training material for civilians, training material for Municipality representatives) will be available on the project's web-site and on information boards that have been erected in NTUA and PAPAGOS premises.



Picture 5. Launching event that took place during the implementation of the DRYWASTE project

The material will also be distributed in upcoming events related to waste management, energy and climate change. It must be emphasized that the bio-waste dryer technology will continue to operate at pilot scale within the framework of an ongoing LIFE + project entitled "Waste2Bio" (LIFE 11 ENV/GR/000949) aiming to

convert dried bio-waste into bioethanol through appropriate biological processes. To this end the developed technology will continue to be disseminated, whereas appropriate activities also foresee raising environmental and waste management public awareness in Papagos-Cholargos and Aspropyrgos. The informative material produced during the implementation of the DRYWASTE project will supplement the informative material foreseen to be produced during the implementation of the Waste2Bio project. Thus it is expected to have rather high rates of raising awareness.

Action.9 (Continuation of research at the NTUA premises and other universities):

The research activities on the alternative uses of the dried bio-waste (**picture 6**) and the further improvement of the dryer's performance will continue after the end of the project's implementation. More specifically, the research activities shall be performed by graduate and post graduate students which will be supervised by PhD students, post doc researchers and professor Loizidou. The 20 waste dryers constructed before the initiation of the project's demonstration phase plus the optimized waste dryer (1 in terms of numbers) that was developed during the project implementation, (21 in total) are currently being operated at lab scale in order to further boost bio-waste drying process and the sustainable exploitation of dried biomass. They are expected to be re-introduced at households of PAPAGOS during the demonstration phase of the Waste2bio project. Additionally, NTUA is following a multidisciplinary approach by involving different departments of the school of chemical engineering aiming to extrapolate and define in depth the alternative end uses of the dried biomass as compost, biogas, ethanol and pellets through appropriate lab scale experiments. More specifically, the dried material will be used as feedstock in lab scale composting, anaerobic digestion and bio-catalytic systems in order to determine the production efficiency and the quality characteristics of compost, biogas and bio-ethanol respectively.



Picture 6. Samples of dry food waste used for the production of ethanol at the NTUA labs

Action.10 (Communication with the EU): While both partners will be involved in communications with the public, stakeholders and the scientific community after the official closure of the project, the National Technical University of Athens (NTUA) will remain the contact point for communication with the European Union throughout



the After-LIFE activities. As information is made available, the EU will be informed of key milestones in the implementation of the After-LIFE Communication Plan.

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