JAP&T TPA-Timişoara

Available online at https://www.journal-of-agroalimentary.ro/

Journal of Agroalimentary Processes and Technologies 2023, *29* (2), 138-148

Journal of Agroalimentary Processes and Technologies

Eco-innovation and the creating of green jobs

Steluța V. Radu

[1]*"Ion Ionescu de la Brad" University of Life Sciences Iaşi, Romania*

Abstract

In this experimental research we followed the possibilities of eco-innovation at the level of the green economy which implicitly generates entrepreneurship in environmental business, as well as green jobs. Following the experience of states with a developed economy and the actions of the International Renewable Energy Agency (IRENA), since 2008 public policies have been issued in the direction of eco-innovation in the USA, Brazil, for energy regeneration and the creation of ecological goods and services. This trend has also forced the establishment of new businesses and new green workplaces, to replace those areas of activity that can destroy the environment in the medium and long term. Most green jobs are in the United States today. Romania has adapted to the new guidelines on Ecological Policy, but Romanian companies have registered a stagnation in eco-innovation because changing the trend of activity of these companies from an industrial economy to an ecological economy is not an economic, financial advantage, because innovation means additional costs and declining economic results. Thus, the current trends of Romania and the European Union are focused on identifying the most efficient regeneration and recycling activities, along with the formation of certain categories of staff, professional reconsideration or qualification for green jobs. The results of the experimental study indicate that the activities of efficiency of renewable resources in Romania compared by European Union are on the first place in saving solar energy in proportion of 72% in Romania compared to 67% in the European Union, followed by material savings of 60% in Romania compared by 59% in the EU, water saving of 57% in Romania compared by 51% in the European Union, distribution of ecological services of 11% in Romania compared by 17.5% in the EU, waste reduction with 52% in Romania compared by 67% in the EU, the development of technical consulting for ecological products and services of 10% in Romania compared by 18% in the EU.

Keywords: ecological innovating and green jobs

1.Introduction

The green jobs are, according to the United Nations Environment Program, "activities in the fields of agriculture, manufacturing, then activities research and development, administrative and service activities which contribute substantially to the conservation or restoration of the quality of the environment, but not exclusively. It includes places work that helps protect ecosystems and biodiversity; reducing energy, material and water consumption through high efficiency strategies; de-carbonization of the economy; minimizing or completely avoiding the generation of all forms of waste and pollution. The environmental sector has the double benefit of mitigating environmental challenges, helping economic growth with green jobs.

The green jobs, according to the Bureau of Labour Statistics, are classified as "jobs in businesses that produce goods or services that conserve natural resources" [1] or "jobs in which the duties of workers involve the production processes of their through the unity more environmentally friendly or using fewer natural resources" [2]. The Bureau of Labour Statistics classifies green jobs in the following areas: water conservation, sustainable forestry, biofuels, geothermal energy, environmental remediation, sustainability, energy auditors, recycling, electric vehicles, solar energy andwind energy [3]. These definitions include jobs that seek to use or develop forms of renewable energy - wind, hydropower, geothermal, landfill gas and municipal solid waste, as well as increase their efficiency. In the field of green jobs, education, training and public awareness are also included.

* Corresponding author: stelaradu2010@yahoo.com

These jobs seek to enforce regulations, support education and increase public influence for the benefit of the environment [4].

Background. According to the International Renewable Energy Agency (IRENA) in 2016, Brazil has 934,000 jobs in renewable energy, making it the second largest country in the world with green jobs. Brazil is the world leader in liquid biofuels, with a total of 845,000 jobs produced. Brazil has 41,000 jobs in solar energy, 36,000 jobs in wind energy and 12,000 jobs in low hydropower [5]. In 2011, green employment accounted for 3.1 million jobs or 2.4% of total employment in 2010 and 3.4 million jobs or 2.6% of total employment US labour [6] Japan.

Copenhagen Climate Council experts published a report in 2009 stating that Japanese solar photovoltaic manufacturers account for 26% of the world market and that the solar industry can operate without subsidy dependence [7]. According to a report by the International Renewable Energy Agency, jobs in Japanese solar photovoltaics increased by 28% in 2014 [8]. In 2016, Japan was listed as the third largest employer of solar energy jobs with 377,100 workers, based on direct and indirect work [8].

In terms of renewable energy, Japan employs 3,000 jobs in liquid biofuels, 5,000 jobs in wind energy, 700 jobs in cooling and solar heating and 2,000 jobs in geothermal energy [8]. Wind turbine service technicians are expected to be the fastest growing profession in the United States in 2017-2024, with a projected growth of 108% [12]. United States of America. In 2010, the Green Goods and Services Survey found that there are 3.1 million jobs for green goods and services (GGS) in the United States, representing 2.4% of all employees in the United States [9,10].

The private sector had 2.3 million GGS jobs, and the public sector had 860,000 GGS jobs. TheUS is currently undergoing an energy revolution, the transition from coal to renewable energy. Most of these additions come from three main resources: solar energy (9.5 GW), natural gas (8 GW) and wind (6.8 GW). Together, these three sources make up 93% of all additions. The shift from fossil fuels to renewables will be mirrored by US employment, as workers will move from jobs such as coal mining to green jobs [11]. Under the 1981-1989 Reagan Administration, the Enduring Wilderness states that "President Ronald Reagan has signed 43 laws designating 10.6 million acres of wildlife in 31 states." [13]. The TAC Credit for Energy Investment for Business is a US federal policy introduced in 2005 under the Bush administration to promote the implementation of green energy sources through a 30% federal tax return on residential and commercial projects. Individuals and companies have been able toapply to the JTI to receive loans for investments in green energy technologies, including solar technology, fuel cells and wind energy [14]. The JTI has been expanded several times, most recently in 2015, through a multi-year extension that will maintain the yield of 30% by 2019, after which it will decrease to 26% by 2020 and 22% by 2021. After 2021, trade credits would be reduced to 10% and 0% for residential projects. The Association of Solar Energy Industries has attributed stability to the growthof the US solar energy industries to the 2006 ITC implementation [15]. Since the implementation of the ITC, the US solar industry has seen an increase in the implementation of solar technology, because the solar industry has been stimulated production and development through ITC [16]. Thus, the solar industry employed more than 420,000 people by 2020 - almost double the 260,000 solar workers in 2016 - and contributed $ 30 billion annually to the US economy [17]. The U.S. Consolidated Loans Actof 2010 allocated $ 8 million to invest in the production and measurement of green collar jobs and green economic activity through the Department of Labour, the Bureau of Labour Statistics and federal agencies (Environmental Protection Agency, Department of Energy). and Trade, Administration for Employment and Training). The methods of approach target businesses that produce green goods and services and include special employer surveys, the collection of aggregate employment data and wages and tabulations that distinguish between employment and industry [18]. The collection and maintenance of jobs data for green goods and services (GGS) has been discontinued due to the Balanced Budget andEmergency Deficit Control Act of 2013. All US government's "green jobs measurement" programs havebeen eliminated by this law [19]. USA 2007 Green Jobs Act 2007. Green Jobs Act 2007 (HR 2847), introduced by Represented Hilda Solis (D-CA) and John Tierney (D-MA), “authorized up to $ 125 million in funding to establish national and state employment programs administered by the U.S. Department of Labour, to help address the

growth deficit affecting green industries, such as energy- efficient buildings and constructions, renewable electricity, energy-efficient vehicles and the development of biofuels. The Energy Independence and Security Act adopted in December 2007 incorporates the Green Jobs Act of 2007. Between 2009 and 2017, President Obama campaigned underthe promise of creating 5 million new green jobs in the United States [20]. President proposed a cappingand trade system that would bring in revenue that would be used to invest in clean energy technology, creating 5 million new jobs. The bill was never approved, thanks to the Balanced Budget and Emergency Deficit Control Act of 2013, when the federal government "discontinued the measurement of all green jobs", which made it extremely difficult to measure job growth. However, there are has been significant growth under his administration. In March 2016, according to a non-partisan group, Environmental Entrepreneurs, there were 2.5 million jobs in clean energy, with 77,088 jobs exclusively in the wind industry [21].

During this time, employment in the solar field also increased. According to the 2015 national solar census, it marked the third consecutive year in which the increase in solar energy was 20%. [22]. In addition, the US Recovery and Reinvestment Act (ARRA), adopted in early 2009, includes provisions for new jobs in industries such as energy, utilities, construction and manufacturing, with an emphasis on energy efficiency and greener practices [23, 24]. Pathways out of Soverty (POP) is a national training program that was established in 2009 by the Obama administration and funded by the 2009 U.S. Recovery and Reinvestment Act (ARRA). POPs target people living below or near poverty levels to give them the skills they need to enter the green job market, focusing on the energy efficiency and renewable energy industries. Vocational training programs focus on teaching literacy skills and vocational training. Some of the programs provide assistance in support of childcare and transportationto overcome barriers to employment [28]. He signed an executive order, “Presidential Memorandum on Freezing Employment,” regarding the freezing of government positions in the executive branch [25]. Then, he took into account subsidies distributed through the EPA, which could amount to $ 4 billion a year. In the 2018 “Face America Great Again Blueprint,” the Trump administration projected 31% EPA funding cuts and discontinued funding for the Clean Power Plan, international climate change programs, and climate change research and partnership programs [26].

In 2008, the United Nations Environment Program (UNEP), the International Laboure Organization (ILO), the International Trade Union Confederation (ITUC) and the International Organization of Employers (IEO) jointly launched the Green Jobs Initiative. The aim is to bring about a fair transition to a green economy, providing space for workers, employers and governments to negotiate an effective policy to provide fair opportunities for green jobs [27]. Million Trees NYC Training Program (MTTP) offers training opportunities, especially for low-income, insecure, 18-24 year old who have a high schooldiploma or a GED. In 2009, the full-time wage of twice the New York State minimum wage of $ 7.25 was provided to MTTP graduates through a grant from the US Forest Service. Of the 16 employed graduates who were interviewed for a study by the USDA Forest Research Service, 75% were men, 25% were women, 81% were black, 19% were brown, 75% had a high school diploma, 19% had a Graduate Ecological Degree and 6% went to high school. Most self-employed employees who graduate remain at their green workplace; not all employees have personal assistance networks [29].

Methodology/Materials and Methods

Green job forecasts. Demographic data. According to Race Forward's Green Equity Toolkit, green jobs are disproportionately occupied by white men. [30] Historically, the environmental movement has been white, middle and upper class [31]. In 1990, minorities accounted for 1.9 percent (14 of the 745) workers for four of the largest environmental organizations, the Council for the Defence of Natural Resources, Friends of the Earth, the Audubon Society, and the Sierra Club [32]. According to an Ecology Law Quarterly magazine published in 1992, white people disproportionately hold green jobs, as these jobs address environmental issues that do not face low-income and black people [33]. Lawyers focus on environmental issues based on aesthetics, recreation and the protection of natural lands outside their communities, often not facing environmental issues in their communities [34]. Low-income communities and people of color who face problems environmental pollution, are

often involved in basic environmental activism to prevent the toxicity of mortality in their communities, such as overcrowding, landfills, incinerators and other health hazards [35]. A small number of environmental organizations have a diversity manager, a diversity committee or collaborate with low-income or ethnic organizations. Environmental organizations rarely recruit from institutions that serve minorities, minority professional assemblies, and other talented minority pipelines. Minority internationals to environmental organizations are less likely to be employed than their white counterparts. Promotions are often aimed at white women in environmental organizations [36**]**.

Education for green jobs. The National Council for Labour Education and the AED have published a report entitled "Going Green: The Vital Role of Community Colleges in Building a Sustainable Future and a Green Workforce" that examines how labour education and community colleges contribute to efforts. in the direction of renewables and energy cleaning. The report provides examples of initiatives currently in place at national level, providing information on how to implement the programs. In response to high unemployment and a struggling economy, workers need skills relevant to their specific geographical locations. "Instead of doing green jobs, we need to do green jobs," says Ken Warden, an administrator in labour education. There are a lot of jobs in the solar industry [38]. SEIA maintains a resource for those looking for solar jobs [37]. A 2016 study indicates that the declining coal industry could protect its workers by retraining them for the solar industry [39]. The green jobs in Romania are jobs in energy and utilities agencies, where funds have been set up for green energy, especially wind energy, since 2016. So, the Romanian population uses ecological and wind resources, solar energy, but in a different form than other users on the planet. In Romania, too, domestic users of wind and solar energy must have capital for the installation of energy capture cells. Maintenance costs are widespread and distributed throughout the consumer network because green energy costs are still very high.

Regarding the training for green jobs, it is not at the highest level of efficiency because technological education for ecology and environmental protection is theoretical, in high schools in Romania, and education and training in the field of technical university studies are focused on forestry, hydro technics and environmental control, which does not actually mean preparing for green jobs or entrepreneurship, environmental business.

The green jobs in Romania are found in ecotourism and organic agriculture, as innovative mechanisms for employment and sustainable local development in rural areas in different regions of Romania. This system supports people interested in finding a job or opening a business in the field of organic farming and is made available by local communities through the European funding.

The European-funded projects from 2014-2020 aimed at developing activities related to: raising public awareness, creating cross-border business incubators for ecotourism and organic farming, developing a common strategy and a cross-border platform for green jobs in rural areas, the organization of special training programs and the organization of training sessions in order to increase mobility in rural areas aimed at training and education for the green workforce, the organization of events "Green Innovation Lab" (Green Innovation Laboratory) The current state of Romanian market for the entrepreneurs indicates occasional, sporadic actions in terms of green jobs. The experimental data were collected from the National Institute of Statistics, were processed in Excel, add a trendline based on series, Average or Pearson correlation functions.

Results

This research it aimed to analyse the ecological potential jobs in Romania, to identify the possibilities of education, professional reconversion and entrepreneurship in environmental business. Eco-innovation is creating jobs for the environment around the world [40]. Innovation simultaneously increases the green productivity and wages, while increasing the efficiency of energy production and the environment [40]. Although, the policy of ecological jobs and the green collars is in a beginning phase, differentiated on the whole planet, “any ecological movement that leads to eco-innovation will be a long-term gain of Romania. On the one hand, the professional reconversion of the labour force from the mining areas to other renewable energies represents a favourable economic perspective, on the other hand, innovation and the establishment of environmental business in our country will

represent a vision of Romania's ecological future, the geographical area in which we are located. The analysis report of the current state of BUILD UP Skills Romania [41] made in 2012 situation of the construction sector in terms of continuing vocational training and the necessary training in the field of energy performance of buildings and the use of sources renewable energy in buildings. The analysis and forecasts made in this document identify a considerable gap between the human resources operating in this sector in 2011 and the need for labour in the perspective of 2026. Thus, the forecasts made regarding the need for force of work in the construction sector, identifies a gap between available and needed resources ranging from 80.928 people (pessimistic scenario) to 186.617 people (optimistic scenario).The main professions identified with high deficits and which have a special relevance for energy efficiency (EE) and the use of renewable energy sources (RES) were: electrician in green buildings, installer, insulator, carpenter / installer, installer for solar thermal systems, installer for solar photovoltaic systems, installer for geothermal systems. biomass thermal power plant installer, heat pump installer.

The dynamics of ecological jobs have an ascending trend between 2009-2014. Growth has been more pronounced in water distribution, sanitation, waste management, administrative or support services, as well as in research and technical activities. There is also a decrease in green jobs in the extractive industry (oil, sugar, starch), in the manufacturing industry, as a result of the insolvency of a large number of oil, sugar or starch factories, or some small and medium enterprises. Between 2008-2026, the field of education is equally important for the training of the graduates with skills for green jobs, as well as the education of the people topreserve a clean, less polluted environment.

From a statistical point of view, there is an increasing linear trend from 2009 to 2014 for green jobs in research and technical activities, activities in administration and support services. The statistical results show that the evolution of green jobs reached a high confidence level of 0.9212 in research and technical activities, 0.9644 in administration and services, as well as 0.8383 in the manufacturing industry, 0.9162 in education and 0.8541 in the extractive industry. The statistical confidence level reflects a significantly good result. The green jobs declined significantly in education, extractive industries and manufacturing (fig.1).

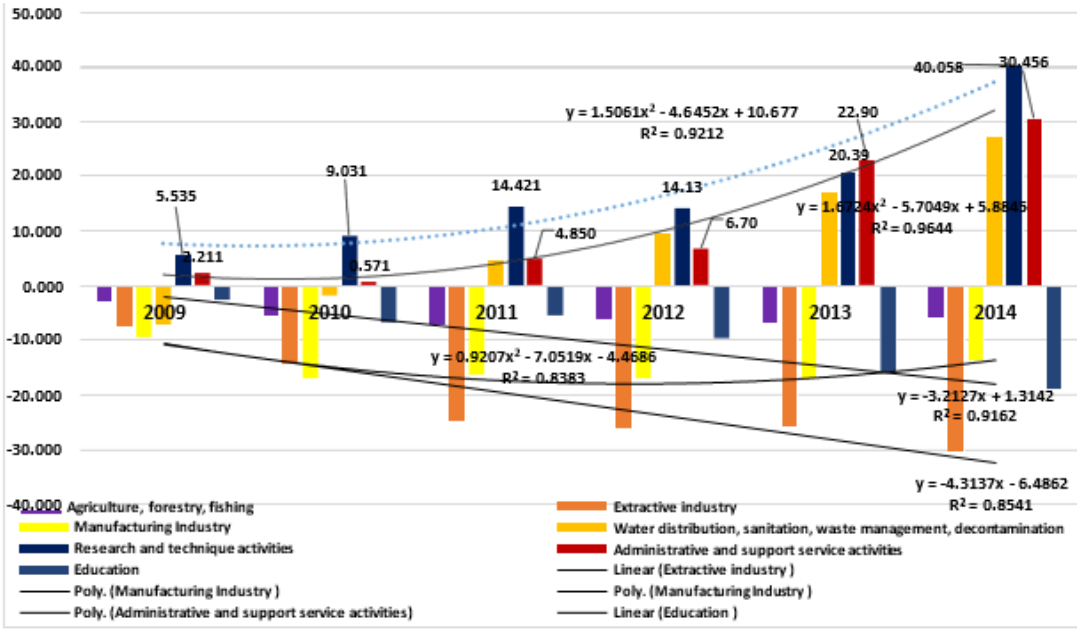

Fig. 1. Dynamics of the green jobs in Romania in the period 2009-2014

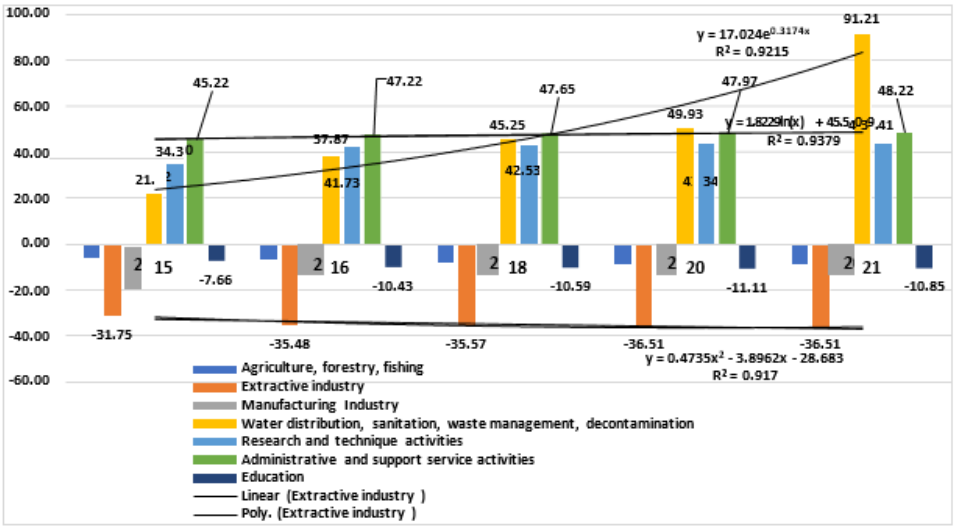

Fig.2. Dynamics of the green jobs in Romania between 2015-2021

The dynamics of green jobs between 2015-2021, increased the most in the field of water distribution, sanitation, waste management, research and technical activities, administrative or support services. The decrease of green jobs in the extractive industry is accentuated, also due to the decrease of the processing production in the extractive industry, in agriculture, forestry and fish farming. On the other hand, the decrease in the number of green jobs in education is improving. From a statistical point of view, the increase in the number of green jobs is linear from 2015 to 2021 in the sectors of water distribution, sanitation, waste management, research and technical activities, administrative or support services. From a statistical point of view, veryhigh confidence level values were obtained from 0.917 to 0.9379, in the period 2015-2021 for the same categories of green jobs. So, the evolution of the green jobs market has remained constant, just like in the period 2009-2014 (fig.2).

The level of unemployment in Romania is 9 times lower than the level of the employed population. That is why the professional reconversion of some categories of employees and their qualification in the field of ecological innovation and the preparation for new professions is correlated with the Romanian labour market. The statistical trend of the obtained experimental results indicates values of 0.9365, a high confidence level for the dynamics of Romanian employees in the period 2008-2021, this is followed by a similar confidence level of 0.9043 for the unemployed, as well as a slightly low confidence level of 0.8987 in the case of the degree of employment on the labour market. The interpretation of the obtained results indicates a direct proportionality between the number of unemployed workers and the degree of employment on the labour market (fig.3).

The actions undertaken by the companies for the efficient use of resources, on the first place is the energy saving 72% in Romania compared to 67% in the European Union countries, followed by material saving 60% in Romania compared to the EU average of 59% water saving 57% in Romania compared to 51% average in the European Union, support services 23% in Romania compared to 17% average in the European Union, technical consulting services for the development of products/services and production processes 10% in our country compared by 18% in the European Union countries, distribution services 11% in Romania compared by 17.5% in the European Union, waste minimization 52% in Romania compared by 67% in the European Union countries.(figure 4). In the case of the differences between Romania and the EU, the percentage weights are written on the linearity only in the case of 4 variables, while three of them do not follow the linear trend green jobs. The statistical trend follows a polynomial evolution with a satisfactory confidence level of 0.7191 in the case of the evolution of the trend of renewable resources in the EU, a lower confidence level trend for Romania of 0.6734 and a good confidence level of 0.821 for the difference between the two segments. The comparison of the evolution of the two segments is welcome because the migration of the labour force from Romania to the countries of Europe is topical today. (fig.4)

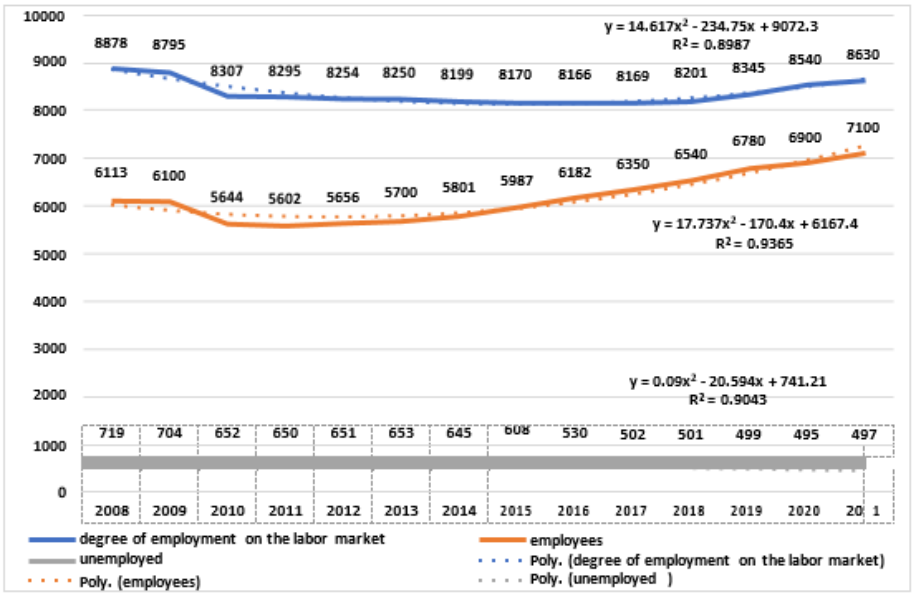

Fig.3. Dynamics of the employees versus the unemployed in Romania between 2008-2021

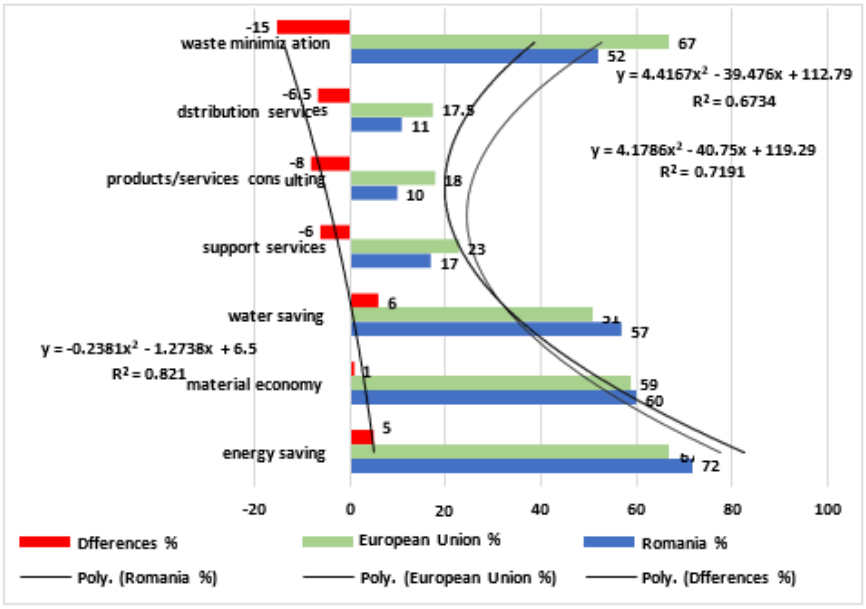

Fig.4. The evolution of renewable resource efficiency activities in Romania throughout the European Union

The trends of green jobs in the period 2008-2021 show that the administrative and support activities, research and technical activities, water distribution, sanitation, waste management, decontamination, had an increasing trend. The highest increase of 91.21% is registered in water distribution, sanitation, waste management and decontamination in the period 2008-2021.

In the case of agriculture, forestry's and fish farming had the smallest decreases, while the extractive industry had the largest decreases in green jobs. (fig.5) Between2020-2021, the trend of jobs went to online jobs, which changed the work style and the orientation to other jobs compared to the period before the pandemic. However, the evolution of jobs is in permanent change.

The logistics of large commercial chains have included green jobs for several years. Green businesses are the most appreciated, especially for entrepreneurs accessing ESG (Environmental,

Social, and Governance) financing lines.The evolution of vacant green jobs in Romania (figure 5) indicates an average decreasein jobs in the field of education (-7.66% to -11.11%) and industrial production (-13.34% to - 16.17%). In the case of the extractive industry, a significant decrease is observed (-31.75% to - 36.51%), in agriculture, forestry and fish farming the decrease is the smallest (-6.3% to -8.93%). (fig.5). The positive evolution of the need for green jobs is noticeable in the administrative sector and support services (45.22-48.22%), in the case of technical and research activities (34.40-43.41%), in a similar proportion. The largest increase in green jobs is recorded in water distribution, sanitation, waste management and decontamination (21.42-91.21%). Statistically, it can be observed that the confidence level of the variation of green jobs in the period 2008-2017, 2008-2019, before the pandemic was 0.4526-0.4601, while the confidence level in the period 2008-2021 was 0 .4343, down 0.0183-0.0258. This shows on theone hand a low confidence level overall below 0.5, on the other hand equally high variability both before and after the pandemic in the period 2008-2021. The increase in the number of jobs at a maximum level was recorded in the waste management sector, which means that Romaniais adapting quite quickly to the regulations regarding the European Green Pact, to ESG factors that will bring long-term benefits at an ecological level. From the analysis of the growth and decrease weights, it is observed that there are more trends of decrease in the green jobs in six fields of activity: education, industrial production, extractive industry, agriculture, forestry, fish farming, and less growth trends, in the administrative sector, research, water and waste management. That is why the increase in the need for green jobs does not compensate for the decrease in the degree of employment in the case of the six fields.

In the last 13 years, both the change in job requirements and the need for professional training of future employees have been reflected. Green jobs constitute a new challenge of the 21st century, firstly in terms of new fields of qualification, secondly, a new trend for the professional conversion of employees with experience in other fields of activity. The risk factors are related to the need for schooling, the time allocated, the financial possibilities of the employees to pay for the training courses, the ability to adapt to the new, the speed of adaptation, the flexibility of the segment of employees aged between 40 and 55 years.

All these disadvantages have led to a decrease in the level of employment in the Romanian market because a small percentage of employees can adapt to the optimization of the flow of green jobs, due to the mentality, superficiality, routine and the lifestyle with a comfort increased in terms of the number of hours worked (8 hours), the number of days worked in a year and mini-holidays or excess days off. The evolution trends of green jobs from a statistical point of view show that in the scenario of the necessary qualifications 2018-2026, the needs of green jobs will increase significantly for household waste sorters, house waste sanitation operators, water repellent insulators, thermal insulation. At the same time, an average increase is observed for the jobs of ecological heating installer electrician in ecological construction and carpentry assembler (fig. 6).

There is a trend of high-scoring financing for green businesses to facilitate the reduction of pollution and the impact of climate change. From the processed data, it can be observed thatthe need for jobs in the perspective of the years 2023-2026 is oriented towards the service sector and fewer jobs are for production, education, the administration sector, Horeca. Regarding the need for green jobs in Romania for the next period 2018-2026, it is estimated that each of the trades: waste sorter, sanitation operator, renewable energy operator, insulator, thermal installer,installer for heat pumps, solar system installer, geothermal system installer, biomass production systems installer, ventilation installer, ecological heating installer, ecological construction electrician, carpenter installer- its will increase after the green businesses would be developed.(figure 6) In a perspective scenario of the need for qualifications for green jobs in Romania until 2026, it is observed that the need for waste sorters, sanitation operators, thermal and energy installers, ecological heating installers, electricians in ecological constructions will increase. These linear increases in line with the job market represent a positive scenario for Romanian graduates, because the new jobs was adopted with the EU green pact until 2030 and represent a favourable evolution to increase employability, especially in green businesses.

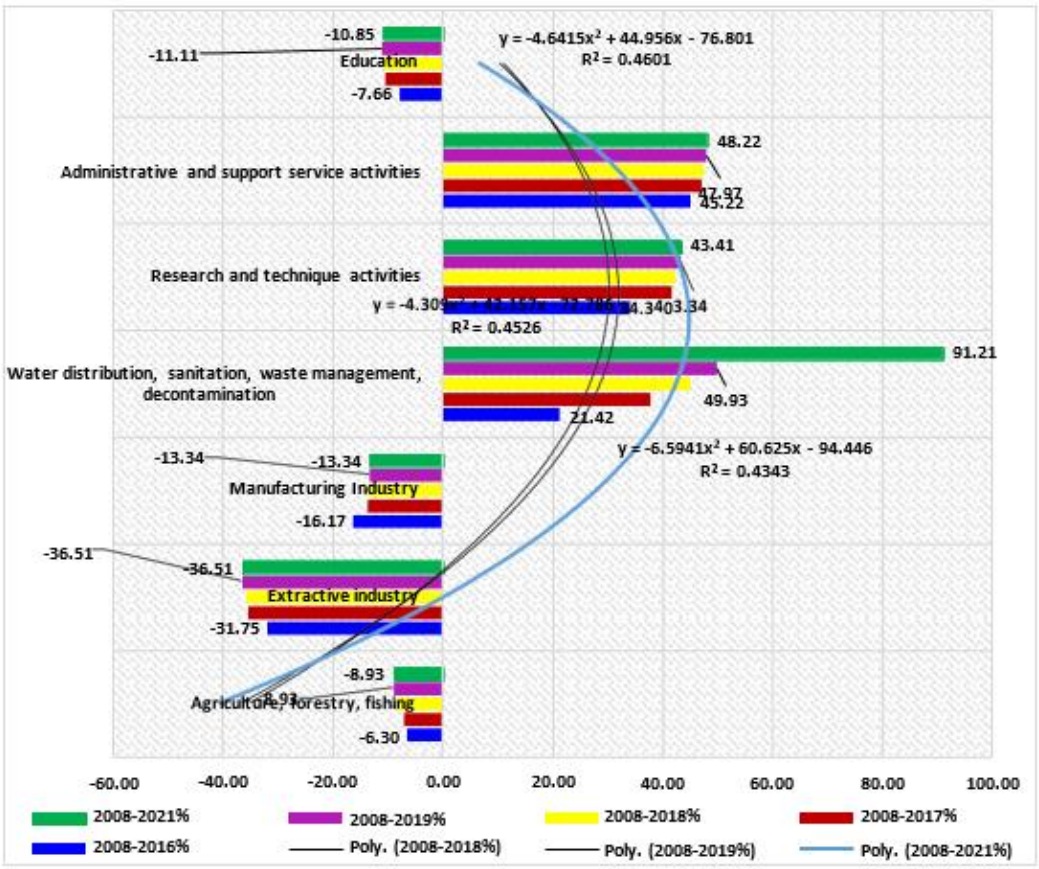

Fig.5. The Green job vacancies version in Romania between 2008-2021

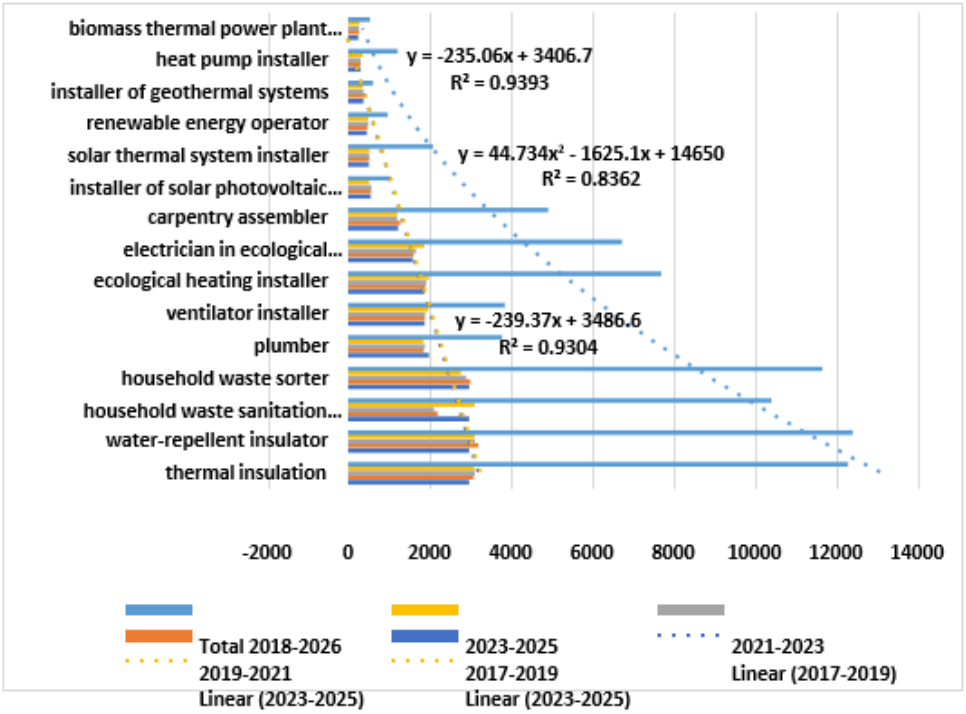

Fig. 6. The necessary qualifications scenario for the green jobs in Romania between 2018-2026 in accordance with the labour market

The research results were statistically evaluated. Thus, the necessary qualifications in a future scenario of green jobs in Romania shows that: in the period 2017-2019 the evolution of the scenario reached a high confidence level of 0.9393, in the period 2023-2025 this scenario will reach a very good confidence level of 0.9304, and in the period 2018-2026 the confidence level calculated at the current date was 0.8362. This slight drop in the level of confidence signifies a slow pace of skills development in the green jobs scenario. This aspect is clearly argued again by the blocking of the labour market in the period 2020-2021 and its return with new jobs, even green jobs, in the period 2022-2026. It is thus observed that there is a permanent evolution in the job market, but the appearance of negative factors will obstruct any scenario, no matter how optimistic it may be. (fig.6) Moreover, in the world, countries with a developed economy have public policies for the eco-innovation of renewable energy and the creation of ecological goods and services, in countries such as the USA, Brazil, (International Renewable Energy Agency). The accelerated adaptation of the labour force in Romania for the entrepreneurial fields and the green jobs, makes Romania manifest itself with flexibility to European and global policies. The time-differentiated implementation of regulations related to Green Policy, ESG factors is generated by the economic-social context and by European or world funding.

The analysis of qualifications and jobs in the period 2008-2023 and the estimation of a scenario for the following period 2023-2026 highlight a short-term strategy for our country like in EU, USA, Japan. These results create a forecast that can be successfully used by Romania in the perspective of modelling the dynamics of the labour force and financing resources for the green jobs of the future through Environmental Protection Agency, Department of Energy and Commerce, Employment and Training Administration. The approaches also target companies that produce green goods and services.

Conclusions

1. The way in Romania faces the challenges launched by the need for greening will materialize more by generating eco-innovation activities specific to national wealth.
2. Increasing know-how in the direction of eco-innovation (green ideas) will mean the involvement of intellectual, green capital, for a world that does not age, but "lives longer" and which will implicitly contribute to increasing national and regional wealth in Balkans.
3. The green jobs that operate in Romania are those that monitor, control the level of pollutants that produce air, water and soil pollution. In other words, there are jobs in environmental quality analysis laboratories, which means that green jobs are insufficient to achieve the greening of the Romanian space.
4. With regard to agricultural employment. Forestry, fish farming, landscaping, water management, renewable energy production are improperly called green jobs because in all these sectors of the Romanian economy are used in carrying out activities with pesticides, fungicides, herbicides, insecticides, chemicals for water treatment, which are solutions to the limit of admissibility for a healthy life or treatments that may affect the ecosystem by default the existence of the population by degrading the environment.
5. The greening trends of the entire planet and the acceptance of global environmental protection policies will generate changes in Romania as well, leading to the establishment of a large number of green business, implicitly a large number of green jobs

Compliance with Ethic Requirements: Authors declare that they respect the journal's ethics requirements. Authors declare that they have no conflict of interest and all procedures involving human or animal subjects (if exists) respect the specific regulation and standards.

References

1. https://green.gmu.edu/community/green-jobs-networking-fair/
2. https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_web2.pdf
3. https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_153458.pdf
4. https://marketbusinessnews.com/financial-glossary/renewable-energy/
5. https://www.airswift.com/blog/renewable-energy-brazil
6. https://enewspf.com/science/environmental/green-jobs-increases-to-3-4-million-in-2011-accounting-for-2-6-of-total-employment/
7. https://unfccc.int/process-and-

meetings/conferences/past-conferences/copenhagen-climate-change-conference-december-2009
8. https://irena.org/newsroom/pressreleases/2018/may/renewable-energy-jobs-reach-10-million-worldwide-in-2017
9. https://www.bls.gov/opub/ted/2012/ted_20120327.htm
10. Monthly Labor Review, January 2013: BLS green jobs overview
11. https://www.ge.com/digital/future-of-energy?utm_medium
12. https://www.fluke.com/en-us/learn/blog/energy-efficiency/wind-turbine-technician
13. https://www.dol.gov/general/aboutdol/history/dolchp09
14. https://crsreports.congress.gov/product/pdf/IF/IF10479/5
15. https://www.itftennis.com/en/news-and-media/articles/it-is-heartwarming-the-jti-and-its-major-impact-in- namibia/
16. https://blog.americansentrysolar.com/solar-itc-extended-through-2021
17. https://solarbusinesshub.com/2020/02/29/the-u-s-solar-industry-employed-nearly-250000-workers-in-2019- report/
18. https://www.amt-law.com/en/publications/detail/publication_0011452_en_001
19. https://www.bls.gov/ggs/
20. https://www.congress.gov/bill/110th-congress/house-bill/2847
21. https://www.ilo.org/wcmsp5/groups/public/dgreports/dcomm/publ/documents/publication/wcms_534326.pdf
22. https://www.energy.gov/articles/solar-energy-jobs-outpace-us-economy
23. https://www.thebalance.com/arra-details-3306299
24. https://www.researchgate.net/publication/264813561_The_green_economy_and_job_creation_Inclusion_of people_with_disabilities_in_the_USA
25. https://www.forbes.com/sites/tomspiggle/2020/10/28/trumps-executive-order-would-diminish-civil-service-employment-protections/
26. https://e360.yale.edu/features/an-inside-look-at-how-trump-turned-the-epa-into-an-industry-subsidiary
27. https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_152047/lang--en/index.htm
28. https://www.indeed.com/career-advice/career-development/what-is-vocational-training
29. https://www.worldcat.org/title/usda-forest-service-research-development-highlights/oclc/1041709977
30. https://www.raceforward.org/system/files/pdf/reports/Green_Toolkit_112009.pdf
31. https://nclcv.org/2020-scorecard-environmental-justice/
32. https://app.impaakt.com/analyses/at-microsoft-minorities-accounted-for-46-of-the-global-workforce/
33. https://archive.org/details/sim_ecology-law-quarterly_1992_19_1
34. https://www.environmentalscience.org/career/environmental-lawyer
35. https://www.scientificamerican.com/article/pollution-poverty-people-color-living-industry/
36. https://www.ehn.org/diversity-in-environmental-organizations-is-improving-with-still-a-long-way/
37. https://www.gsenergy.eu/solar-energy-industries-association/
38. https://www.cnbc.com/2021/10/20/global-shortage-of-workers-whats-going-on-experts-explain.html
39. https://www.nytimes.com/2016/06/11/business/energy-environment/coal-production-decline.html
40. https://www.researchgate.net/publication/263798710_STUDIES_ON_THE_ENVIRONMENTAL_IMPRO VEMENT_IN_ROMANIA
41. https://buildupskills.eu/en/event/Romania