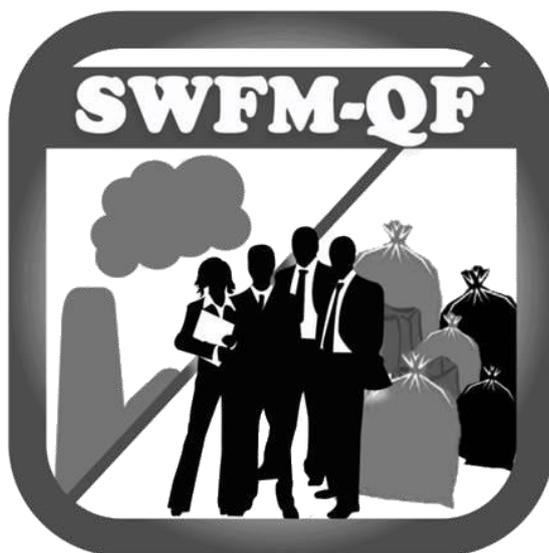




Executive Agency, Education, Audiovisual and Culture



## **Towards a European Qualification for Solid Waste Facilities' Managers**

Final Report

Public Part

## Project information

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## Executive Summary

Waste management, including recycling, is the largest sub-sector of the EU27 eco-industry. It is still very dynamic and offers economic opportunities with vast potential for expansion. In 2008, its turnover (€145 billion) represented around 1% of the EU's GDP and offered 2 million jobs. Compliance with EU policy would help create a sector with 2.4 million jobs and a total annual turnover of €187 billion, till 2020.

To date and despite the similarities in the regulatory framework, the occupation and the training of Solid Waste Facilities Managers (SWFMs) are very diverse in European countries. Designation of occupational qualifications and Vocational Educational Training (VET) programs are still within the domain of members state regulations and are based on national traditions and priorities.

SWFM-QF project aimed at the development of the European, harmonized occupational qualifications and the respective training framework to address the needs of facilities managers in the waste industry. SWFM-QF project succeeded to:

- identify the structure and contents of the professional activities and qualifications for the SWFM occupation in the European market and the specificities linked to the waste management sector;
- explore and compare the VET processes whereby these qualifications are acquired;
- detail the proposed qualifications with regard to the respective required learning outcomes, and for every learning outcome depicting knowledge, skills, competences descriptors in alignment with level 6 of the European Qualifications Framework (EQF), implementing an extensively interactive collaborative approach incorporating stakeholders involvement, too;
- create a harmonized training frame for the different developed SWFM qualifications modules
- establish a multi-national network engaging and actively involving key stakeholders from all project's short and long term target groups.

The sector of waste management will continue to change and develop, mainly due to the initiatives and policies adopted in EU and the new technologies and techniques introduced, thus rising a huge need of highly qualified engineers, operational managers and processing technicians all over Europe which now and in the future can only be met through workforce mobility, transparency and mutual recognition of professional qualifications and training.

The SWFM-QF project outcomes will be beneficial in raising transparency for required competences and mobility of professionals in the environmental protection business sector introducing an innovative clearly defined methodology for the creation of the Solid Waste Facility Manager job profile, based on the actual needs of the labour market, the guidelines of EQF and ECVET tools, across Europe.

The development of the new occupational qualifications for SWFMs and the promotion of the new VET courses for the employees will contribute to the sustainable and efficient operation of existing and new solid waste management facilities' and their improved operational, environmental and financial performance. SWFM-QF outcomes will help waste management companies to select the appropriate candidates and professionals to improve their eligibility within the waste management labour market.

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# 1. Project Objectives

The project "Towards a European Qualification for Solid Waste Facilities' Managers" (Acronym: SWFM-QF) aimed and succeeded to develop:

- a) the Occupational Qualifications and
- b) the required corresponding vocational training framework of managers occupied in modern solid waste management facilities.

In order to achieve the abovementioned overarching aim SWFM-QF partners:

- **investigated and identified, in European Union (EU) Countries, the structure, contents and regulations of the existing qualifications for the occupation of the Solid Waste Facility Manager (SWFM) in the European market.**
- **explored and compared the Vocational and Educational Training (VET) processes whereby these qualifications are and can be acquired.**

Two different questionnaire surveys were conducted in eight EU countries, one concerning required SWFM qualifications and another – existing VET systems.

Project target groups, clustered in the following 3 categories:

- **Direct Beneficiaries** that include Developers of Qualifications at Sectoral and National Level, Experts working on EQF and ECVET issues, National and European Accreditation Organisations of Vocational Qualifications, National and European Organisations for Vocational Education Training, Research institutes on Vocational and Education Training, Waste Management companies and Agencies
- **Vocational training providers and potential learners.**
- **Policy and Decision Makers:** Authorities in the fields of education environment, waste management, National and International Waste Management Associations.

were contacted and interviewed by SWFM-QF partners, in order to provide first-hand information and current insights into the state of the importance of knowledge, skills and competences for SWFM occupation as well as the labour market conditions and VET offers in the solid waste management sector.

Both surveys' results are presented in the **SWFM-QF Comparison Report**.

The SWFM-QF Comparison report analyses and compares the qualifications, national vocational education and training (VET) systems and the labour markets in the field of waste management in the eight, SWFM-QF project partners', European countries. The report focuses on the qualification levels for technicians (EQF 4) and for managers (EQF 6).

The aforementioned stakeholders were asked to join the **SWFM-QF national Networks**, that were established one in each separate EU country participating in the project and further contribute with their knowledge and expertise to the project evolution. Therefore eight national SWFM-QF Networks were established, in Bulgaria, Greece, Italy, Germany, Lithuania, Hungary, Poland and England. The SWFM-QF Network has also been expanded to Slovenia, Romania and FYROM and numbers almost 400 members.

Based on the Comparison Report results and the data acquired by project's target groups **the occupational qualifications and the respective training framework for managers employed in different types of solid waste management facilities**, were developed. The occupational qualifications were developed in alignment with

EQF and ECVET tools, aiming and supporting to the recognition and adoption of the necessary qualifications of solid waste management occupation, across the European Union countries.

While developing the different qualifications modules, consideration were given to all modern main trends affecting the solid waste management sector and their influence on the functions and the activities a SWFM is involved in, and the tasks that have to accomplish while managing a solid waste management facility. Such trends are the:

- increased internationalization of the market and growing subcontracting of activities
- demand for sustainable operation and continuously improved environmental performance of the facilities
- introduction of new technologies and application of automated and advanced processes
- occupational health and safety concerns and improvements
- new provisions of national and European regulatory framework.

For each developed qualification module, the requirements for a training course that will ensure acquisition of the designated learning outcomes, for each identified SWFM professional activity and task were determined. All the training courses contents were organised in order to have the format of an e-toolkit, **the SWFM-QF Info-Training Toolkit**. That will ease the organization and holding of training courses for each different SWFM qualification module developed.

The structure, the contents and the integrity of both the SWFM occupational qualifications and the Info-Training toolkit were evaluated by the members of the SWFM-QF National Networks (project's key stakeholders) and other external experts in solid waste management and VET sectors. Therefore revised, improved versions of SWFM occupational qualifications and the Info-Training toolkit were produced.

SWFM-QF deliverables along with other valuable information on issues regarding vocational training and educational issues addressed to solid waste management were input in the **SWFM-QF Communication and Knowledge Exchange Tool**. In this IT platform project's target groups and end users may find valuable information both on vocational and educational training issues associated or not to solid waste management. They may also add their work under the predefined topics.

SWFM-QF activities, results and deliverables were communicated to project's target groups and other beneficiaries via a series of **communication and dissemination actions and events** which included:

- Compilation and distribution of five e-Newsletters in all partners' country languages
- Organisation of informative workshops and participation in other projects' informative events, in other national and international workshops and conferences
- Issue and distribution either in hardcopy or electronically of informative leaflets and a 12-page coloured brochure, describing the SWFM-QF main deliverables and achievements.
- Publication in national and international mass media of technical articles and press releases.

SWFM-QF website is the project's main informational node. It will continue to communicate project's deliverables, results and provide updated valuable information to SWFM-QF target groups after the project ending, too.

SWFM-QF partners will continue to inform existing SWFM-QF Network members about their future activities related and aiming to the exploitation of project deliverables. They will also continue to enrol new members, expanding the SWFM-QF multinational Network.

**An Exploitation Plan was concluded after the SWFM-QF Final Conference** on issues related to the sustainability and further exploitation of SWFM-QF project results and delivered products. It serves as an agenda for future opportunities and possibilities of increasing the reach of the dissemination and communication project in the targeted users' community. The SWFM-QF exploitation strategy focuses on the following objectives:

- to promote and raise awareness about the project's contents, achievements and deliverables;
- to successfully transfer the results to appropriate decision-making bodies aiming for further cooperation and support to the adoption and promotion of SWFM-QF results and deliverables;
- to create a core group of stakeholders interested in exploiting SWFM-QF results, thus encouraging interactions and expanding SWFM-QF current networking;
- to harmonize the partners' exploitation activities for a more efficient and effective communication.
- to plan specific activities for exploitation after the project lifetime.

SWFM-QF project stakeholders will be invited to participate in the foreseen exploitation activities, too.

The sector of waste management is rapidly changing and developing, mainly due to the initiatives and policies adopted in EU and the new technologies and techniques introduced, thus rising a huge need of highly qualified engineers, operational managers and processing technicians all over Europe which now and in the future can only be met through workforce mobility, transparency and mutual recognition of professional qualifications and training.

The development of the new professional qualifications for SWFMs and the promotion of the new VET courses for the employees of waste management facilities will facilitate the careers' evolution of modern SWFM and the entrance of young and new professionals in the waste management labour market. SWFM-QF project results will lead to the creation of new job positions, the improved operation and environmental performance of solid waste management facilities.

The SWFM-QF project outcomes will be beneficial in raising transparency for required competences and mobility of professionals in the environmental protection business sector introducing an innovative clearly defined methodology for the creation of the Solid Waste Facility Manager professional profile, based on the actual needs of the labour market, across different countries in Europe.

It is foreseen that the high demand of professionals in the fields of Waste and Pollution Management sector of the eco-industry, the priorities of the E.U. policies towards sustainable development and green economy combined to the collaborative and networking character of the project, to maintain at a high level the demand for the project results and deliverables in a long term perspective.

## 2. Project Approach

The methodological concept adopted by SWFM-QF project was elaborated using a Logical Framework Analysis. The Work Packages have been designed to support the core objectives of the project in terms of the following progressive activities:

- Identification of the structure, content and regulation of the qualifications of the occupations related to Solid Waste Facilities Management in the European Market; assessment of the existing national VET systems related.
- Establishment of a multi-national network consisting of representatives of all the project's short and long term target groups (SWFM-QF Network). Development of a web based interactive platform, the communication and knowledge exchange tool.
- Development of the Solid Waste Facilities Manager (SWFM) occupational qualifications, based on the methodology for the development of a Professional Profile. Development of an Informative and Training Toolkit analysing the structure, the contents of the required vocational training courses for acquisition of the designated learning outcomes described in terms of knowledge, skills and competences.
- Implementation of an extensively interactive collaborative approach incorporating a continuous stakeholders' involvement throughout the project lifetime. Members of SWFM-QF national networks originating from the project's target groups contributed both to the development and the evaluation of the project's main deliverables.
- Compilation and implementation of the SWFM-QF Communication and Disseminations Strategy. Organization and holding of a series of communication and dissemination activities (workshops, brochures, press articles, newsletters, EU presentations) presenting project's activities, results and outcomes. Development and launching of the SWMF – QF website in which all project's results and deliverables are available in 8 different languages;
- Development of a self-sustaining implementation strategy to support the recognition and transfer of qualifications across the European countries;

The whole approach was supervised and coordinated, based on a critical path analysis of work plan, by a concrete and flexible management structure comprised of units and partners' specific roles that ensured effective management procedures.

Quality assurance regarding the smooth and proper project evolution with respect to designated objectives and expected results was achieved by the compilation of project's Quality Work Plan, explicitly documented in SWFM-QF Quality Handbook. An Internal Audit Program was agreed between partners. A set of measurable indicators were defined and respective target values were set. Internal monitoring actions and audits were carried out during project's lifetime. Whenever deviations were identified, corrective actions were proposed and their applications were audited. Special emphasis has been given to the dissemination and exploitation actions and the transferability of the project's outcomes to interested parties and foreseen target groups after the project conclusion. The Exploitation Plan contents were concluded after an analytical open discussion, for the sustainability and further exploitation of SWFM-QF project results and delivered products between the project's partners and key stakeholders that participated at the SWFM-QF Final Conference.

### 3. Project Outcomes & Results

The major achievements and results of the SWFM-QF project within the reporting period concerning the project's objectives are:

- Objectives:**
- 1. Identify the structure, content and regulation of the qualifications for the SWFM occupation in the European market**
  - 2. Explore and compare the VET processes whereby these qualifications are acquired**

#### Conduction of Research Surveys – Compilation of National Reports

The National Survey Reports that were conducted and compiled in 8 EU countries (Bulgaria, Germany, Greece, Italy, Hungary, Lithuania, Poland and UK) summarize the results of two research surveys conducted at each participating country. Two questionnaires were compiled, one for SWFM qualifications and one for existing VET courses in Waste Management sector. In each country a survey was carried out among waste management companies, associations, authorities and training organizations to obtain first hand data on the work requirements and qualifications as well as the VET offers for technicians and managers.

More than 3700 contacts were made, by all partners, and 750 answered questionnaires have been received.

All survey's deliverables are available on SWFM-QF project official website (<http://www.swfm-qf.eu>).

SWFM-QF target groups, such as waste management authorities and companies, VET competent bodies and providers and other bodies activated in these fields may extract valuable information regarding the waste management market and VET provided services in each one of the abovementioned countries.

- Objectives: 3. Detail existing qualifications to the respective NQFs and assess their correlation and alignment with EQF/ECVET**

#### Compilation of Comparison report of the identified national qualifications and VET

Based on all the surveys' national reports and the identified qualifications for Solid Waste Facilities' Managers a Comparison Report was compiled. The report analyzes and compares the qualifications and the national vocational education and training system (VET-system) in Bulgaria, Germany, Greece, Hungary, Italy, Lithuania, Poland and the UK – in the field of waste management. The report is structured on the answers of six key questions and focuses on the qualification levels of technicians (= EQF 4) and managers (=EQF 6). That makes easier the navigation through its contents and it helps to compare the results from the 8 EU focus countries against the European and each national legal, political, economic and educational background.

**From the comparison report It is resulting that efficiency in waste management is directly associated and requires up-to-date and qualified personnel, both on the technician and managerial level, both for the municipal and the industrial solid waste management sectors.**

A gap between current qualifications and training needs was identified in almost all 8 EU countries where the surveys conducted.

### Communication and Knowledge Exchange Tool

SWFM-QF IT Platform (ITP) serves as a tank of knowledge and information on solid waste management and VET issues. New knowledge developed during the SWFM-QF project plus experiences gained from surveys, workshops, and conferences, including good practices, innovative training procedures, training material sources, articles, European legislative framework, for the Waste Management industry and Vocational Training Issues was added in the ITP. ITP contents are clustered in ten different topics and a search engine has been added in order interested stakeholders to find easier the issues they are looking for.

SWFM-QF partners agreed and will continue to enrich ITP with informational material after project's conclusion. It was acknowledged that this is a good practice to trigger the interest of project target groups and other interested stakeholders and motivate them to register to SWFM-QF Network.

The overall contents of the SWFM-QF Knowledge Exchange tool can be accessed via the project's website (<http://www.swfm-qf.eu>).

**Objectives:** **4. Identify the competences linked to the specificities of the sector**

**5. Create a harmonized competence and training frame for Solid Waste Facilities Managers qualifications**

### The Solid Waste Facilities Managers' Occupational Qualifications

A harmonized qualifications and training frame for managers employed in different types of solid waste management facilities, was developed, in alignment with the European Qualifications Framework (EQF), the common frame of reference levels of qualifications in EU, aiming and supporting to the recognition and adoption of the necessary qualifications of solid waste management occupation, across the European Union countries.

The methodology used to compile the SWFM occupational Qualifications was based on the methodology implemented for the development of a Professional Profile. Therefore, the main Professional Functions, Activities and Tasks that a Manager occupied in a Solid Waste Facility' should practice, were identified.

While developing the SWFM professional profile the learning outcomes associated with each professional task were designated, too. Learning outcomes are considered the criteria for the certification and performance-value reflected in EQF. Then learning outcomes were described in units of knowledge, skills and competences descriptors.

Modern solid waste management incorporates the implementation of different technologies for different and similar types of solid waste. From the SWFM-QF comparison report it is clearly concluded that solid waste facilities managers must not only possess technical but also administrative and financial management qualifications. Based on these facts, two suites of qualification modules were developed:

1. The “technical” suite of qualifications is referred only to the technical operations implemented in a solid waste management facility, strongly depending on the waste management technology, applied at the facility. The technical qualifications suite was developed for the following solid waste management facilities-technologies:

- Municipal Solid Waste Sorting
- Recycling
- Composting
- Anaerobic Digestion and Mechanical Biological Treatment
- Thermal Treatment
- Sanitary Landfill

2. The generic qualifications which are necessary for managers, no matter which solid waste management technology is implemented, comprise the following professional functions:

- Operational Management
- Financial and Contractual management
- Human Resources
- New Projects' Management
- Environmental Management
- Health and Safety

Each qualification module was weighted based on the European Credit System for Vocational and Education Training (ECVET), in order to provide a full 180 points curriculum, which could be equivalent to a two years full time-training program.

The concept for the development of separate suites of qualifications presents significant advantages both for the solid waste facilities managers/trainees and the vocational training providers, since they can choose different modules from each suite and thus develop different, multiple training pathways according the identified required training needs, each time.

All SWFM qualifications modules can be accessed via SWFM-QF webpage at [http://www.swfm-qf.eu/main/?page\\_id=7304&lang=en](http://www.swfm-qf.eu/main/?page_id=7304&lang=en)

### *The Solid Waste Facilities Managers' Info-Training Toolkit*

For each different, developed occupational qualification module the requirements for a training course that will ensure the acquisition of the designated learning outcomes for each identified SWFM professional activity and task were determined. All the training courses information were organised in order to have the format of an e-toolkit, the SWFM-QF Info-Training Toolkit, that eases the planning and organization of training courses for each different SWFM qualification module developed.

The SWFM-QF Info-Training Toolkit includes:

- The curriculum of the vocational training courses addressed to Solid Waste Facilities' Managers based on the identified required qualifications. Within each curriculum, are explicitly analysed the training course's:
  - ✓ Concept
  - ✓ Structure and Contents
  - ✓ Trainers' and Trainees' requirements
  - ✓ Training Facilities and Infrastructure requirements.
- Proposals for educational, training and other informative material.
- A multinational glossary of the relative solid waste management technical terms used in different solid waste management technologies and facilities.

Info-Training toolkit contents can be accessed via SWFM-QF webpage at [http://www.swfm-qf.eu/main/?page\\_id=7391&lang=en](http://www.swfm-qf.eu/main/?page_id=7391&lang=en).

In order to improve the contents and the structure of both the qualification modules and the Info-Training toolkit, SWFM-QF partners organised and conducted a two phase evaluation process, an internal and an external evaluation, at each participating country. The internal evaluation was conducted, via an on-line questionnaire, by the members of the SWFM-QF Network and other interested stakeholders that project partners have contacted during the project elaboration. The external evaluation was conducted by two experts, per participating country, in solid waste management and vocational training topics, too. In both cases evaluation concerned the integrity of the proposed solid waste managers' professional activities, the value of the respective correlated learning outcomes, the completeness of the analysed knowledge, skills and competences descriptors and the extent of their conformity with the EQF level 6.

An evaluation report was compiled based on the answers received. Each external evaluator also compiled and filed a report with his/her improvement proposals. The improvement proposals were integrated in the final version of the SWFM occupational qualifications and the ITT contents.

**Objectives: 4. Favour the project results adoption**

SWFM-QF Website

In SWFM-QF web-site - <http://www.swfm-qf.eu/main/> all project's stakeholders current and future ones will be able to find and further exploit all project's results, deliverables, past and future activities, articles on different waste management and VET issues, links to similar EU projects. In addition, via the website, stakeholders may contact SWFM-QF partners, join SWFM-QF Network and contact its members, too. The main core of website is available in the languages of all participating countries (EN, GR, DE, IT, HU, PL, LT, BG).

During the two years of project elaboration more than 10500 unique visitors, from countries all over the world (EU, Canada, Saudi, Arabia, China, Japan, USA) visited the SWFM-QF webpage. SWFM-QF website will remain active and will be currently updated for the next at least 5 years.

SWFM-QF Brochure

A 12-pages brochure was compiled detailing enough the core project's results and deliverables. The brochure was translated in all partners' languages and its translated versions will be forwarded to members of project's target groups and stakeholders. It will also distributed to informational events that partners will participate for exploitation purposes.

Project's Newsletters

Five Newsletters were created providing information about the project's progress and results/products and relative articles on Solid Waste qualifications issues. The Newsletters were disseminated in electronic format via e-Newsletter Services (>1500 recipients), direct emails. They are also available on SWFM-QF project official website (<http://www.swfm-qf.eu>) in the languages of all the participating countries.

Informative Leaflets

Two informative leaflets, a "start-up" (first) leaflet was prepared in view of the informative workshops at the beginning of the project. As second one was compiled describing SWFM-QF core results and deliverables. Both leaflets were and will be

distributed during national and international informative events, wherever project partners participated and will participate in the future. Both leaflets are translated in partners' languages.

#### Articles and Press releases

SWFM-QF Project Partners issued 19 press releases and publicised 14 technical articles about SWFM-QF project to National Press and Magazines.

#### Participation to other Events and Conferences

SWFM-QF Partners, in the framework of dissemination activities, participate at twenty one (21) different National and International Events and Conferences presenting project's activities and main outputs to the public. Relative events are available on SWFM-QF project official website ([www.swfm-qf.eu](http://www.swfm-qf.eu)).

#### Informative Workshops

In all participating countries partners organised one one-day informative workshop at national level for the dissemination of the project identity. Presentations were given on project's actions, anticipated results and outcomes, vocational training aspects and needs on solid waste management, vocational training and waste management legislative framework. Stakeholders from all identified target groups and end users were invited. Presentations and other informative material resulting from the workshops holding can be found to project website (<http://www.swfm-qf.eu>).

### **Objectives: 5. Promote the suitable use of the project outcomes**

#### The SWFM-QF multinational Network

The multi-national Network was created, with the engagement and active involvement of key stakeholders from all project's short and long term target groups. At the moment, the SWFM-QF Network numbers 392 members at 11 European countries. Network members had an active role during the project elaboration participating in surveys compilation and mainly by evaluating and proposing improvements both for the occupational qualifications and the Info-Training Toolkit structure and contents. Their role is also important, after the project conclusion, for the adaptation and exploitation of project results and deliverables.

SWFM-QF partners have agreed to continue looking for and register new members to the SWFM-QF Network after project conclusion.

#### The SWFM-QF Exploitation Plan

The project's exploitation strategy is laid down in a 5 years plan, the SWFM-QF Exploitation Plan. The main goal of the Exploitation Plan is to serve as an on-going, concise work plan for setting out the main exploitation aspects of the SWFM-QF project and to establish suitable actions to make SWFM-QF a successful and sustainable project for a long period. SWFM-QF Exploitation Plan was concluded successfully during the SWFM-QF Final Conference after a constructive session - discussion between the partners and key stakeholders participating in it, on issues related to the sustainability and further exploitation of SWFM-QF project results and products.

SWFM-QF Exploitation Plan includes:

- Target Groups and Beneficiaries of exploitation activities
- Types of dissemination and exploitation activities to be carried out;
- Means/Instruments that will be used for communication and dissemination;
- Planning of sustainability measures;

## 4. Partnerships

SWFM-QF project partnership incorporates 13 partners from 8 different EU countries from Northern, Central and Southern Europe. The transnational character of the project presents a particular added value since it deals with issues of common concern at pan-European level.

SWFM-QF partners' consortium uses and exploits the benefits of an established partnership between enterprises, educational and training institutions as well as with civil society authorities, involved in solid waste management sector, as outlined within the strategic objectives of EU education and training policies.

SWFM partners present expertise in development of occupational qualifications, VET systems and materials as well as in waste management and environmental protection issues. The transnational nature of the project consortium in conjunction with the partners' multidisciplinary expertise formulates an efficient partnership where sharing of practices, technology transfer and joint collaboration in the process, methodologies and deliverables results to more effective learning and leads to the beginning of a sustainable networking across European educational area. In the partnership are included members of SWFM-QF target groups. Additionally, all partners participate, actively, in several networks, thus enhancing the project dissemination potential on a wider range of potential stakeholders all over the EU area.

During project elaboration SWFM-QF partners have established, in their countries, the SWFM-QF national networks. SWFM-QF national networks include members originating from all project's target groups. National networks consist the multinational SWFM-QF Network, which, at the moment, includes members from three other European countries, except the partners' countries, Slovenia, FYROM and Croatia.

SWFM-QF partners have an obvious interest in enhancing and upgrading the existing cooperation, exploiting and further improving the foreseen learning objects after the project completion since they collaborate and/or are in direct contact with several end users of the project. In this way, the project's outcomes are easily disseminated; accessible and transferable resulting in benefits which will impact on a wide range of potential beneficiaries, even beyond the boundaries of the consortium member countries.

SWFM-QF partnership will take advantage of the direct involvement of the end user representatives in the project consortium and of the strong market position of all the other partners in order to undertake initiatives for further exploitation of project results and delivered products ensuring that as many as possible bodies will be interested and will make use of them.

More information about the partners of the consortium and the SWFM-QF multinational Network can be found at the following links, respectively:

[http://www.swfm-qf.eu/main/?page\\_id=5897&lang=en](http://www.swfm-qf.eu/main/?page_id=5897&lang=en)

[http://www.swfm-qf.eu/main/?page\\_id=7374&lang=en](http://www.swfm-qf.eu/main/?page_id=7374&lang=en)

## 5. Plans for the Future

SWFM-QF partners in collaboration with project's key stakeholders compiled the SWFM-QF Exploitation Plan in which the main exploitation aspects and actions of the project are analytically described. The Exploitation Plan was concluded successfully during the SWFM-QF Final Conference after a constructive discussion between the partners. Stakeholders participating in the conference were asked and expressed their opinions on issues related to the sustainability and further exploitation of SWFM-QF project results and products.

The main axes around which the project's exploitation activities have been planned and will be elaborated include:

- Close collaboration with related EU projects and networks in order to support the exploitation activities and voice the results;
- Publication and wide dissemination of the SWFM-QF results using strong on-line presence plus the identified tools and channels as they are analytically prescribed in the project's Exploitation Plan.
- Planning and implementation of Vocational Training courses in collaboration with VET Centres, with Waste Management Companies and the Agencies in which they are registered.
- Development of occupational qualifications at lower than 6 level of the EQF, such as for technicians occupied in solid waste management facilities
- Further specialisation and specification of generic qualifications modules per solid waste management facility
- Development of educational material for different subunits and units included in the Info-training Toolkit contents
- Use of the qualifications modules to define the required qualifications for new job positions and personnel hiring (action already implemented).
- Development of agreements aiming and supporting to the recognition and adoption of the necessary qualifications of solid waste management occupation, across the European Union countries.
- Replication of the methodology adapted for the development of the SWFM occupational qualifications for other professional profiles as well.

Financial self-sustainability and viability of the Network's longevity and operability must necessarily involve the identification of potential sources of revenue. During the compilation of the exploitation plan SWFM-QF partners have identified the potential costs (staff, travel, printing, infrastructural maintenance and updating, web hosting, participation fess, etc) of the foreseen exploitation activities and discussed about the potential sources that could finance the identified costs.

Financing could result from the following exploitation activities:

- Use of the occupational qualifications and training framework contents for the organisation of vocational training seminars addressed to professionals already occupied in solid waste management facilities or professionals that would like to enter into the waste management labour market.
- Use of the occupational qualifications and training framework contents for the compilation of national qualifications standards by the competent bodies. Project partners will contact the respective national bodies in their countries.

- Submission of new proposals either at EU level or national level for further specialisation and adoption of SWFM-QF results and deliverables.
- Investigation and contact with similar EU projects (environmental, vocational training) that may be interested in exploiting SWFM-QF products.
- Development of specific training material based on the learning outcomes defined within the SWFM occupational qualifications and the training needs of waste facility managers and technicians as these were identified and documented in the project's Comparison report.

Other activities, that were already discussed and agreed by project partners and they will contribute to the sustainability of the SWFM-QF project are the following:

- The project website will be maintained and constantly updated under the responsibility of the Project Coordinator, Sigma Consultants, for at least five years after the project's completion. All exploitation activities (planning and elaboration) will be communicated to SWFM-QF Network members and other partners via the website.
- New dissemination channels offered by Internet tools (e.g. Twitter, dedicated groups on professional sites like LinkedIn etc.) and additional national and E.U. networks will be used to further exploit the SWFM-QF deliverables. The dissemination material will be distributed in English; however translations per country partners will be pursued.
- SWFM-QF partners have already planned and are aiming to continue the presentation of the SWFM-QF outcomes and results in respective vocational training and waste management workshops and conferences in their countries and at European level, after the project completion.

SWFM-QF partners have agreed to establish the SWFM-QF Sustainability Support Group in order:

- a) to coordinate and watch the foreseen exploitation actions
- b) inform other partners and mainly SWFM-QF Network members about the planned and undertaken exploitation activities.

All project partners have assigned at least one member from their staff to participate in the Sustainability Support Group (SSG).

Special attention will be given to the preservation and further enlargement of the SWFM-QF Network beyond the project lifetime, since its members are not considered only as acceptors of SWFM-QF results and outcomes but mainly as multipliers of project impact. SSG will be responsible for the direct contact and information provision to SWFM-QF Network members.

The SWFM-QF consortium is aware that the project's evolution may present changes in the course and enactment of some of the aforementioned activities. Dissemination channels not yet foreseen may come into being and may demand exploitation, while some activities deemed promising at present may in the future be found to be ineffective. The consortium will adhere to the aforementioned principles in its further pursuit of the broadest array of dissemination and exploitation activities possible to achieve its goals.

## 6. Contribution to EU policies

SWFM-QF project results and deliverables contribute to key EU policies addressed both to the environmental and educational sectors.

Environmental, green economy is considered as one of the major reservoirs of creating new jobs, worldwide. Its dominant sub-sector is the management of solid waste. In 2012, it is estimated that the total number of people working in eco-industries was around 3.4 million (around 1% of the total workforce), and that the eco-industries had a turnover of around EUR 550 million. Improved waste management has substantial economic and job potential and can make a significant contribution to the global resource supply, improving resource efficiency. The EU sustainable development policies and strategies, such as the 2001 Gothenburg strategy, the 2006 Renewed EU sustainable development strategy encourage a continuous long-term improvement of the quality of life through the creation of sustainable communities able to manage and use resources efficiently.

Resource efficiency is a Flagship Initiative under Europe 2020 and key to achieving its sustainable growth objective. Solid waste facilities applying effective, up-to-date technologies must be operated by professionals having adequate technical, economical, social qualifications for managing waste sites safely and efficiently.

SWFM-QF project managed to develop the required technical, administrative, financial and social qualifications for solid waste managers, occupied in modern solid waste management facilities that may implement different technologies. Occupational qualifications were developed in different modules and for each module the complete contents of the respective training courses were specified enabling the organization to follow versatile training pathways, according the trainees' actual training needs.

Waste management industry will continue to grow and evolve during the next coming years, since existing and upcoming legislation needs to be enforced and waste management standards and rates need to be implemented (EU Waste Thematic Strategy).

SWFM-QF project is in full agreement with the EUROPE 2020 Flagship Agenda for New Skills (Green) and Jobs. The project falls into the objectives of:

- Modernisation of labour markets to raise employment levels and trigger growth and jobs
- Acquisition of new skills to enable workforce to adapt to new conditions such as technology advancements and legislation compliance in waste management sector.

SWFM-QF project results and deliverables significantly contributes to the planning and organisation of vocational training courses that will prepare highly educated and qualified personnel for the waste management labor market.

SWFM-QF project covers the already identified need of Solid Waste Facilities Managers (SWFM) for acquisition of specific professional qualifications using multiple training pathways, according the identified training needs. Moreover, the SWFM occupational qualifications were developed using the European Qualifications Framework (EQF) as a reference (level 6 and higher) framework in order to depict the new required learning outcomes into Knowledge, Skills and Competences

descriptors and in line with the European Credit System for Vocational Educational Training (ECVET) tool.

SWFM-QF project introduces an innovative, clearly defined methodology for the creation of a new job profile, based on the actual occupational and training needs identified in the waste management labour market and implements a self-sustaining strategy to support the recognition and transfer of qualifications across different countries in Europe. Therefore, it is in total agreement with the directions of the EU Training and Education policies and objectives for

- Making lifelong learning and mobility a reality;
- Improving the quality and efficiency of education and training;
- Promoting equity, social cohesion, and active citizenship;
- Enhancing creativity and innovation, at all levels of education and training.

SWFM-QF project contributes to the Copenhagen process on enhanced European cooperation in vocational education and training (VET) in order to improve the performance, quality and attractiveness of VET in Europe. The main goals like reinforcing the European dimension in and the transparency of VET as well as the development of tools for the recognition and validation and competences and qualifications are fully met by SWFM-QF project. The project consortia developed suites of harmonised occupational qualifications in EU countries, based on actual working activities and tasks in the waste management industry. This enabled the project consortia to focus on the core needs of managers to run a waste management facility with regard to the required knowledge, skills and competences.

The developed products will enable participants to choose qualification paths; therefore the project will help to increase the comparability and the transparency among the EU partner countries in order to foster the mobility of solid waste managers within Europe as well as to provide trainings, which are based on the real needs of the waste management companies and industry.

The developed occupational qualifications and the proposed training pathways will be forwarded to the respective EU National Authorities serving as a guide in creating or reforming the national qualifications for solid waste managers making Solid Waste Facilities' Managers training and mobility a lot easier and more transparent, within the EU labour market.

Employment, training and acquisition of skills of the workforce are considered to be key issues within the EU Lisbon strategy. The development of skills and especially green skills is a core point of the European policies and especially the training and skills strategies developed under the Education and Training 2010 work program. The high demand of trained professionals in the field of waste management combined to the innovative character of the project and its transferability to other environmental sectors are indicative of the high expectancy in the results and also the multiplication potential of the SWFM-QF project.

