



Best Practices Report

on Eco-innovation and Entrepreneurial Training Needs and Existing Educational Initiatives in the Companies (national level)

prepared for:

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INTRODUCTION

The Report on the Best Practices on Eco-innovation and Entrepreneurial Training Needs and Existing Educational Initiatives in Companies in the region is based on the results obtained from the conducted research for the project: “A KNOWLEDGE ALLIANCE IN ECO-INNOVATION ENTREPRENEURSHIP TO BOOST SMEs COMPETITIVENESS” (SMecoMP). The first research for the Pelagonia region was conducted in April 2018 on a representative sample of companies based in Pelagonia. During the research, 150 random companies were contacted and according to their residence and the place of their operations, they belonged to different industrial areas in Pelagonia. 50 of the contacted 150 companies sent their replies. The second research in the Pelagonia region, which was conducted with personal interviews of the respondents, took place in July and August 2018. At first, 50 companies were contacted and based on their willingness to participate in the further research, 10 companies were chosen to take part in the research – the interviews. The first research in the Skopje region was conducted in April 2018 and the questionnaire was sent to 55 companies, but only 12 companies sent their replies until 05.05.2018. The second research in the Skopje region conducted with personal interviews of the respondents, took place in December 2018; 12 companies from Skopje participated in it, they were the same companies from the first research. This report on best practices was prepared based on the answers of the companies which attended trainings on eco-innovations and gave positive answer to question 2 from section B of the first research, as well as further analysis and contact with the participants of the research who answered positively to the this question and left contact information for additional communication. This report will show the practices of certain trainers, organizers of seminars, trainings and educational initiatives.

Furthermore, special attention will be drawn to the management of packaging and packaging waste in the Republic of Macedonia and the stimulation of eco-innovations in this segment, the work of Pakomak LLC Skopje, particularly having in mind that waste management trainings are encompassed in the three spheres of eco-innovation trainings as well as the obligations imposed on companies by the regulation for management of packaging and packaging waste.

It has to be mentioned that in the first research out of 60 respondents only 12 respondents answered positively to question 2 from section B and just few of them left personal information for the questions in section B and data about the company or a person for additional communication whose collaboration and further communication might help in the preparation of a more comprehensive report.

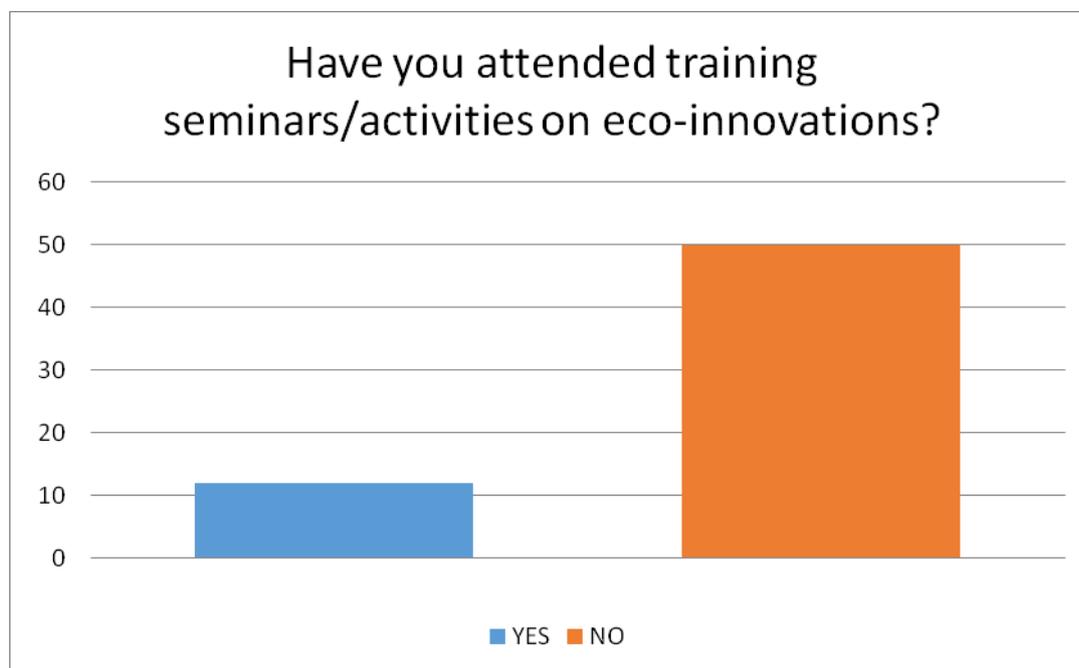
SHORT REVIEW ON ECO-INNOVATIVE AND ENTREPRENEURIAL TRAINING AND EDUCATIONAL INITIATIVES OF COMPANIES

In this part we will briefly remind you of the results of questions 2, 3 and 4 from section B of the first research:

Attended training seminars/activities on eco-innovation

The respondents from the first and second research were asked whether they had attended training seminars/activities on eco-innovations; 12 respondents answered positively, whereas 50 respondents answered negatively.

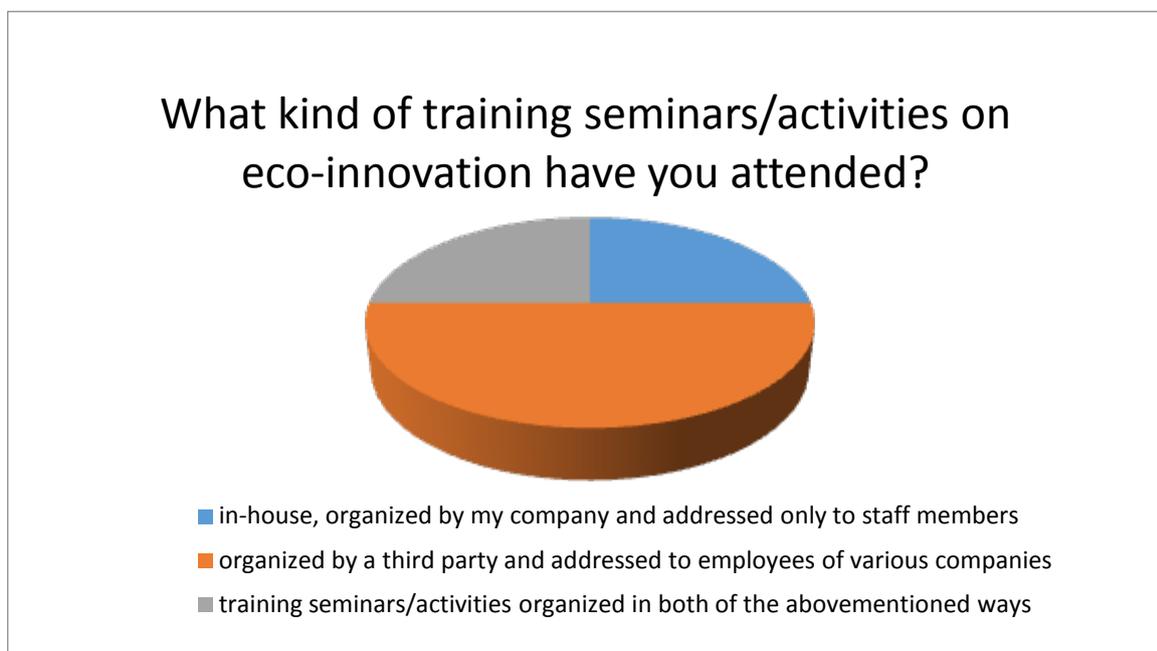
Chart no.1



Kind of training seminars/activities on eco-innovation attended

If the respondents had attended training seminars/activities on eco-innovation, they were instructed to choose one of the three options listed in the next question which refer to the organization and conduction of the training seminars/activities. The first option, the training seminar was in-house, organized by the company and addressed only to staff members, the second option, the training seminar was organized by a third party and addressed to employees of various companies and the third option, the training seminars were organized in both of the abovementioned ways.

Chart no.2



The research shows that the respondents mainly attended training seminars organized by a third party and addressed to employees of various companies – 6 of the respondents answered that they had attended training seminars of this kind (50%), on rare occasions, the respondents attended in-house training seminars that addressed only to staff members – 3 of the respondents answered that they had attended in-house training seminars (25%), the same number of people, 3 of the respondents, answered that they had attended training seminars organized in both ways (25%). These results correspond with the fact that most of the active business entities in Macedonia, or 79.3%, have 1 to 9 employees; 2.9% have 20 to 49 employees and only 0.3% have over 250 employees¹. Due to the higher cost of organizing training seminars that address only to staff members of one company as well as the insufficient number of attendants that work for one company, it is the most common practice to organize training seminars that address to employees of various companies

¹ The number of active business entities, 2017, the rest of the results can be found on <http://www.stat.gov.mk/PrikaziSoopstenie.aspx?Rbrtx=79> [08.11.2018]

Specific fields of training seminars/activities on eco-innovation attended

If the respondents had attended training seminars/activities on eco-innovation, they were instructed to answer the next question regarding the specific fields they addressed. The question consists of 3 parts in terms of the fields of eco-innovation training seminars/activities: The first part refers to training seminars/activities in the sphere of *Environmental technologies and systems*. The second part refers to training seminars/activities in the sphere of *Organizational innovation for the environment*. The third part refers to training seminars/activities in the sphere of *Product and service innovation offering environmental benefits*.

The respondents who had attended training seminars/activities in the sphere of *Environmental technologies and systems* answered the first part of the question in the following way:

Table no.3

<i>Training seminars/activities in the sphere of: Environmental technologies and systems</i>		
	number	percentage
Pollution prevention and control technologies	2	16,6
Cleaning (clean-up) technologies that treat pollution released into the environment	2	16,6
Alternative systems of production and consumption; cleaner process technologies; green logistics; new manufacturing processes that are less polluting and/or more resource efficient than relevant alternatives (eg biological agriculture, renewables-based energy system)	6	50
Waste management equipment	1	8,3
Environmental monitoring and instrumentation	/	/
Green energy technologies	1	8,3
Water supply	/	/
Total	12	99,8

The respondents who had attended training seminars/activities in the sphere of **Organizational innovation for the environment** answered the second part of the question in the following way:

Table no.4

<i>Training seminars/activities in the sphere of Organizational innovation for the environment</i>		
	number	percentage
Pollution prevention schemes	2	28,6
Environmental management and auditing schemes: formal systems of environmental management involving measurement, reporting and responsibilities for dealing with issues of material use, energy, water and waste (eg EMAS, ISO 14001)	3	42,8
Chain management: cooperation between companies so as to close material loops and to avoid environmental damage across the value chain (from cradle to grave); participation in circular economy initiatives	2	28,6
Total	7	100,0

The respondents who had attended training seminars/activities in the sphere of **Product and service innovation offering environmental benefits** answered the third part of the question in the following way:

Table no.5

<i>Training seminars/activities in the sphere of Product and service innovation offering environmental benefits</i>		
	number	percentage
New or environmentally improved products (goods) including eco-houses and buildings	2	50
Green financial products (such as eco-lease or climate mortgages green certificates, allowance trading)	/	
Environmental services: solid and hazardous waste management, environmental consulting, testing and engineering, other testing and analytical services	1	25
Services that are less pollution and resource intensive (eg car sharing)	1	25
Total	4	100,0

The obtained results lead to the conclusion that the least attended training seminars/activities were in the sphere of: *Product and service innovation offering environmental benefits* and the most attended training seminars/activities were in the sphere of: *Environmental technologies and systems*.

Analysis of the best practices of Eco-innovative and entrepreneurial training and educational initiatives of companies

The practice in the Republic of Macedonia shows that the largest part of Eco-innovative and entrepreneurial training and existing educational initiatives of companies are organized within the project activities of projects supported by the European Union, certain foundations, chambers of commerce etc. Activities in this area are being taken by certain state institutions, agencies or other bodies by organizing info days, info centers, printing of certain publications, brochures, pamphlets, manuals, informants etc. We will briefly analyze the more important activities of certain non-governmental organizations, foundations, state institutions or other bodies in the sphere of eco-innovations and the best practices in this sphere.

The Energy Agency of the Republic of Macedonia has been active in this sphere. The Energy Agency of the Republic of Macedonia issues multiple e-publications. Within the Informants, the Energy Agency publishes a list of conferences and trainings concerning the energy sector taking place abroad as well as useful information and worldwide experience in using renewable energy sources. A more significant activity of the Energy Agency aiming at eco-innovations trainings was the organization of a two-day conference and seminar on the topic of: *“Business Planning of Energy Efficiency and Projects for Renewable Energy Sources”*. The seminar and the conference took place in June 2011 in Skopje and the co-organizers were the United Nations Economic Commission for Europe (UNECE), the Norwegian Association of Energy Suppliers and Users (Norsk Energi); the partners from Macedonia were: the Energy Agency, the Centre for Climate Change. The seminar had been planned for about 50 participants and the conference for around 100 participants from Macedonia and also: Albania, Bosnia and Herzegovina, Bulgaria, Croatia and Serbia. The seminar, which took place on 29.06.2011, was aimed at businessmen and people who take

part in international projects in this sphere; while the conference's goal was to connect the representatives of the government, local governments, international financial institutions and the banking community with businessmen and people who take part in international projects in this sphere. The end results for the participants of the seminar were getting familiar with the energy efficiency investments and projects for renewable energy sources, the preparation of a business plan including resume, project information, analysis of technology sustainability, benefits for the environment, financial risks, financial plans and projections and project implementation. During the seminar, individual consultations of businessmen and people who take part in international projects were arranged.

The Centre for Climate Change is a non-governmental organization founded in 2008 and it is significantly active in the sphere of protection and improvement of the environment and the fight against climate change. Concerning this issue, the Centre for Climate Change has worked on multiple projects within CCEI programs in collaboration with Norsk Energi. Most commonly they are energy efficiency projects of specific legal entities facing problems with energy efficiency or large polluters. One of the projects which the Centre for Climate Change has participated in collaboration with Norsk Energi was the project for "Cleaner and More Cost Effective Industry in Macedonia". The project was funded by the Norwegian Ministry of Foreign Affairs. The results of the project were the development of 13 energy efficiency studies in the period of 3 years, the development of environmental management systems in 4 companies, the improvement of capacities/abilities for energy efficiency needs among young entrepreneurs, providing consulting services and raising the awareness for the need of implementation of energy saving measures. In addition to the large project activity, the Centre for Climate Change has been active in organizing training seminars for assessment of the influence on the environment, which include more than 10 experts and consultants. The Centre for Climate Change provides online training materials for the following several areas:

- Energy efficiency in industry
- Waste
- Climate change
- Environmental management

- Handbook for Energy Management and Energy Efficiency.²

The Small Business Chamber has contributed considerably with activities in the sphere of training seminars on eco-innovations. The members of the Small Business Chamber are mainly micro, small and medium-sized enterprises working mostly in the construction, metal and electronics industry. In addition to the many goals and tasks, the Chamber is also active in the sphere of energy efficiency and utilization of EU funds. The Chamber provides support for small and medium-sized enterprises in choosing, applying and implementing financial instruments for support and the realization of projects, programs for education of the members on certain topics which aim at the increase of competitiveness and innovation in their working process as well as maintaining sustainable development. One example of such workshop is the workshop on funding energy efficiency projects during which the members of the Small Business Chamber were presented with concrete projects for energy efficiency and renewable energy sources in the presence of representatives of the Macedonian Bank for Development Promotion (MBDP) and the European Bank for Reconstruction and Development (EBRD) and interested commercial banks. This workshop provided an opportunity to the managers of the members of the Small Business Chamber for consultation on the preparation of energy efficiency projects, for a participation fee of around €25. Another training seminar in this sphere was the seminar on the topic: “ZERO Carbon City - urban areas without negative impact on the environment”. At the seminar, the participants were informed about the assessment of the measures in terms of their technical efficiency, environmental effects and, at the same time, the efficient energy use, through economic analysis aiming at determining the commercial and economic advantages. This seminar covered the following topics: choosing project topic, research of status quo, development and calculation of optimal energy solutions, comparison of price efficiency, preparation of management presentation, project schedule, expenses control and evaluation and assessment of performances. The participation fee for this one-day seminar was round €90. The training seminar on the topic: Energy Management Systems (EnMS) educated the attendants about the way of establishing energy management system which would influence energy consumption. The improvement of energy performance can cause swift benefits in an organization.

² <http://ckp.org.mk/%D0%BC%D0%B0%D1%82%D0%B5%D1%80%D0%B8%D1%98%D0%B0%D0%BB%D0%B8-%D0%B7%D0%B0-%D0%BE%D0%B1%D1%83%D0%BA%D0%B0/>

Consequently, the organization can have positive contribution to the reduction of the exploitation of natural resources, which may cause decrease in pollution and other accompanying effects on global level. The participation fee for this training seminar was around €60. Due to the growing need for expert understanding of legal regulations in the Republic of Macedonia and the European Union standards and laws regarding reconstruction of buildings with energy saving i.e. reduction of energy consumption per product in commercial buildings, while simultaneously conserving the environment, the Association for Energy Efficiency EUREM MK has been set up within the **Small Business Chamber**, which represents joining of expert potential in small and medium-sized enterprises.

The Foundation for Industrial Management Research (IMR) is a private non-profit foundation, founded in 2002, with mission to encourage economic growth for the benefit of everyone. There is a Centre for Eco-innovation within the Foundation which performs activities for technology watch combined with direct assistance in different areas of the environment. The info desk and the advice desk together with specialized training seminars/activities aim at providing information and advice on new technologies, funding sources, legislation and competencies and skills. The advisory services enable companies to enhance their environmental and energy performance, decrease their costs and access green markets. The Foundation has organized a workshop on the topic: “Eco-label, Waste Management and Waste Types”. The workshop was aimed at small and medium-sized enterprises in Macedonia. The workshop covered the following topics from the area of SME’s environmental activities: eco-label, waste types and general rules for waste treatment, keeping records of waste and waste manager, license for waste management, waste management strategy.

Within the Universities of the Republic of Macedonia, there is only one **Institute for Environment and Health** at the South East European University. The objective of the Institute is to provide organizational activities, scientific research and to promote and strengthen awareness for protection and improvement of the environment and health regionally and globally. The institute is interdisciplinary and it comprises 10 academic staff, 5 external research associates and 30 research students. The Institute’s contribution consists of finding solutions to environmental and health issues, providing and developing program

studies with adequate literature, good conditions for scientific research activities, promoting environment and health in the public, constantly keeping the library well stocked with literature and planning partnerships and collaboration with regional and international institutions and organizations.

Case study: PAKOMAK

PACKAGING MANAGEMENT AND PACKAGING WASTE MANAGEMENT IN THE REPUBLIC OF MACEDONIA AND ENCOURAGING ECO INNOVATIONS

Following European trends in the field of environmental protection, the Republic of Macedonia passed the Law on Management of Packaging and Packaging Waste in 2009 (Official Gazette of RM number 161/09 form 30.12.2009).

The legal text was based on the principle of producers' responsibility and the principle of assessment of a product's life cycle. Both aim at transferring the responsibility of negative effects from placing products with waste packaging on the market to the producer and the importer and proposing various instruments for minimizing the negative effects by issuing bans for using certain types of packaging, stimulating returnable packaging, lowering the weight of non-returnable packaging, compensations and etc. All of it eventually stimulated the creativity of companies and producers and encouraged eco-innovations because in addition to the responsibility regarding the environment, financial obligations of companies placing waste packaging on the market became larger.

For the first time, it was specified that the material of the packaging should be marked and identified for easier collection, reuse and recycling. For instance, the mark for colorless glass is GI 70, for aluminum is ALU 41, for paper PAP 22 etc. The check of correct numbering and use of marks, which are the foundation of the label identification system for each product, has become common practice for serious producers in the Macedonian market. The Rulebook was published in the Official Gazette of RM number 62/2010 and the website of the Ministry of Environment and Physical Planning. The fine of €6000 is an additional motivation for each producer to pay more attention to the compliance of the marks. This obligation additionally

burdens all of the traders who place products which are not marked in compliance with the legal regulations on the market. So, now, not only the producers, but also the traders are responsible for the control of the correct marking of products. In case of incorrect marking of products, the trader is not allowed to sell those products. This is a considerable burden for traders taking into consideration the big number of products they usually trade daily. It should be taken into account that only a small part of the traders are familiar with this obligation; therefore, in the future corrections of the law it should be reconsidered if the responsibility for correct marking should belong exclusively to the producer or the importer.

Producers who annually produce packaging that is greater than 30 tons are required to develop **programs for restriction and prevention of creation of packaging waste** which should include quantitative measures for restriction and prevention, measures for achieving the aims and mechanisms for quality control of packaging. The program should be prepared for a period of four years. The law stipulates that in order to restrict and prevent the creation of quantities of materials and hazardous substances contained in packaging and packaging waste, the producer of the packaging and the producer, during production or import of materials, is obliged to use **the best technologies and production processes proven in practice and available on the market which at a reasonable price**, contribute to:

- reduction in the creation of the quantity of packaging and packaging waste,
- prevention and reduction of harmful/negative influence on the media and areas of environment caused by those quantities and the composition of the material of the packaging and the packaging waste, and
- prevention and reduction of the harmful/negative influence on the media and the areas of the environment during production, release on the market, selection and use of packaging as well as processing or disposal of the packaging waste.

The company will not be responsible for failure to fulfill the stipulated activities in the program, but surely the stipulated activities should be feasible and aimed at additional and intensified environmental protection. If the producer has not prepared a program for packaging waste management, the state environmental inspector will oblige them to prepare a program; however, the inspector can also impose a fine in the amount of €3000 in MKD counter value.

This should not be confused with the producers' obligations originating from the Law on Waste Management. It should be noted that physical and legal entities which annually generate more than 200 kilograms of hazardous waste and/or more than 150 tons of non-hazardous waste in performing their work are obliged to prepare a Waste Management Program (as stated in the Law on Waste Management) as well as appointing at least one authorized person – waste manager whose main responsibilities will be ensuring the conduction and implementation of the annual program, monitoring the ongoing situation in waste management, keeping records and many other responsibilities. Due to the specific responsibilities, a **waste manager** can be a person who has passed the expert exam and has work experience of at least 5 in waste management. In addition to the monitoring of the ongoing situation in waste management, keeping records and preparing reports, the responsibilities of the waste manager include suggesting concrete solutions regarding the production, treatment, processing and disposal of waste, controlling the quantity of generated waste and conducting and implementing the annual program for waste management. If the producer meets the criteria under the two laws, they should prepare two programs, one for packaging waste and the other one for all the waste.

However, in the period of passing the law, the additional financial burden stipulated by the law had the greatest impact on Macedonian companies. An illustrative example is the PET packaging for drinks of 1.5 liters. Pursuant to the hitherto existing provisions of the Law on Environment (published in the Official Gazette no. 53/2005), the companies paid MKD 5.5 for 1000 pieces of 1.5 liter drink packaging; however, according to the amendments to the Law on Environment, published in the Official Gazette no. 24/2007, the amount of the fee for plastic products and plastic packaging changed to MKD 0.80/1 kg for packaging made of all kinds of polymers. Nevertheless, the biggest change happened with the implementation of the Law on Packaging and Packaging Waste (Official Gazette no. 161/2009), which resulted in an increase of the initial amount by around 100 times (calculated with a price of €20 per ton of plastic waste, approximate price of a collective waste handler). Hence, the displeasure of the companies was substantial in the beginning. It should be noted that the projections and planned increase of the fee range up to €35 per ton in 2019, given that the goals for treatment of packaging waste are set high.

The pressure of the increased expenses and raising public awareness for the general environmental protection have led to investments in Macedonian companies, reducing packaging waste and improvement of opportunities for waste recycling. Therefore, one of the larger Macedonian companies for production of beverage and water, Kozhuvchanka LLC Kavadarci, in 2016 announced that “Izvorska has new eco packaging containing 30% less plastic and better preserved freshness due to the perfected wide mouth for easy opening/closing, which offers a special way of filling water. The cap is smaller by 50%, which considerably reduces plastic waste. The new Izvorska has clean and simple design, and the ribbed packaging makes it easy for the users to recycle. Regarding the water, Kozhuvchanka from Kavadarci guarantees the quality of Izvorska which comes from the cleanest area, the site Vasov grad – Kozhuf Mountain”. In 2014, the company revealed an investment for environmental protection and the General Manager Mitko Janchev stated: “We invested €1.5 million in the latest technology for packaging production. That resulted in 30% less use of plastic. At the same time, production expenses have dropped by 30% to 40%, which increased the competitiveness of our product, making it easier for the product to compete on the regional market. The new eco packaging of “Kozhuvchanka” provides significant decrease in plastic waste and easier recycling for users. 20 “Kozhuvchanka” employees have been working on the preparation of innovative products and a fifth of the annual turnover is invested in that purpose.”

Some of the collective handlers and the state too, have specified different fees for certain materials belonging to the same category (for example metal) but different subcategory (for example, the fee is different for iron and aluminum), therefore we cannot make true comparison of prices. Some of the collective handlers, more specifically the Czech collective handler EKO KOM, have stipulated different fees not only in terms of the nature of the material but also in terms of primary, secondary or tertiary packaging. Hence, the pricelist consists of 42 different types of prices, which makes it difficult to analyze and implement it too.

A comparative analysis has shown that in 2018 the fees by the most serious collective handler in the Republic of Macedonia, Pakomak LLC Skopje, are the most competitive among the analyzed collective handlers in the region and they are several times lower than the fees specified by the state. Regarding composite packaging, the price is 22 times lower.

type of waste	Pakomak	R. Macedonia (state fee)	ECOPACK Bulgaria	HE.R.R.Co. Greece	EKO KOM The Czech Republic
paper/cardboard	18,75	100	219	52,5	100
plastic	22,76	325	307	66	189,64
glass	20,39	73	117	10,9	66
metal	21,42	138 or 100	80 or 282	21	57 or 76
composite materials	22,66	358 or 488	379	57	141
wood	21,84	65	121	9,5	39

Pakomak LLC Skopje is a collective handler founded in compliance with the Law on Packaging and Packaging Waste Management by 11 Macedonian companies and it is evaluated that, today, it has around 40% of the market share of all packaging and over 800 clients (producers and importers). This is one of the rare or maybe the only example of competitive companies setting up a nonprofit trade company which will ensure the implementation of legal obligations and environmental protection. The effects are evident and significant. In addition to the investments in infrastructure for selection and collection of waste containers, vehicles, pressing machines, waste selection lines, a significant amount of the funds has been allocated to raise public awareness for environmental protection and waste selection, such as the project with 3D Ecobus and children plays, school projects, participation in the project for putting up Eco City Tree in Skopje and Tetovo and many others. National objectives have been set high, so it is required to recycle 60% of the glass, paper and cardboard, 50% of the metals and 15% of the wood by 2020. These numbers, which seemed unreal a few years ago, can be reached only with an intensified shift in the awareness of producers and consumers.

The reaction remains with a large part of the companies which believe that the state has insufficient control over the implementation of legal obligations for producers and importers

of products that are not included by collective handlers of packaging and waste packaging and they do not fulfill their financial obligations to the state. It is necessary that inspecting bodies intensify the control on the field in order to ensure the correct and full implementation of the law on the field. Until then, there will not be real and equal market fight between competitors in the already difficult Macedonian market.

Referring to the activities conducted by Pakomak LLC Skopje aiming at the encouragement of eco-innovations, it is worth mentioning that training seminars for clients started in 2011 and they were attended by representatives of about 100 companies. At the training seminars, there was detailed presentation of legal regulations on handling packaging waste and waste in general. A special emphasis was put on the obligations referring to the Waste Management Program with one of its basic objectives to reduce waste and generate less waste, which will make the process of reusing and recycling easier. Pakomak LLC Skopje, for the need of its over 800 clients, offers free services by hiring licensed waste managers who will perform consulting services. Furthermore, there are numerous examples in the direction of raising public awareness, particularly for the competition “Trash for Art”, which takes place every year, eco education in schools including the project for donating liquid soup corresponding with the collected waste in each school in Skopje, creating the educational game: “Green Team”, eco-masquerades, eco-promotions in shops, the project Ecobus throughout Macedonia, the HORECA eco-action and the registering of the trademarks ECO café, ECO restaurant, ECO zone, putting up boards with eco messages, playing eco videos, collaboration with the application “My Air”, participation and support of actions for cleaning the environment and many others. Additionally, the company publishes “Eco Herald”, an informative magazine in the field of environment, focusing on waste reduction programs among other things. The magazine is distributed for free as an addition to the daily newspapers in the country.

Pakomak LLC Skopje even published an ad in a newspaper for the most environmentally friendly Mayor in 2018 and in addition to the amount of collected and selected packaging waste, the conditions for election included the amount of funds from the municipal budget allocated for environmental projects connected to innovative eco-facades, solar panels, composting, biowaste and similar things in order to reduce the pollution. Thus, handing an

award to the most active Mayor in the Republic of Macedonia induces a competitive spirit among the municipalities in fulfilling their competencies in the field of the environment.

Pakomak LLC Skopje is one of the rare entities which registered three certificated trademarks. Pursuant to the Law of Industrial Property, a certificated trademark protects a mark which is used by several trade associations supervised by the holder of the certificated trademark and it serves to protect the quality, the origin, the way of manufacturing or other common characteristics of the products and services of those trade associations. This alignment of operation of, above all, hospitality objects as well as other objects by obeying the rules set down by Pakomak LLC Skopje regarding proper waste selection with special stress on waste glass selection and its handing to authorized handlers as well as advertising collaboration in raising public awareness, grants the right to hospitality objects to put up advertising boards with the trademarks ECO zone, ECO café or ECO restaurant inside or in front of their objects. At this point, there are more than 580 hospitality objects which possess the “ECO” trademark as a sign of cooperation with “Pakomak“ in the field of responsible treatment of waste. Thus, using a very rare tool (certificated trademark), Pakomak introduced new standards in the treatment of waste generated in hospitality objects and it influenced the public awareness of the users of services in a very acceptable and simple way.

Conclusions from the results obtained

Based on the conducted research, a conclusion can be drawn about the condition and the best practices of Eco-innovative and entrepreneurial training and educational initiatives of companies in Macedonia:

1. Of the conducted research, it was concluded that the number of respondents which had participated in a seminar or an eco-innovations training is very small (20%). Besides other reasons, this can be considered a result of the low offer of such kind of specialized training. The conducted research was mostly organized by third parties or was intended for employees in more companies, and rarely training was organized in a company and was intended only for the company's employees. Thematically, the most attended was the training in the sphere of ***Innovative products and services which benefit the environment***, and most training in the sphere of ***Technologies and systems which refer to environment protection***.
2. In the Republic of Macedonia, the largest part of Eco-innovative and entrepreneurial training and existing educational initiatives of companies are held within the project activities of projects supported by the European Union, certain foundations, chambers of commerce etc.. Activities in this area are being taken by certain state institutions, agencies or other bodies by organizing info days, info centers, printing of certain publications, brochures, pamphlets, manuals, informants etc.. A small number of organizations/legal entities commercially deal with organizing trainings of these areas.
3. A significant activity in organizing seminars, training and other educational initiatives for businessmen in Macedonia has been taken by Energy Agency of Republic of Macedonia, the Center for Climate Change, the Chamber of Commerce of Small

Business, the Health and Environment Institute, Foundation for Management and Industrial Research, Pakomak LLC Skopje and other legal entities.

4. The most commonly organized training and seminars refer to energy efficiency, contributions of energy efficiency, and with the purpose of increasing the competitiveness of companies. Most often, training and seminars are part of projects funded by international funds, the EU, EU member states etc. and they are free for the subjects who are interested. Training and seminars which are organized by associations of legal entities, chambers of commerce or other non-governmental organizations, with the purpose of raising the awareness of participants regarding the benefits of eco-innovations, acquiring skills for exploiting these potentials have a symbolic price which ranges from 30-90 euro. Most often the training, seminars, and workshops last one day and are organized in classrooms i.e. separate rooms. While the educational initiatives which publish various manuals, newspapers, pamphlets, brochures etc. are published electronically, and by delivering them online.
5. Pakomak LLC Skopje pays special attention to dealing with waste and package waste. Pakomak LLC Skopje organizes diverse training for its membership, in order to more easily perform their legal obligations. Besides that, Pakomak LLC is very proactive in the general public also, for raising the awareness regarding eco-innovations and for preserving the environment in general.
6. Besides the engagement of certain experts in non-governmental organizations in the area of protecting the environment, within the Universities of the Republic of Macedonia, the only Institute for health and environment is within the University of South East Europe. Ten employees in teaching staff participate in its operation in order to do scientific research and promote and reinforce the awareness for protection and improvement of the environment and health both regionally and globally. On an academic level, significant attention is not being paid to eco-innovations in Macedonia.

7. Based on the above stated it can be concluded that in Macedonia there is no significant activity and movement in terms of organization and participating in eco-innovative and entrepreneurial training and educational initiatives of companies. Training which has been organized so far has been within certain projects or within certain associations of legal entities, aimed at gaining knowledge for meeting certain legal obligations or gaining initial knowledge for eco-innovation. More specific training for gaining more detailed knowledge regarding eco-innovations is mostly organized for members of certain chambers, and even though they are not closed for the general public, they still do not resonate with the general public, i.e. with companies which are not part of the actual chamber.

8. There is more room for taking action, firstly for educating trainers or expanding the activity of Universities and academic staff in this area, producing sufficiently educated staff, collaborating with organizations and associations of the activity in question, and also promoting of these activities in public and the economy, from where the future trainees would be recruited, but also entrepreneurs and managers who would implement the contributions of eco-innovation in their operation.