



National reports on qualifications, knowledge, skills, competences and labour status of Solid Waste Facilities' Professionals

Outline

Survey on qualifications, knowledge, skills, competences and labour status of solid waste facilities' Managers and technicians. Each survey will be conducted via the distribution of more than 200 questionnaires in each participating country to companies, vocational training institutes, and competent bodies

Solid waste facilities concerned:

- waste collection companies;
- waste sorting facilities;
- Waste recycling facilities;
- incineration facilities;
- landfills.

Three questionnaires will be used in the survey adapted for the following respondent groups:

- Waste management facilities
- Organisations providing training for waste management facilities' managers and specialists
- Associations and authorities

1. Introduction

- **Brief overview of the report**

This report reflects the actual situation of the solid waste facility management industry and the existing training practices in the country.

The survey was implemented through gathering of 200 questionnaires by different stakeholders: training providers, companies and consultants. Most of the companies which were interviewed are representing the waste recycling industry and at the same time some of them claim to be also waste collecting and waste sorting companies.

In Bulgaria there are almost 800 registered training providers. For the purposes of the survey 100 VET institutions were selected which train the profession "Ecologist". Since there is no training program for solid waste facility management, we decided that the abovementioned VET providers might be clear-sighted about the specific topic, subject of the survey.

Although we managed to gather sufficient number of questionnaires, we were not able to attract any public institutions to participate in the survey.

The methodology used for collecting the questionnaires is the following: we have disseminated the questionnaires through e-mails. The level of received feedback was very low. Then we contacted the Bulgarian Association of Recycling and asked them to send short information letter to their members

asking them to fill in the questionnaire. After that, the team engaged with the project call on the phone all the selected stakeholders and made a sort of telephone interview with the companies. We tried not to bother them with too long questions, but to make short telephone conversations in order to receive their opinion on the topics included in the questionnaire. We also disseminated the questionnaire through our monthly bulletin. In addition we managed to gather some questionnaires during an international exhibition in Sofia – “Safe the Planet”.

The same approach was used with the VET providing companies and the consultants – short telephone interviews.

The provided in the report data is based on information from the survey, official statistic or other public sources.

- Information about authors

Daniela Simidchieva: Master of Economics and Master of Sociology, Head of the VET centre at BIA

Work experience: Assessor of competences; Practical aspects in the management of quality in the provision of educational services; Evaluation of the human resources; Project Organization and Implementation; Financial shaping and prognosis; Motivation and business; Human recourse management

2009 – development of training material for project “Elaboration and consolidation of the administrative capacity of BIA as a nationally representative employers’ organization”;

December 2007 – July 2008: Economic expert and lecturer on “Motivation and business” in project „Assisting of a small business”;

August – November 2007: Economic expert and lecturer in project “Economic prosperity and social welfare through equal opportunities for all”

Theodora Sotirova: Master of Business Administration, Expert in International Economic Relations Centre at BIA

Bachelor degree in International Relations; specialization in European Policies. Key competences: project management, risk management, business environment and sustainable development, business assessment and controlling.

Work experience: project coordination, organization of trainings and seminars, organization and participation in international exhibitions, product marketing, financial analyses, international cooperation

2. Overview of waste management industry in the country based on information collected by project partner

- Waste streams

Waste from economic activities and households		Agriculture, forestry & fishing	Mining & quarrying	Manufacturing	Energy	Construction & demolition	Other economic activities	Households
Total	Of which hazardous							
165 877	13 542	618	150 214	3 308	8 032	79	1 231	2 396

According to data from 2012, Bulgaria ranks on first place in Europe in the amount of waste per capita. However, the study of the dynamics of the amount of waste produced by businesses and households between 2008 and 2010 shows a positive trend towards reduction of waste products in absolute size. In Bulgaria household waste accounts at 410 kg per person yearly. 404 kg of this waste pass through processing.

According to official data from the Ministry of Environment and Water, the state's gross waste output accounts to more than 2.5 million metric tons on a year basis. Industrial waste represents approximately 70% of the total waste generated, municipal waste accounts for 25% and the remaining 5% is hazardous waste.

- **Composition of waste management industry (public/ private sector)**

Distribution of activities in waste management between public and private sector in Bulgaria is characterized with a balance of responsibilities in handling the problem. Commercial and private limited companies, sole traders, associations and non-governmental organizations have taken on the role of direct organizers of events associated with the collection, transport, sorting, recycling, processing, resale or incineration of hazardous and non-hazardous environmental waste. In the performance of this core activity, the above companies enter into business relationships with state, local and municipal organizations and institutions with whom they interact on the implementation of specific national and international projects and contracts awarded.

In this regard the role of the administration is defined as regulative, legislative specifying clear and unambiguous work parameters in the area of waste management for all private entities. Legal infrastructure built by regulations (municipal regulations, national laws and regulations transposed EU directives, regulations, bilateral and international agreements to which Bulgaria is part of) sets requirements and create a business environment in which all participants are directly involved in the activities on the waste management and must follow the established rules with territorial scope. The bigger part of the engine of this economic sector is all registered private entities directly involved in the process of waste management. The state with its supervised role is a guarantee to ensure better business area and to reduce waste quantities through monitoring of the changes and new trends in the sector as well as the good practices and establishment of higher ecological and qualitative requirements.

- **Waste management industry associations and networks**

National Association for waste and water management, Bulgarian Association of Recycling, Cleantech Bulgaria

- **Other relevant information**

3. **Overview of waste management facilities in the country based on survey of waste management facilities**

- **Average number of employees**

According to official data of National Statistical institute of Republic of Bulgaria regarding the sectoral employment in the country for 2012, the employed people by item number: Mining and quarrying manufacturing, production and distribution of electricity, heat energy and gas; water supply, sewerage, waste management and remediation” are 672 000 people. In 2010, the employed people under labor contract in the sector of “Water supply, sewerage, waste management and remediation” are 35 536 people or around 0,47% of the population in the country for the same year.

Most of the companies from the waste industry sector in Bulgaria are SMEs. The average number of employees per company is 20 people.

- **Average age of employees**

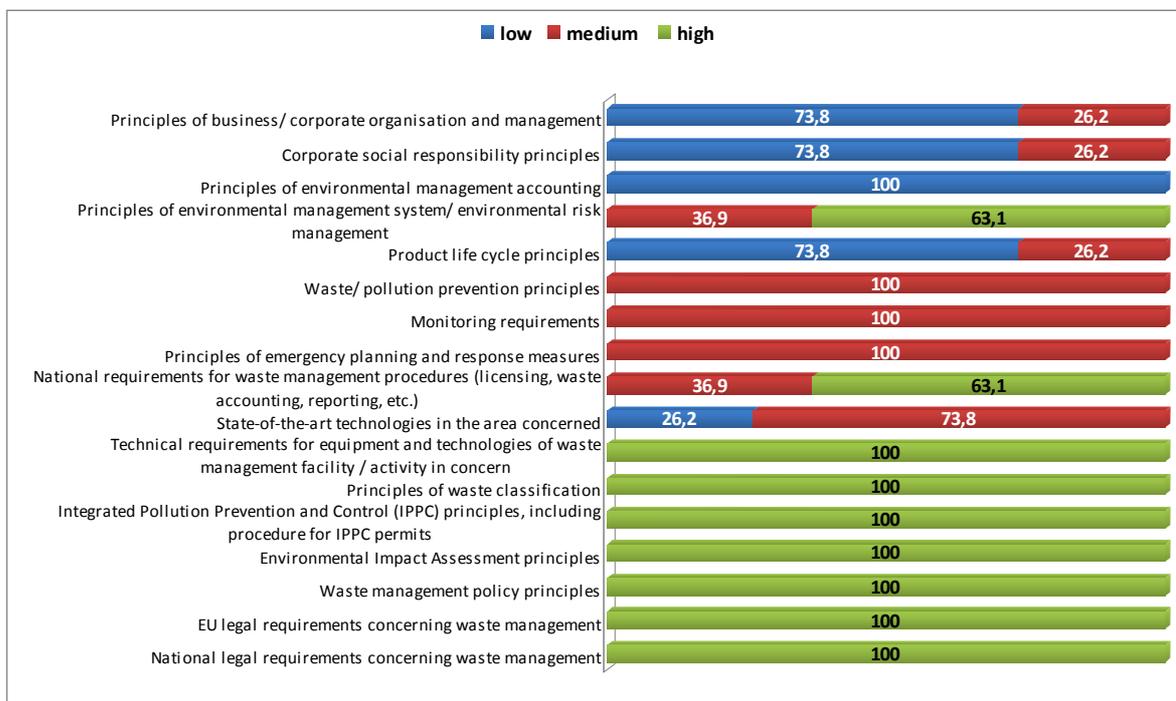
The waste management sector in Bulgaria is relevantly young sector. The average age of employees is 35 years.

4. Description of how importance of knowledge in different areas for waste management facilities' managers and technicians is perceived by different stakeholders

The gathered questionnaires showed identical results connected to the importance of the knowledge. Almost 100% of the stakeholders assess the proposed topics with high importance. This is due mainly to the fact that in Bulgaria there is no structured vocational training program for solid waste facility managers.

5. Current qualification of solid waste facility managers and specialists in particular areas based on opinions of different stakeholders collected during survey

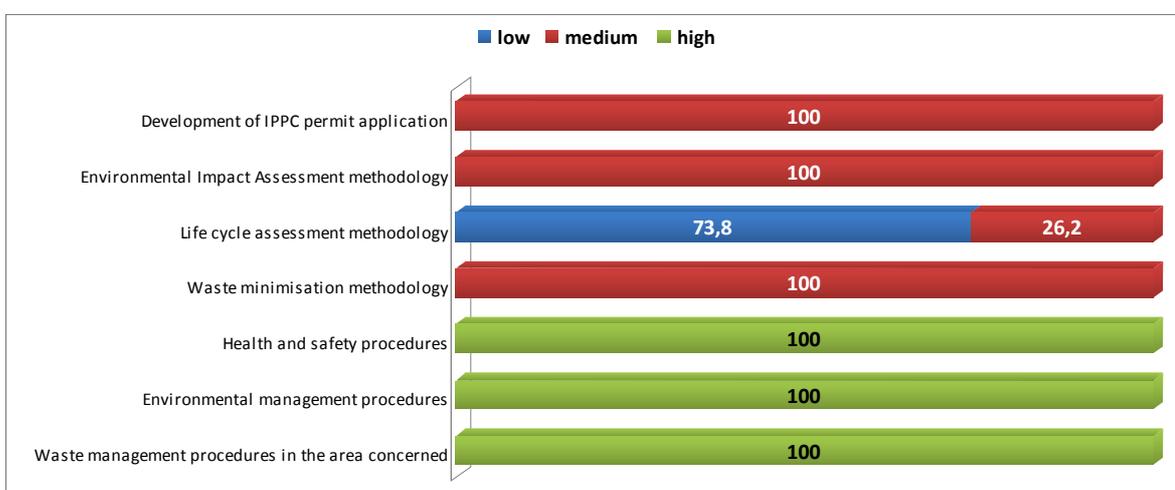
The chart below shows the way the stakeholders assess their level of knowledge on different topics. It is obvious that the topics connected to legislative issues and policy principles are very well known among the specialists. The topics which received the higher level are actually connected to the implementation of the principles of the Bulgarian Law on Waste Management. Some topics like the life cycle assessment and corporate social responsibility are fairly known among the professionals. This is mainly due to the fact that these are new topics in the Bulgarian business environment and the companies are still reluctant to apply the new principles, since they are not obliged by the law. The topics ranked with the higher scores are the most common ones trained during seminars and workshops.



6. Description of how importance of practical skills in particular areas for waste management facilities' managers and specialists is perceived by different stakeholders (waste management facilities) and the level of those skills as perceived by the waste managers (based on survey).

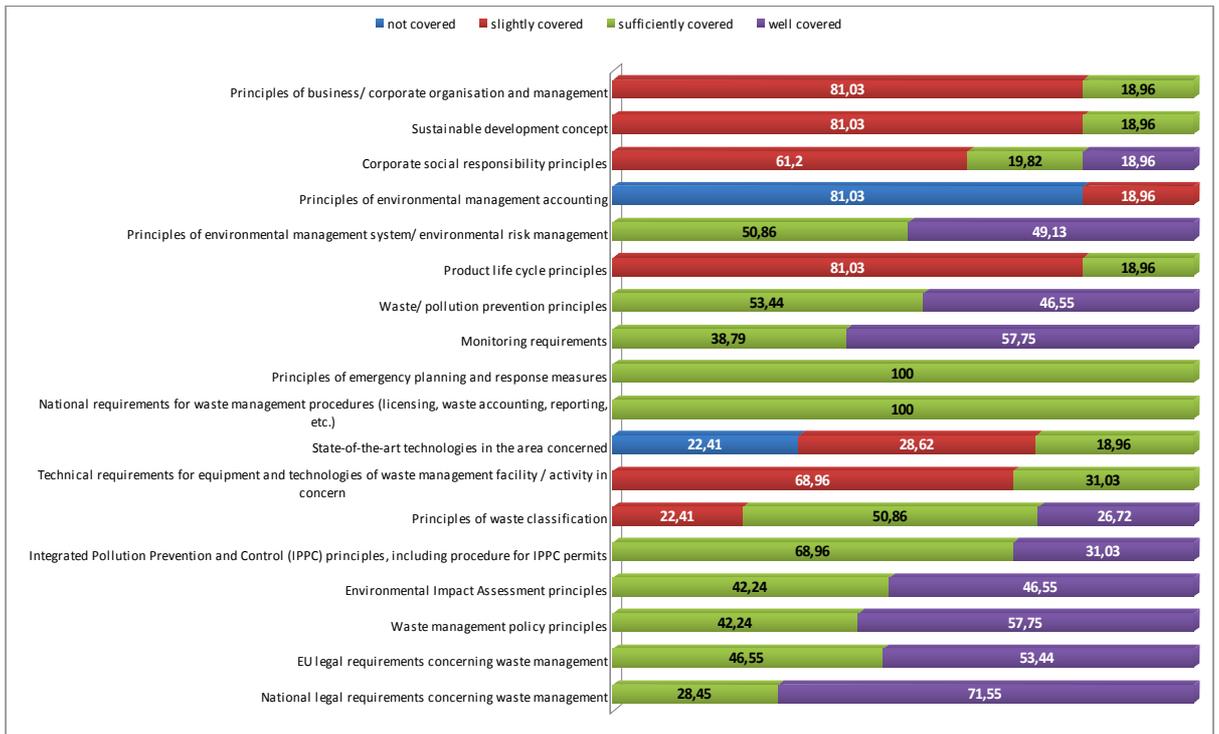
Almost 100% of the interviewed stakeholders assess the proposed practical skill with high importance. This is a normal reaction since the practical skills are the weak point in the knowledge of the stakeholders.

The table below shows the level of practical skills in particular areas as perceived by the waste managers. It is clear that the professionals have profound knowledge in the more common theoretical topics. These are also the topics which to some extent are included in the seminars and workshops. From the graphic is seen that there is lack of knowledge in the more specific topics like the life cycle assessment. The overall impression is that the professionals are well qualified, but most of the knowledge is acquired through informal trainings and on the job trainings.



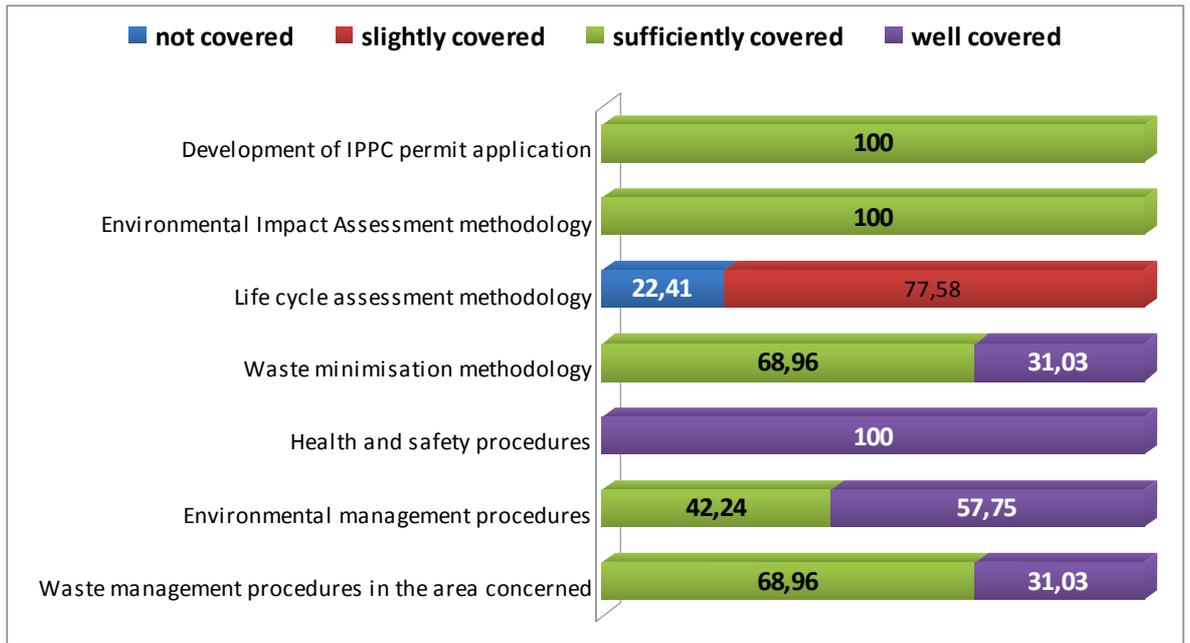
7. Description of how well the different topics proposed in the questionnaire are covered by the existing training seminars and workshops (based on the survey among organizations providing trainings)

The table below shows the coverage of the different topics in the training seminars. In Bulgaria there are **no VET programs for solid waste managers**. The questionnaires are filled in by VET organizations which provide training on environmental issues and environmental consultants, but not specifically in solid waste management. Usually the seminar trainings are one-day events with speakers from the respective ministry or leading consultants. The answers vary between the different stakeholders because there is no structured and unified training program. Each organization is delivering trainings on its own discretion and depending on the identified need of their clients. The interviewed stakeholders are delivering trainings following changes in the law and other identified need of the companies. Sometimes one day seminar can cover more than one of the below mentioned topics. The topic “national requirements for waste management procedures” is 100% sufficiently covered. This result can be explained by the fact that the Bulgarian law on waste management is constantly undergoing some changes. The companies’ need for information urge the training providers to deliver connected to this topic seminars.



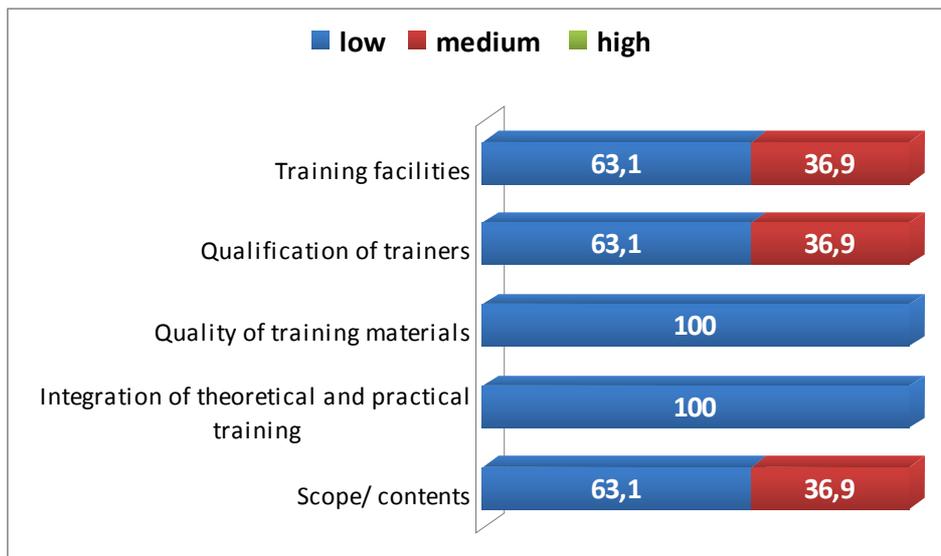
8. Description of how well the particular practical skills are acquired during the existing training seminars and workshops.

The table below describes how well the particular practical skills are acquired during the existing training seminars and workshops. The figures express the opinion of the training providers. The Health and Safety procedures are well covered mainly due to the fact that companies are subject to constant inspections by the state and local authorities. In addition each year the responsible state authorities grant money to the training providers in order to deliver a definite number of seminars connected to the topic. For example, BIA recently signed the contract for delivering 30 seminars around the country connected to health and safety procedures. There are no costs for the companies. The development of IPPC permit application is also very common topic for seminars. The training providers shared that the companies are constantly having some difficulties with this. As already mentioned above, almost all the seminars are on theoretical topics. According to the training providers, they deliver some kind of practical training. But when interviewing the companies, most of them claimed that their practical skills are not acquired during the proposed trainings in the country.



9. Evaluation of the existing training seminars according to the solid waste facility managers.

The results from this question are pretty negative due the fact that there are no VET programs on waste management, nor dedicated training institutions. The VET providers don't dispose of training facilities and the training materials in most cases are just presentations on the covered topic during the seminar. As already mentioned above the existing training seminars are covering more theoretical topics. The results from the chart clearly show the poor training conditions.



10. Labour status (based on survey and statistical data)

- Salary level of waste management facilities' managers in respect to average salary in the country/ (higher/ equal/ lower) in particular waste management sectors (waste collection, waste sorting, waste recycling, incineration, landfills) based on information from waste management facilities and national statistical data

The salary level is equal in respect to the average in Bulgaria. The highest salary is in the waste recycling companies followed by waste sorting, waste collection and landfills. There is only one incineration company in Bulgaria and the average salary is comparable to the other sectors, even higher for some positions. Usually in all the abovementioned companies the management level is well paid. People occupied in the lower levels (technicians) of the companies are usually workers without higher education and there is no requirement for them to have any specific skills. As a whole it can be considered that the professionals engaged in the industry are sufficiently paid.

- Employee replacements (average number/ year) in waste management facilities based on questionnaire responses from waste management facilities

Less than 5 employees' replacement per year. The fluctuation of labor is not very big, because of the relevantly good salary level. For the lower level staff the salary is good, having in mind that these are people without higher education and any specific skills. The companies are trying to keep the high management, because it is very difficult to find qualified people in the sector. In times of harsh economic crises the employees are more reluctant to change their job, because it is very difficult to find another one. This refers especially for the lower level staff, which is the most affected by the poor economic conditions in the country. As a whole the fluctuation of labor is relevantly low.

- Qualitative assessment of working conditions (health and safety) in different waste management facilities based on opinions of survey respondents

Although the managers who filled in the questionnaires were representing different type of companies, they were asked to give their opinion and observations for the working conditions in all the listed types of facilities. Almost all the stakeholders assess the working conditions in the recycling companies as good. According to the results the worst conditions are in the landfills. The working conditions in the waste sorting facilities and waste collecting facilities are satisfactory.

- Competition for employment in different waste management facilities in based on questionnaire responses from waste management facilities

The competition level is medium for most of the facilities. The landfills are the most unwanted job positions.

- General social status of different waste management facilities' employees based on opinions of different stakeholders: waste management facilities, training organisations and authorities

Having in mind that the salaries in the waste management sector are comparable to the average, most of the employees belong to the middle class society. There is a difference between the higher management and the lower level staff. The managers belong to the upper middle class, while the lower level staff like technicians can be considered as part of the lower middle class society.

11. Conclusions and recommendations

The report reflects the results from the national survey carried out in Bulgaria among waste management professionals and organizations providing training services. During the survey it came out that there is no qualification for solid waste managers in Bulgaria. The existing training procedures are in the form of one day seminars with predominantly theoretical topics. In Bulgaria trainings are also provided by the consulting companies, which use various methodologies and don't dispose of structured training programs. All the trainings in Bulgaria connected to solid waste management are delivered sporadically depending on the adoption of new legislation or EU directives. Some VET institutions provide trainings connected to environmental issues, but there is no structured program for solid waste management. In the vocational training we train only "Ecologists". Part of the program includes an overview of the waste industry. Most of the specialists on waste management have acquired their knowledge through informal trainings. It is very common that companies are hiring consulting companies to train their staff depending on specific needs, but without officially approved training program.

Most of the interviewed stakeholders are on the opinion that there should be officially recognized qualification for solid waste facility managers. Although there is no VET program for solid waste facility managers, some training institutions are making the first steps when delivering various seminars connected to the topic. All the topics proposed in the questionnaires were ranked with high importance by the stakeholders, which might be considered as positive reaction by the industry. During the survey most of the stakeholders expressed their support for the initiative of the project. They agree that it is very important such qualification to be developed.

After discussions with the management body of the Bulgarian Industrial Association a decision to propose the developed under the project qualification to the NAVET was taken. After the project end BIA will prepare the needed documents in order the qualification for solid waste facility managers to be officially recognized by the National Agency for Vocational Education and Training.