

Sustainability Advisors: Discussing the potential for new green jobs among young people in Europe



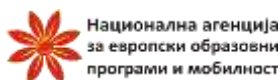
European Commission | Erasmus+



Национална агенција
за европски образовни
програми и мобилност



Sustainability Advisors: Discussing the potential for new green jobs among young people in Europe



Imprint

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Disclaimer

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1. General information about the project and partners

1.1 Eco Logic

ECO – LOGIC is a non-profit organization that is dedicated to protection and conservation of the environment, promotion of modern ecological practices, as well as monitoring and promoting the principle of sustainable development.

The organization encourages and supports positive changes in the environment in the forms of:

- Promotion of the ecology as science;
- Promotion of the cleaner production concept;
- Protection and conservation of nature and the environment;
- Distribution of environmental knowledge and upgrade of ecological education;
- Promotion of the principle for sustainable development;
- Creating new “green” jobs, especially in the field of sustainable development, energy efficiency and green social entrepreneurship;
- Opportunity for training and involvement of all interested citizens in projects in the area of ecology and environmental protection and management.

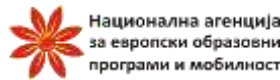
1.2 Humanost

Association Humanity was founded in 1998 based on the identity of their beliefs and humanitarian views on the existence of a need for people who are at risk of impoverishment and social exclusion to obtain the necessary capabilities and resources to fully participation in economic, social and cultural life and to enjoy a standard living conditions and social security that are considered normal in the society in which they live. We will allow for greater participation in decision-making affecting their lives and access to their fundamental rights.

The main sectors of activity are:

- Young Sector Education;
- Sector Policy Making;
- Sector Home care;
- Sector for Psycho-social support Care and assistance.

Our main focus is to provide greater social integration and promotion of the principles of equality, solidarity, non-discrimination of persons in social risk. To this end we have organized more educational trainings, public debates, collaboration with experts, campaigns for the full inclusion of persons in social risk their non-discrimination in society, breaking stereotypes and prejudices, raising the voice of those who are not visible to society because each of us is a citizen has equal rights and equal treatment. They are certified trainers, experts and highly educated individuals who share the same mission of the founders. Trainers and experts for youth, experts on policy and advocacy, youth workers, doctors and volunteers. All are part and creators of all activities in our association in these 18 years, fit with great experience and many successful projects.



1.3 InterAction

InterAktion is a youth organization active in the field of human rights, youth policies, integration of the young people from migrant families and refugees, aiming to encourage intercultural dialogues between the people from different backgrounds and cultures through non-formal educational methods. The organization promotes human rights, sustainability, active citizenship and voluntarism among the young people in Styria and contributes to the self-development and the inclusion of the marginalized groups and youth at risk.

InterAktion is focused on building bridges between the local population and the refugees. Moreover, we would like to reduce the number of young refugees without proper education, who are stuck in the procedures and waiting for asylum, by providing them with language training, non-formal education and organized activities with the local community aiming cultural exchange and breaking the stereotypes.

The founding of InterAktion results from a defined need for additional support of refugees during their process of integration. Moreover, InterAktion is a good example of established networks and successful cooperation's between the civil society, the private and the public sector. The NGO is mostly active within the KA1 Erasmus+ projects, organizing youth exchanges and training courses with which InterAktion is promoting economic, social and environmental sustainability.

1.4 Fundacija Instytut Innowacji

The mission of the Foundation is to foster the development of innovations in Poland by promoting modern technologies, stimulating social development and building tri-sector and international cooperation in favor of economic and scientific growth. The Foundation has already completed a number of projects in the field of:

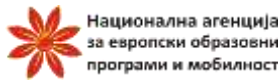
- business development for foreigners;
- projects aimed at environmental protection;
- non-formal education of children and youth;
- non-formal education of the elderly;
- trainings for polish NGOs and the unemployed;
- projects for the development of culture and cultural projects at transnational level;
- support, cooperation and development in the countries of the Soviet Union (youth, environment, entrepreneurship, culture),
- CSR and Social Impact Assessment study in the field of energy (shale gas).

2. Current progress towards Sustainable Development

2.1 Republic of North Macedonia

Macedonia has a solid legal framework that promotes country's sustainable development, both in terms of the Constitution and with the other harmonized legislation. In regard to planning and implementation of successful sustainable development at the national level, a variety of medium and long-term planning documents and strategies are prepared, focusing on various parts of sustainable development, such as:

- National Strategy for Sustainable Development 2009-2030¹,



- Program for sustainable local Development and Decentralization 2015-2020²,
- National Strategy for Reduction of Poverty and Social Exclusion 2010-2020³,
- Strategy for Gender Equality 2013-2020,
- Strategy for Environment and Climate Change 2014-2020.

The National Strategy for Sustainable Development (NNSD) is for the period 2009-2030, and her motto is: "Better future through change - using our rich social, cultural and natural heritage in a balanced way."

The preparation of the NNSD was one of the priorities outlined in the European Partnership with the country from 2004, as part of the requirements for reforming the country on the road to EU accession, as well as commitment to fulfillment stated in the "Country Strategy for Integration into the European Union".

The National Strategy for Sustainable Development consists from two parts. Part I, which contains the overall strategic framework and Part II, which contains the strategic basis for support, and its implementation and is aimed at ensuring economic development that is socially responsible and fair, acceptable to the environment and which relies on the basic postulates of civil society.

The NNSD is based on:

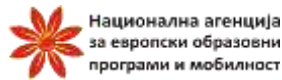
- a) The principles for sustainable development accepted globally and defined at the UN Conference on Environment and Development (Rio de Janeiro, 1992) with the goal of Agenda 21 being operational,
- b) The Johannesburg 2002 Declaration and Plan for Implementation adopted at the World Summit on Sustainable Development,
- c) The principles of the UN Millennium Declaration in which are contained The Millennium Development Goals and
- d) The principles developed in the renewed EU Sustainable Development Strategy, adopted by the European Council in 2006.

The strategic structure on which this Strategy is based is focused on six main areas:

- policy and legal framework;
- environment;
- energy;
- rural development;
- social issues;
- small and medium enterprises;
- infrastructure and transport;
- industry.

The strategy is based on three guiding principles:

- 1) The Government has an innovative, supportive and leading role in relation to municipalities and the private sector;
- 2) To introduce e-governance;
- 3) The short-term measures to focus on highly educated workforce, in order to prevent further "brain drain".



As a document, the Strategy has long-term, medium-term and short-term goals. In that direction, there is a need for its revision and adjustment in accordance with the real situation and principles, goals and indicators of Agenda 2030 and Sustainable Development Goals (SDGs).

One other key document for sustainable development, especially from social aspect, is the National Strategy for Reduction of Poverty and Social Exclusion, whose main goal is to reduce poverty and social exclusion in the country by improved utilization of the available human and material resources, the living, working, and the social conditions of all citizens, systemic and institutional interaction for the purpose of rapid development, higher standards and better life quality.

The Strategy covers the following areas:

- employment and labor market,
- poverty and social disadvantage,
- health care,
- long-term care,
- education,
- social protection.

In the line with the others strategic documents leading to improvement of the legal framework for sustainable development, is the Strategy for Environment and Climate Change 2014-2020, whose main goal and vision is aimed at preserving, protecting and improving the quality of the environment, and the quality of life of the citizens, in order to enable sustainable growth that will contribute to the achievement of the global goals for the environment.

This document further focuses on monitoring and implementing the principles of the concept of sustainable development, as a way that leads to economic progress and social well-being that has no negative impact on the environment, as well as to assure country's commitment to joining EU and fulfillment of the obligations of the international agreements on protection of the environment and climate change.

The country is a decentralized with divided governance between institutions at central and local level.

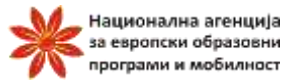
Accordingly, sustainable development is appropriately implementing at these two levels, and therefore specific policies and measures for sustainable development at local level are needed. For this purpose, the Government, in addition to NSSD, adequately prepares a Program for Sustainable Local Development and Decentralization (PSLDD).

PSLDD is the basic strategic document for the development of local self-government and decentralization in the country.

Through the program for the country presents its determination to continue on promoting sustainable local development, good local governance and creating conditions for a more active, more effective and innovative role of local authorities in achieving national goals for growth and development¹⁷. has been operationalized.

The document is based on four key pillars:

- good governance and development of an institutional framework for integrated local growth and development;
- knowledge-based growth through strengthening local competitiveness and innovation;



- inclusive growth by providing equal access to local services for all citizens;
- sustainable growth based on the responsible use of natural resources.

The latest version of PSLDD is for the period 2015-2020 and is the sixth planning document devoted to the further development of the decentralized government, from 1999 to the present.

The country, as well as many countries from the region and beyond, as a member of the United Nations joined the process of integrating and harmonizing SDGs in its national development policies and strategies. In this regard, the Government on 24 October 2016 signed a document for Partnership for Sustainable Development: United Nations Strategy 2016-2020 (UNDAF)⁴, which provides a strategic and legal framework for UN activities in the country for the period 2016-2020.

This Partnership Agreement is aimed at introducing and implementing SDGs by prioritizing the objectives, results and indicators that the UN agencies and national partners have agreed to have as of particular importance for the country in the first five-year period of implementation of Agenda 2030. Thus, five priority areas of cooperation were determined:

- employment,
- social inclusion,
- governance,
- environmental sustainability,
- gender equality.

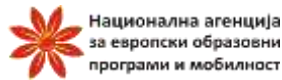
2.2 Austria

In words of Alfred Strigl, deputy director of the Austrian Institute for Sustainability, “Austrians are top of Europe and top of the world, when it comes to the environment.” In his opinion, being green has always come naturally to his countrymen. “We are the pioneers of Europe. We have a broad traditional knowledge of natural topics that comes from a conservative way of life – the farmers, hunters and forest men – that has been handed down from generation to generation. We know how to read the landscapes. We know about the cycle of life, to listen to the wind and to pay attention to the seasons and the way the herbs grow, the birds, the mushrooms and so on.” <https://www.austria.info/uk/service-facts/about-austria/austria-green-credentials/green-austria>

Austria is one of the leading countries in Europe in the field of environmental policy. This was not only recognized by the OECD in its report on the environmental situation in its member countries; the report of the EU Commission on the accession of Austria, Sweden and Finland also clearly showed that environmental standards within the European Union were substantially improved due to the accession of these three new Member States.

Since 2003 Austria has been a party to the Aarhus Convention, under which Member States undertake to actively make information available to the public and to provide a comprehensive, computer-based information network for the collection of data on environmental protection. The Environmental Impact Assessment Act of 2005 provides for the assessment of direct and indirect effects planned projects may have on humans, animals and the environment. Austrian legislation is thus increasingly taking citizens’ health and environmental concerns into account.

As defined by the Federal Ministry for Sustainability and Tourism “Sustainable development stands for shaping world and future in a way which is worth living. It serves to meet the needs of the present



without comprising the ability of future generations to meet their own needs. To fulfil this request which is valid for all countries and their people Austria has worked out a strategy for sustainable development. The implementation includes monitoring of development and evaluation of measures.” <https://www.bmnt.gv.at/english/environment/Sustainabledeve.html>

2.2.1 The country of smart cities

For years, Austria has been a key pioneer in smart city technologies. The country makes a lot of efforts and investments about rethinking a city as a living space with a view to energy and mobility, planning it innovatively and integrating it. In fact, 10% of all EU Smart City projects are based in Austria.

The most important approaches to design urban regions "smart" include: increasing energy efficiency, increasing the share of renewable energy sources, and reducing greenhouse gas emissions. The use of energy from renewable sources, energy-saving buildings and environmentally friendly transport require an intelligent interaction of innovative technologies and of integrated solutions that network individual technical systems wisely⁵.

2.2.2 National Policies

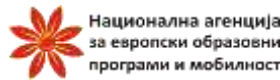
The national Strategy for Sustainable Development was adopted by the Austrian Government on April 30, 2002 (NSTRAT). It consists of four fields of action (quality of life in Austria, Austria as a dynamic business location, Austria as living space and Austria's responsibility), each of which has five key objectives. The Minister of Agriculture, Forestry, Environment and Water Management, who was mandated to coordinate the implementation policies at federal level, commissioned a “Committee for a Sustainable Austria”. In January 2018 the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) has become the Federal Ministry for Sustainability and Tourism and is in charge of agricultural policy, forestry, hunting, fishing, viticulture and wine law, environmental protection, energy, mining, animal welfare, and the tourism industry. The ministry coordinates all national activities, platform, initiatives, agencies and committees related to sustainability.

The sustainable development in Austria is being monitored under the supervision of the Federal Ministry for Sustainability and Tourism (BMNT). A comprehensive report on the progress of sustainable development in Austria is published once every other year.

Since 2010, Austria has had its own sustainability strategy backed by the Federal Provinces and the Federal Government (Austrian Strategy for Sustainable Development, ÖSTRAT). ÖSTRAT builds on the objectives and policy principles of the EU Sustainable Development Strategy, the Federal Government's National Strategy for Sustainable Development (NSTRAT 2002) and the strategies and programmes of the Federal Provinces for sustainable development and takes its cue from the Millennium Development Goals of the United Nations. Primary targets are policy makers and administrators, and a work programme has been devised for the strategy's implementation over several years.

The joint work programme (Work Programme 2011ff) of the Federal Government and the Federal Provinces for ÖSTRAT has nine closely related topic areas and sets out challenges, medium-term goals and specific initiatives. These initiatives are implemented either in cooperation with several federal ministries, across Federal Provinces or, as the case may be, by the Federal Government in collaboration with the Federal Provinces.

The EU Strategy for Sustainable Development of 2001, which was renewed in June 2006, aims to achieve continuous improvement of quality of life both for the present and for future Generations. Following an extensive review, the revised EU Strategy for Sustainable Development (EU SDS) was adopted on 15



June 2016 by the EU's Heads of Government and State. The revised EU-SDS represents a mandatory framework, also for Austria. It sets forth requirements, general and operational objectives as well as concrete actions for seven key priority challenges in sustainable development.

The key priority challenges defined in the revised EU SDS are:

- climate change and clean energy
- sustainable transport
- sustainable consumption and sustainable production
- conservation and management of natural resources
- public health
- global challenges posed by poverty and sustainable development
- social inclusion, demography and migration

Since 2016, each Austrian ministry must include the implementation of the 2030 Agenda for Sustainable development within its respective areas of responsibility.

2.2.3 Sustainability Reporting / Corporate Social Responsibility

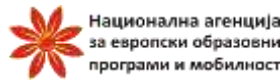
After the directive on disclosure of nonfinancial and diversity information came into force in the EU, it became part of the national law in Austria. The companies (with more than 500 employees) are required to report on environmental, social and employee-related, human rights, anti-corruption and bribery matters.

2.2.4 Austrian Environmental and Energy Technology Sector

Austrian companies are heavily involved in numerous fields of the environmental technology. Austria's environmental technology industry is one of the world's most innovative industries with a very good reputation. It is export intensive and grows rapidly, faster than the Austrian economy as a whole. This industry secures high-quality jobs and prosperity and creates the technological base for an improved quality of life and environmental quality.

The environmental technology economy is a vital substance of domestic national economy with a beneficial economic development and a firm anchoring in the domestic economic network. 1,012 industrial enterprises and 1,490 service providers with environmental technological activity create about 41,400 jobs. In 2015, the Austrian environmental technology industry directly generates a turnover of about 12.3 billion EUR. The economic structures of production have the largest share. This group of undertakings generates a turnover of 9.69 billion EUR and offers more than 31,000 jobs. Being considered over a long period of time, a continuous upward trend can be seen for the environmental technology industry. Since 1993, the number of jobs has tripled and the turnover of environmental technological activities has grown 6.5 times. In addition, all other substantial economic indicators are positive in their development and even above average. Finally, the Austrian environmental technology industry holds a share of more than 3% of the GDP.

The environmental technology industry with its high multiplier effects, spreading to other economic sectors (in particular intermediate services as well as effects on consumption and investment), creates more than 119,000 jobs in the overall economy and a turnover of 24.28 billion EUR.



2.2.5 Important institutions, initiatives, associations, funds, platforms in the field of sustainability

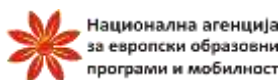
- **Austrian Environment Agency** - provider of environmental consultancy services. Their range of services includes: performing evaluations, setting standards and developing methods and recommendations. The agency provides the basics for decision-making as well as sustainable solutions. Based on their broad expertise they offer sustainable solutions and services in many areas⁶.
- **SDG Watch Austria** - The civil society platform in Austria supports the implementation of the 2030 Agenda and the UN goals for sustainable development. It is a broad, cross-sectorial network of more than 150 civil society and non-profit organizations working in alliance with the private and academic sector. In January 2017, 144 organizations addressed the government in an open letter calling for the implementation of the Agenda 2030 and its SDGs. In the letter, the organizations demanded a transparent and inclusive participation process, a gap analysis and the development of an overarching sustainability strategy based on the SDGs.

On 27 September 2017, more than 80 civil society organizations from various sectors came together to support the implementation of the Agenda 2030 and the SDGs and, thus, founded SDG Watch Austria. Just one month afterwards, more than 100 organizations from all over Austria became members of the network and at the first general assembly of SDG Watch Austria in May 2017 more than 130 organizations were part of SDG Watch Austria⁷.

- **respACT** - Austrian business council for sustainable development is Austria's leading platform for Corporate Social Responsibility (CSR) and Sustainable Development. The association emerged in October 2007 from the fusion of the Austrian Business Council for Sustainable Development (ABCSD) and respACT austria. respACT stands for "responsible action" and supports its member companies on their way to implementing socially responsible actions into their daily business. Responsible companies focus on five fields of action: organisational leadership, market place, workforce, environment and society. respACT - Austrian business council for sustainable development responds to businesses of all sizes based in Austria, from small companies to major corporations.
- **The Austrian Ecolabel** - The "Austrian Ecolabel" was created on the initiative of the Federal Ministry of Environment in 1990. The Austrian Ecolabel can be granted for products and services (tourism, education, events). This label provides the general public with information on the environmental impact of consumer goods that arises from their production, usage and disposal and attracts the attention of consumers to alternative environmentally friendly products. The products and/or services for which guidelines have been drafted are subject to a holistic evaluation. In this context not only the environmental effects of the use of a product or a service but also the production process, disposal as well quality and fitness for use ("lifecycle") are recorded.
- **Green Start-Up Competition** - The Climate and Energy Fund is supporting innovative, sustainable business ideas in cooperation with the Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW). Start-up projects and concrete project ideas in the fields of energy efficiency, renewable energies, agriculture and mobility can apply for funds. Another fund: **The Climate and Energy Fund** see itself as an initiator and source of innovation for climate-relevant and sustainable energy and mobility technologies. The support ideas, concepts and projects in the areas research and development, market penetration and awareness rising.
- **Green Tech Cluster** - The Green Tech Valley is located in and around Graz, Austria and is home to 200 companies and research institutions working and researching in the area of

green technologies and innovations as part of the Green Tech Cluster. With 20 global technology leaders the region of Styria provides the world's highest concentration in the areas of bioenergy, solar energy, waste and resource management & green buildings within the radius of an hour's drive. This is the global hotspot for advanced energy and environmental technologies and proven growth through innovation. Businesses in the Green Tech Valley are growing almost twice as rapidly as world markets and have created more than 1,000 jobs per year since establishment of the cluster in 2005. This innovative capacity has consistently placed the Green Tech Valley as the worldwide No. 1 green tech cluster in all the rankings to date.

- **State Prize for Environmental and Energy Technology** - The State Prize honors technological innovations, high quality products and services of environmental and energy technologies.
- **Austrian Programme on Technologies for Sustainable Development** - This five-year research and technology programme has been developed by the Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT). It initiates and supports trendsetting research and development projects and the implementation of exemplary pilot projects. The programme pursues clearly defined emphases, selects projects by means of tendering procedures and is characterized by networking between individual research projects and by accompanying project management.
- **klimaaktiv - climate protection in Austria** - The Austrian climate protection initiative and integral part of the Austrian climate strategy. It's primary objective is to launch and promote climate-friendly technologies and services. In doing so, klimaaktiv focuses on high standards of quality, provides education and training of professionals, gives advice and cooperates with a large network of partners. Learn more about the goals, activities and actors.
- **OEGUT** The OEGUT is an independent non-profit organisation which has been focusing on sustainability in the economy and society for more than 30 years. As a platform for this development, the OEGUT has brought together more than 100 organisations and institutions from economic backgrounds (organisations in the areas of waste management, finance, energy providers etc., interest groups such as the Austrian Chamber of Commerce (WKO) and Trade Unions), administrative bodies, and environmental groups (the largest environmental NGOs etc.). The OEGUT is a competence centre which offers a broad and diverse range of services. Our goal is to develop and implement innovative solutions to current challenges together with our partner-network. It develops strategies and supports strategy processes; researches and advises within specialist areas of knowledge; provides information on current developments and communicates innovative, sustainable solutions (via events, publications, presentations etc.); organises and hosts working groups and platforms on the topic of sustainability; coordinates and manages (research) programmes; offers presentations, workshops and training-sessions using innovative methods; presents the annual OEGUT-Environment-Prize.
- **Ökoprofit** - Ökoprofit (ECOPROFIT) was originally developed and implemented as a local initiative in Graz, Austria. Since then it has spread to other Austrian regions and other EU Member States. For instance, it has been adopted in many German or Polish communities. As a consequence, the initiative can be regarded as already "common" in a number of countries of the EU. Ökoprofit is an environmental programme supporting the avoidance/reduction of waste and emissions in companies (alleviating the environmental impact of a company), including SMEs. The initiative is further intended to help companies cut costs, which is paid attention to when designing measures to improve the environmental performance. Specific workshops train companies to reduce waste and emissions and provide individual consultation. Companies cooperate with Ökoprofit consultants and set themselves precise objectives concerning the avoidance and/or reduction of waste and emissions of their companies.



- **topprodukte.at** - Information platform for high-quality, energy-efficient products. When buying new household appliances, consumers shouldn't just make decisions about the investment cost; they should also consider the running costs over the appliance's whole operating life. Especially for the latter, they can save a lot of money by choosing more energyefficient appliances. The topprodukte.at online platform is a service of klimaaktiv and was developed as a decisionmaking tool for private individuals and professional buyers to equip them with the knowledge needed to select the most energy-efficient appliances. The site lists over 3,000 products which are categorised under lighting, office, household, heating/hot water/air conditioning, mobility and TV/mobile phone.

Useful websites and further reading:

Federal Ministry for Sustainability and Tourism <https://www.bmnt.gv.at/english/>

SDG Watch Austria <https://www.sdgwatch.at/en/>

respACT - <https://www.respect.at/site/en/home>

Austrian Ecolabel - <https://www.umweltzeichen.at/en/home/start>

Austrian Development Agency: <https://www.entwicklung.at/en/actors/businesses/>

ecotechnology Austria - <https://www.ecotechnology.at/en/green-tech-report-2013>

Austria's green start up competition- <https://greenstart.at/>

The Climate and Energy Fund - <https://www.klimafonds.gv.at/>

klimaaktiv - <https://www.klimaaktiv.at/english/>

Green Tech Cluster - <https://www.greentech.at/en/green-tech-valley-2/>

OEGUT <https://www.oegut.at/en/>

ECOPROFIT <https://www.ecoprofit.com/>

Austrian Environment Agency - https://www.umweltbundesamt.at/en/services/uba_expertise/

Austria's Way into the Future of Energy - Strategies and Success Stories -

https://www.bmvit.gv.at/en/service/publications/downloads/Mission_Innovation_Austria_Broschur_e_English.pdf

#Mission 2030 –The Austrian Government's Climate Change and Energy Strategy
https://mission2030.info/wp-content/uploads/2018/10/Klima-Energiestrategie_en.pdf

Master plan environmental technology - https://www.bmnt.gv.at/dam/jcr:e1236687-cd85-49fd-95a2-49c2f9b82414/Broschure_20MUT_20171008_20eng_20endf..pdf

SUSTAINABILITY AND GREEN TECHNOLOGIES IN AUSTRIA [https://www.bmnt.gv.at/dam/jcr:b250c415-4448-4974-ad56-0e5b883b43eb/\(English\)%20Green%20Tech%20in%20Austria%20Vortrag.pdf](https://www.bmnt.gv.at/dam/jcr:b250c415-4448-4974-ad56-0e5b883b43eb/(English)%20Green%20Tech%20in%20Austria%20Vortrag.pdf).

Eco-innovation in Austria
https://ec.europa.eu/environment/ecoap/sites/ecoap_stayconnected/files/field/field-country-files/austria_eco-innovation_2015.pdf

The Environmental Implementation Review 2019

http://ec.europa.eu/environment/eir/pdf/report_at_en.pdf

2.3 Poland

The main point when thinking about SD in Poland has started to arise in the period of political transformation in 1989, and transition from communism into democratic. New constitution had to be established. It was approved finally in 1997.

Systemic and political transformation in Poland started in 1989 after the collapse of Communism. Decentralization and a free market economy were introduced, based on fundamental changes in law and the creation of new state institutions. However, a new constitution was needed to allow further changes of the country in transition aiming at the long-term development of the regions and at the welfare of the society. Continued reforms of the state, of public administration and of regional development required fundamental formal solutions accepted by the larger society. Therefore, the new Polish Constitution was approved by a national referendum in 1997⁸.

Article 5 in Polish Constitution states: "The Republic of Poland shall safeguard the independence and integrity of its territory and ensure the freedoms and rights of persons and citizens, the security of the citizens, safeguard the national heritage and shall ensure the protection of the natural environment pursuant to the principles of sustainable development." Poland was one of the few countries around the world which included the concept of sustainable development at the level of the Constitution.

Sustainable development is included in the Polish Constitution as well as in EU treaties which makes SD a leading principle in stimulating social and economic life in Poland and in raising awareness and responsibility among Poles for our environment. SD is not only a concept of complex environment protection but above all a strategy of socioeconomic development aiming at durable economic development through assuring access to scarce resources; quality of life improvement through maintaining clean environment; economic growth provided through an efficient use of energy, resources and work as well as the development of environment-friendly technologies, and the protection of the Polish cultural heritage for future generations⁹.

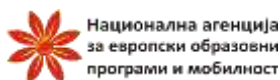
Since then Poland had created a lot of official documents, as e.g. The Law on Environmental Protection of 27th April 2001 and other strategies for implementing SD principles.

Sustainable development is understood as such a socio-economic development in which the process of integrating political, economic and social actions occurs taking into account the natural balance and stability of basic natural processes in order to guarantee the possibilities of fulfilling basic needs of separate societies or citizens not only of the contemporary generation, but future generations as well¹⁰.

One of them was the strategy "Poland 2025"¹¹¹².

A document called the "Polish Sustainable Development Strategy 2025" was developed by the Ministry of Environment as early as 1999, that contained only guidelines for ministries developing sector strategies and recommendations of actions for sustainable development (Ministerstwo Środowiska, 1999). This document contained neither measurable goals nor indicators¹³.

Until 2009 there were 42 strategies. In 2009 new plan was developed which was presenting 9, integrated strategies (out of 42 which were existing since then).



Due to the numerous strategic documents in this field, the Council of Ministers accepted the document “Plan of putting in order development strategies” on 24 November 2009. This Plan intended to unify obligatory strategic documents and limit the number of obligatory strategies to 9 new integrated development strategies (out of 42 existing strategies), basing on the diagnosis and recommendations resulting from the report “Poland 2030. Development Challenges”¹⁴

The new integrated strategies include:

- Strategy of Innovativeness and Effectiveness of the Economy,
- Human Capital Development Strategy,
- Transport Development Strategy,
- Strategy for Energy Security and the Environment,
- Efficient State Strategy,
- Social Capital Development Strategy,
- National Strategy of Regional Development 2010-2020: Regions, Cities, Rural Areas,
- Sustainable Development Strategy of Rural Areas, Agriculture and Fishing,
- Strategy for Development of the National Security System¹⁵

The newest Strategy document is The Strategy for Responsible Development (SRD), adopted in 2017. The basic principles of the strategy are:

- Selective approach (concentration, the search for niches, key industries / sectors flagship projects);
- Integrated (management organized around strategic goals, sectors’ coordination) and territorially differentiated approach (operation’ integration , greater synergies);
- Cooperation, partnership and shared responsibility of public authorities, businesses and citizens in the implementation of public policies
- Increasing activity of Poland at UE forum and in close neighborhood
- The mobilization of home capital (active home capital, more savings - increasing the investment opportunities of the country)

The main objective: Creating the conditions for the growth of income of the Poles with the increase in the social, economic and territorial cohesion¹⁶.

The Strategy for Responsible Development (SRD), adopted by the Council of Ministers on 14 February 2017, formulates the Polish perspective of actions for sustainable and responsible development. The document defines the priorities of social and economic development by 2020 and in the perspective to 2030 (a horizon consistent with the 2030 Agenda). SRD is a strategic instrument for managing the country’s development policy implemented by the state institutions. It presents in a single programming system the objectives to be achieved, the way they are to be achieved and the performance indicators and key projects for the achievement of the objectives of the SRD. The strategy also indicates the principles organising the process of its programming and implementation and defines the basic sources of financing.¹⁷

The new development model for Poland presented in the SRD meets the expectations set out in the 2030 Agenda. The convergence of the SRD and the Agenda is noticeable in their objectives, priority areas and actions, as well as indicators. The priorities of the social and economic development of Poland have been defined in all three dimensions of sustainable development¹⁸¹⁹²⁰.

Before that, there was established Resolution No. XXXII / 452/17 in Małopolskie Voivodeship council dated 23 January 2017 with restrictions and prohibitions in the area of operation of installations in which fuel is burned in the Małopolskie voivodeship, in other words it's an anti-smog resolution²¹.

The principle of sustainable development was introduced into the legal system of Poland when the Constitution of the Polish Republic was adopted in 1997. Paradoxically, in Poland – so far one of the few countries in the world which have introduced the concept of sustainable development at the level of the Constitution – it is difficult to find a reference to SD in the political debate. Poland 2025, the National Sustainable Development Strategy, has met with no response in the society and today hardly anybody seems to remember its existence. An average citizen does not know about the concept of sustainable development, nor does he or she have even the vaguest notion of it. Even those who have heard of SD often identify it exclusively with environmental protection. Solving social problems (the labour market, education, health protection, gender equality, etc.) is not associated with sustainable development whatsoever, no more than the commitment to achieve the millennium development targets on the global scale. The reason for this situation might be, on the one hand, that the Ministry of the Environment is the most active organization in this field, and, on the other hand, that there is no clear reference to sustainable development in other ministries or departments responsible for social and economic issues²².

3. Education on Sustainable Development

3.1 Republic of North Macedonia

The country, with its demographic composition, has perhaps the greatest capacity of all the Balkan countries to develop an educational system that would be a model for inclusion and sustainable coexistence for the other countries to follow, but at the same time is facing quite unique obstacles that stay in the way of a more significant progress in this field.

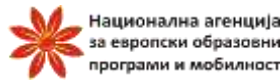
With SDG 4 aiming at ensuring education for sustainable development, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development (9), it is becoming clear that schools should become media for something more than literacy. Schools and all educational institutions should equip their students with the skills necessary to be able to contribute to the achievement of such goals, and, at the same time, skills they could transfer further, thus guaranteeing development, growth and growth sustainability of the society in general²³.

1) VET Programme Sustainability Advisors

Within this program, the participants will gain the necessary knowledge, skills and competences for analysis, planning and realization of the principles of sustainable development in a particular organizational unit.

This program covers theoretical and practical part within 245 classes (45 minutes per class) from which 72 are for theory, 140 for realization of practical part (working on a case study) in public institution, small/ medium or large enterprise or household, and 33 for evaluation including control tests, discussions and final presentation of the case study.

The program is modular and is consisted from the following 12 modules:



Module 1: Introduction to Sustainable development

Through the first module the participants will learn about the definition, concept and the meaning of the Sustainable Development (SD), the SD goals adopted by the United Nations, the key national and international stakeholders, the fundamental pillars of SD: society, economy and environment in order to use the basic principles of SD and to identify the key stakeholders related to SD on national and international level.

Module 2: Global economic trends

Through this module the participants will learn about the best practices of the developed countries for achieving the sustainable development goals, the process of identification and extrapolation of trends and with the available qualitative and quantitative methods for scientific prediction of the sustainable development in order to successfully analyze global economic trends and implement appropriate methods for prediction of future trends.

Module 3: Strategies for Sustainable Development on micro and macro level

Through this module the participants will learn about the main elements and the fundamental frame of the strategies for sustainable development, the National strategy for sustainable development of Republic of Macedonia, the sustainable development strategies of the European Union and other developed countries in the world in order to recognize the key implementors of the sustainable development strategies on national and international level, to analyze a sustainable development strategy for a particular entity and to discuss the contents of a particular strategy.

Module 4: Ecology policies

Through this module the participants will learn about the basic framework of the policies for environmental protection, cleaner production, energy management and so on in order to successfully analyze correlations between different types of policies.

Module 5: Eco innovations for Sustainable Development

Through this module the participants will learn about technologies and technologic innovations for sustainable development in order to recognize the benefits of the implementation of eco innovations and analyze the opportunities for implementation of eco innovations in a certain product.

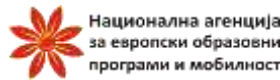
Module 6: Indicators for monitoring and measurement of sustainable development

Through this module the participants will learn about different types of indicators for monitoring of the working processes including indicators for sustainable development from economic, social and environmental aspect, indicators for technological development and eco indicators in order to successfully identify and calculate indicators for SD in a particular entity.

Module 7: Resource efficient and cleaner production

Through this module the participants will learn about the concept, methodology and indicators for Resource efficient and cleaner production in order to be able to implement the methodology and the indicators in a particular entity and to propose appropriate measures.

Module 8: Eco design



Through this module the participants will learn about the fundamental principles and phases of eco design, eco characteristics of the materials and eco modelling in order to advocate for use of materials and technologies that are environmentally friendly.

Module 9: Methodologies for Sustainable Development

Through this module the participants will learn about and practically implement different methodologies for sustainable development including methodologies for planning and decision making, identifying main elements of the process of decision making, multicriteria analysis and multicriteria decision making.

Module 10: Tools for organization and realization of the Sustainable Development

Through this module the participants will learn about different tools for organization and realization of the sustainable development in order to practically apply particular indicators, tools related with implementation of sustainable development, tools for progress evaluation and tools for decision making.

Module 11: Sustainability at home

Through this module the participants will be able to identify significant consumers in households, to assess the energy consumption, consumption of material resources, water consumption and to analyze the disposal of waste in households and suggest appropriate measures for reducing the consumption in households.

Module 12: Case study – sustainability analysis on a particular entity

The participants will have to do a case study for a particular organizational unit or entity where based on analysis of the status quo they will have to identify and apply appropriate methodology and tools and will propose appropriate measures for achieving the sustainable development.

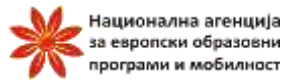
2) Master studies programme Sustainable Energy and environment

The Master studies programme Sustainable Energy and Environment (SEE)²⁴ is a programme within the Mechanical Faculty in Skopje. The SEE curriculum is developed in response to the needs of the industry, business and institutions, which have to face environmental problems and ask for engineers with interdisciplinary expertise in the field of environmental engineering. The programme aims to contribute to the development of outstanding and innovative master thesis projects that solves problems of industry and public sector in achieving energy and resource efficiency and/or zero emissions, application or research on new materials and new technologies for renewable energy.

The main subjects in the programme are: Transport and the environment, Fluid mechanics in environmental engineering, Environmental measurement methods and monitoring systems, Environmental systems analysis, An introduction to eco-innovations, Non-conventional power plants, Water and waste water treatment, Energy efficiency, Eco-engines, Design of fluid conveying and hydro power system, Waste management, Energy vs. sustainable development: Concepts and aspects, Automation of environmental processes, Clean fossil and alternative fuels energy.

3.2 Austria

1) Specialization in Sustainable Management and Governance, MBA, MODUL University Vienna



The Master of Business Administration (MBA) is a part-time program designed especially for industry professionals wanting to advance their careers. It concentrates on strategic analysis and planning, interdisciplinary skills, value-based management, and critical thinking. Students will advance their knowledge in core business disciplines including human resource management, organizational behavior, accounting and finance, marketing and operations, innovation and entrepreneurship. Out-of-the-box thinking challenges existing limits and thought patterns. Specialisation in Sustainable Management and Governance includes: Different Dimensions of Sustainable Development; European Union Policies, Green Business Strategies, Social Entrepreneurship I: Foundation, Social Entrepreneurship II: Bootcamp. Blocked courses take place once a month on 2-4 consecutive weekdays and weekends. Courses involve two days of interactive seminars led by internationally recognized scholars, not requiring your presence on campus every month. Completing the program is possible in a min. of 18 months to a max. of 6 years (including Master thesis). It Combines traditional business subjects with understanding and training in contemporary practices of good governance and effective public management, as well as an understanding of the challenges of building economic and social well-being by preserving and protecting our shared natural environment. A strong focus on good governance practices of institutions and organizations operating within a larger set of regional, national and international frameworks. Designed for individuals who are seeking to improve their public management skills and to provide innovative leadership for government, non-profit, or mixed public-private organizations.

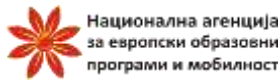
Core Courses include Financial Management and Reporting; Leadership; Managing People, Teams and Organizations; Entrepreneurship; Innovation; Project Management; as well as Digital Marketing. Graduates are qualified to: negotiate, plan and implement sustainable programs and policies; design, monitor and analyze green business practices; plan regional economic development strategies that incorporate principles of sustainability; work in interdisciplinary teams and offer problem analysis and consulting.

2) Sustainable Construction, MA, TU Graz and Vienna University of Technology

2 semesters part-time /Master of Engineering (MEng) Sustainable Construction: 4 semesters part-time. The university programme in Sustainable Construction at TU Graz and Vienna University of Technology brings students up to date with the latest developments in sustainable construction. Students learn about current methods, theories, trends and tools in the building sector and can use the competences they acquire at the workplace. In addition, they are trained as an [ÖGNI auditor](#). This certificate programme is an ideal postgraduate training course for managers in the construction industry, who have specialised in sustainable construction, or who wish to specialise in this area.

Aimed at

- planners from the construction sector (e.g. architecture, civil engineering, building services engineering),
- clients, investors (e.g. at real estate funds, project developers from larger municipalities, provincial real estate organisations, national real estate organisations, building departments at large companies).
- public administration departments, and
- future auditors for the ÖGNI building certification.



Furthermore, this programme provides postgraduate training for managers in the construction industry, who have specialised in sustainable construction, or who wish to specialise in this area.

Core courses include: introducing and changing the environment, Ecological sustainability, Economical sustainability, Social sustainability, Buildings and energy, Economic factors and facility management, Regional planning and spatial planning.

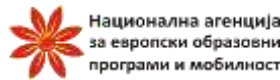
Graduates work in all areas of building construction design, in project development and in building operation. They view the life cycle of buildings in a holistic manner, understanding the need for better design quality, modified construction products and construction systems; understand the changes in competition and the design process, connected with sustainability in the construction sector; master the fundamentals of sustainable economics and use the necessary tools in building practice and construction projects; are aware of the connections between building energy use and climate protection, and can issue energy certifications for buildings; have the necessary specialist knowledge to complete the ÖGNI auditor examination; develop and implement sustainable strategies in an interdisciplinary working environment.

3) Sustainable Development, MA, Karl-Franzens Universität Graz

International Joint Master's Programme in Sustainable Development was designed and approved by six partner universities, with the University of Graz (Austria) as co-ordinating university, Ca' Foscari University of Venice (Italy), Leipzig University (Germany), and Utrecht University (The Netherlands) are degree-awarding consortium members, and Basel University (Switzerland) and Hiroshima University (Japan) are associated mobility partners. Sustainability issues are approached from an international as well as inter- and transdisciplinary perspective. The focus is set on applying the competences to the question of sustainable development and the needs and possibilities of societal transformation. Four semesters full time (two years, 120 ECTS). Interdisciplinary approach with specialization tracks from natural and social sciences, 60 ECTS have to be earned at the chosen entrance university, The second semester involves a specialisation track at one of the partner universities (30 ECTS - mandatory mobility), An additional mobility semester is optional, Entrance universities are: University of Graz (Austria), Leipzig University (Germany), Utrecht University (Netherlands), Ca' Foscari University Venice (Italy), Specialization tracks can also be chosen at University of Basel (Switzerland) and University of Hiroshima (Japan), Additional mobilities are also possible at TERI University (India) and Stellenbosch University (South Africa).

This programme provides knowledge and skills that enable students to contribute to the development of a responsible environmental attitude (sustainable development). Students learn to assess the important impact of national and international economic and social developments against the backdrop of pressures on the environment. Contributions to more sustainable development include measures such as recycling materials, a responsible handling of natural resources and raising awareness for social responsibility in companies.

The programme consists of two general modules (1st and 3rd semester) which follow the same structure at all consortium universities, and of specialisation tracks (2nd semester) which specialize in a particular area of sustainable development. In the general part the challenges of sustainable development are examined and discussed from various vantage points. You will become familiar with both the natural sciences and the social sciences approach to sustainability. You will form research teams and work on the confrontation and integration of knowledge and insights. Upon completion of the joint master's programme the students are awarded a "Joint Master's Degree in Sustainable



Development”, Msc, - highly qualified specialists able to operate, through their multidisciplinary skills, in prevention, diagnosis and solution to environmental issues.

4) Sustainable Development, Management and Policy, M.Sc., MODUL University Vienna

The MSc degree is a two-year, full-time program (120 ECTS) in which students learn skills needed to design and implement sustainable development strategies on the household, business, city, regional, and national levels. Guided by expert faculty, students come to understand that effective implementation of sustainability strategies is a fundamental societal, economic, and environmental need. MU's prioritization of sustainability as an integral part of the University offers additional unique opportunities to students, including the invitation to participate in the University's Sustainability Committee. This programme provides knowledge and skills that enable students to contribute to the development of a responsible environmental attitude (sustainable development). Students learn to assess the important impact of national and international economic and social developments against the backdrop of pressures on the environment. Contributions to more sustainable development include measures such as recycling materials, a responsible handling of natural resources and raising awareness for social responsibility in companies.

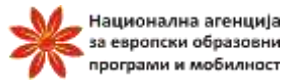
MSc SDMP students must complete a selection of required Core Courses and Focus Courses as part of their curriculum (Management and Research Fundamentals, Sustainable Development and Policy, Professional Application of Sustainable Development, MSc SDMP students can specialize in the following areas: Entrepreneurship, Innovation and Leadership, Innovation and Experience Design for Tourism, Sustainable Management and Governance, Tourism and Services Management. In addition, students can take advantage of integrating a customized internship into their curriculum.

Graduates are the new generation of professionals who will respond to future global sustainability challenges. The practice-driven program prepares graduates for scientific positions in a variety of public, non-profit, and private organizations. Potential careers: Scientific Positions; Public Policy Analyst; CSR Expert; Environmental Consultant; Product Research Analyst.

5) Sustainable Energy Systems, MA, University of Applied Sciences Upper Austria

2 years, full time, Master's degree. Interdisciplinary, technical programme with focus on: energy utilisation of sustainable energy resources, energy storage, energy distribution, energy efficiency and ecology, energy markets, energy management, Business administration and intercultural management, International project management and development. Goals of the programme are to provide students from various engineering disciplines with a deeper understanding on how to develop, plan and market efficient technologies for sustainable energy production and conversion, while also equipping students with the necessary skills in order to become an international engineer. The core of the programme is focused around renewable energy sources, such as photovoltaics, wind, hydropower, and biomass, and how to use them efficiently. As such, the programme provides students with both a technical and practical approach that is needed when dealing with a variety of different issues. For example, you would have the appropriate skills in order to communicate with a process engineer at the steel manufacturing plant or solar facility, and would be able to accurately provide an energy-efficient (saving) solution.

Modules: Essentials of Engineering, Energy Engineering, Ecological Energy Utilisation, Management Skills and Languages, Scientific Work, altogether 120 ECTS.



Career prospects: These include the technical implementation of international projects, e.g. the construction of large-scale PV or wind power plants, project management, energy efficiency for energy systems (in-service behaviour, optimising operations ...), energy efficiency procedures (especially for industrial production processes) or energy distribution (renewable energy, energy distribution including smart grids and energy storage). Possible jobs would be among other things: engineer for energy systems (design, construction, main-tenance and retrofit), technical consultant, expert for project financing and management, technical adviser for banks and insurance companies.

6) Sustainable Food Management, BSc University of Applied Sciences Joanneum

Full-time / 6 Semesters / 180 ECTS. Sustainable aspects of food development, production and marketing. The Bachelor's degree programme in Sustainable Food Management covers all of the processes throughout the food value chain from agricultural production to processing, trade and consumption.

The goal is to gain Extensive specialist expertise across the value chain, guaranteeing the highest quality food. The course content covers a wide range of knowledge from the basics of natural science (chemistry, livestock farming, crop cultivation and microbiology) to processing technology and food management and sales: Direct marketing; production planning; processing, quality assurance; product development; management and sales in family businesses. Students are qualified to apply for a position of responsibility in a range of fields, from agriculture or industrial and commercial production to trade. They can to evaluate and understand the entire value creation process and are able to plan processes, implement ideas and improve products and processes.

3.3 Poland

There is a number of different projects, initiatives and events which are supposed to promote principles of SD, although the basic concept of SD sometimes is not appearing itself. That is why Poles might have problems with SD definitions and recognizing it in such initiatives.

- FORMAL EDUCATION:

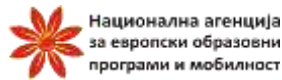
In formal education the most specific courses are available on academic level. Before that, in primary school and high school in some grades kids are having courses of biology, chemistry and physics, so it is an opportunity when they can learn more about sustainable development. Also it happens that schools are becoming partners or organisers of events, projects and initiatives connected with a topic.

In Krakow at two the most recognizable universities - Cracow University of Technology and Jagiellonian University you can gain knowledge about environment in different areas.

At Cracow University of Technology courses are more specific and practical. On first and second-degree studies you can learn e.g.: Engineering and Environment Monitoring, Engineering for Environmental Shaping, Revitalisation Of Degraded Lands.

At Jagiellonian University there is Institute of Environmental Sciences where you can study Biology on first (3 years) and second-degree studies, and also

- Ecology and evolution (in English) - The aim of the studies is to obtain broadened theoretical knowledge in the field of ecology and evolution.



- Natural resources management (in Polish or English) - the aim of education is to acquire knowledge and skills in the field of management and making appropriate environmental decisions

On second-degree studies, which take 2 years. All those studies are providing knowledge for future work connected with nature-related SD principles.

An offer of postgraduate studies is more specific and rich in topic of Sustainable Development. I collected information about few courses from Krakow and Warsaw, although I am sure there is more of them at other universities.

On the level of postgraduate studies Cracow's Polytechnic and Sendzimir Foundation in cooperation with INTBAU are organising course of Sustainable Urban Development Management (1 year).

'The main goal of the the Programme is to raise students qualifications in the field of integrated management of urban development. It is worth noting that in December 2016, the Studies were appreciated for its innovative approach to the issues and received the Rector's Award of the Cracow University of Technology. In 2018 our Programme has been awarded the "Studies for the future" certificate, that is given to the most modern and innovative fields of study in Poland.

We develop knowledge and practical skills of integrated management, synergically combining the achievements of natural, technical and social sciences. The acquired qualifications help to translate theories, strategies, programs and European and regional funds into effective actions at the local level²⁵.

In Warsaw on postgraduate level at Kozminski University you can also get a course of Sustainable Development Goals in the company's strategy

The aim of the studies is to supplement knowledge in the area of shaping ethical and responsible business strategy, as well as the acquisition by participants of highly valued on the market the ability to effectively use various instruments of corporate social responsibility (CSR) in a modern organization²⁶.

And at University of Warsaw you can study 'Implementation of Sustainable Development of Metropolis and Local Innovations'

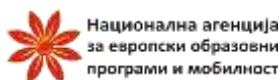
'They [studies] are primarily dedicated to local government officials, councilors, social and political activists, activists and local culture animators. They are a response to the growing demand for targeted education in the functioning of cities and their surroundings²⁷.

In matter of vocational education I have also found project financed by UE 'Vocational education in schools with a trampoline for sustainable development of the staff on the Legionowo labor market' and which partners are 7 schools from Mazowieckie Voivodeship.

'The project is financed by the European Union under the European Social Fund under the Regional Operational Program of the Mazowieckie Voivodeship for 2014-2020. Priority X Education for regional development, Measure 10.3. In-service training, Sub-measure 10.3.1. In-service training for pupils'.

Project tasks are:

'1. Obtaining qualifications of vocational counselors by persons performing tasks in the field of educational and vocational counseling in schools as well as raising the qualifications of vocational counselors.



2. Establishment in junior high and high schools, including vocational schools in the poviats of Legionowo School Information and Career Points.

3. Preparing students to make educational and vocational decisions and to actively enter the labor market by conducting classes in the field of educational and vocational guidance.

4. Creation of the Cooperation Platform: Education for the Labor Market²⁸

- **OTHERS:**

LIFE PROJECT

In Małopolska Voivodeship there is LIFE project established in 2015 or 2016, where each commune in the voivodeship had to hire a person who will be in role of eco-manager/eco-advisor. It means that every person who wants to find eco-friendly solution for his/her household or company, can contact this eco-manager and consult an idea. It is a good example of combining green job with educative approach.

Tasks of Eco-managers

- Providing air-protection advisory and administrative services for residents,
- Supporting municipalities in obtaining funds from EU and national sources to implement air protection measures,
- Encouraging citizens to replace old boilers with environmentally friendly energy sources,
- Conducting environmental education in schools, promoting environmentally-friendly behaviour among children,
- Controlling compliance with air protection regulations,
- Encouraging citizens to thermal modernization of their houses and providing professional advisory by means of thermographic measurements of buildings²⁹.

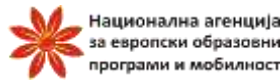
CIVIC BUDGET

A civic budget in Krakow is a process in which residents decide on the allocation of a part of the city's budget. They are proposing their own ideas how money can be spend in order to improvement of quality of life in Krakow, e.g. by proposing infrastructure for people with disabilities, transform fallow lands to parks etc. (there are few categories of projects, also connected with cultural life, sport etc). By taking part in civic budget voting, citizens directly influence Krakow by prioritizing and realizing the needs of their local communities. Civic budget voting takes place every year³⁰.

Academic Education Cycle: Sustainable development - global challenges

In period 06 - 12.2012 an educational project for Jagiellonian University student, PhD students and alumni was organised and it was about global challenges in matter of sustainability. It consisted 10 lectures, 40hrs in total. Basing on lectures' content the textbook was published.

The aim of the project was to activate the academic environment in the field of applying the principles of global education in academic teaching. Emphasis was placed on organizing knowledge and improving the skills of PhD students and graduates of the Jagiellonian University in the field of sustainable



development in the conditions of globalization, as well as raising awareness of the possibilities of individual involvement in shaping global processes³¹.

CENTRE FOR SUSTAINABLE DEVELOPMENT OF WROCLAW'S COMMUNITIES LOCUS

In Wrocław there was (I say was, because the last news on websites are from 2015) CENTRE FOR SUSTAINABLE DEVELOPMENT OF WROCLAW'S COMMUNITIES LOCUS which was the unit at the University of Wrocław dedicated to the sustainable development of city community. Its mission was To promote the sustainable development of Wrocław through research, education and empowerment of citizens³².

'Academy of Sustainable Development'

Sendzimir Foundation from 1998 - 2015 was organising each summer 'Academy of Sustainable Development'. It was a course addressed to students and PhD students, researchers, business and administration representatives from the Baltic Sea region. Participants came from different fields and specialities. Over 550 people took part in 18 editions of the course.

'What was the subject of the course?'

Sustainability, ranging from a detailed explanation of the concept, through theoretical aspects in various fields of science and technology, to workshops, classes and practical projects. The course also had additional activities, such as field trips that integrate the group.

The program of the course included lectures, debates, workshops, simulation games, field activities and practical projects, covering issues related to sustainable development. Under the supervision of the experienced Sendzimir Foundation instructors, the students realised two large practical projects, within which they attempted to introduce the principles of sustainable development into the practice of specific companies and institutions in the first project, and municipalities and cities in the second.

The workshops included about 100 hours of regular classes, with less formal activities in addition, such as trips, meetings, reading articles and video projections³³.

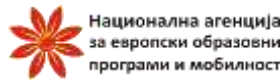
4. Best practices on green jobs

4.1 Republic of North Macedonia

Macedonia is fully committed to the global efforts for GHG emissions reduction. With support from the United Nations Development Programme and GIZ, the Ministry of Environment and Physical Planning submitted the Macedonian INDC in August, as the 23rd country in the world.

The document³⁴ notes the reduction of carbon dioxide emissions from fossil fuels combustion by 30%, that is for 36% at a higher level of ambition, by 2030 compared to the business as usual scenario. Fossil fuels combustion covers almost 80% of the total GHG emissions in the country with the sectors of energy supply, buildings and transport having a dominant share.

Moreover, policies and measures that mitigate climate change do not present only a burden because of their implementation costs; they also have positive co-benefits, one of them being increased employment. For the first time in Macedonia, number of domestic jobs created as a result³⁵ of the implementation of INDC mitigation measures in the area of energy efficiency and energy supply was



assessed, using macroeconomic input-output method, based on investments, and factors from literature.

It turned out that these co-benefits offer great opportunities – by implementing energy efficiency measures in buildings and by introducing low-carbon energy supply technologies (renewables and gas), about 6,000 green jobs can be created by 2030.

And here is how the rationale behind the summary numbers looks like:

Energy efficiency measures in the buildings sector have the highest potential for the creation of new jobs. Introducing higher efficiency standards to new buildings and retrofitting old ones could open 3,500 jobs by 2030.

A switch to LED lighting, which has much higher added value, will create employment, since new channels for sales and more innovative installation will be possible. It is estimated that investment of USD 1 million (EUR 0.92 million) will create 5.1 direct jobs, and 4.2 jobs are indirectly created (supply goods and services).

It is difficult to estimate jobs related to more efficient transport. These jobs will mainly be in the vehicle production and supply chains, and as such not in Macedonia. On the other hand, if electrification of personal vehicle is started, then there will be jobs related to chargers and smart chargers, which would be additional equipment installed in homes, businesses and on public parking places. Also, some jobs would be lost at petrol stations, petrol station servicing and fuel handling. Still, by 2030 big breakthrough of electrification is not expected, so that is why these jobs are not assessed.

It is also difficult to assess jobs related to modal shift towards the public transport, use of bikes, walking and railway. They should be related to new investments in alternative modes of transport, as well as to the maintenance of appropriate technologies.

Investments in energy efficiency in industries are also hard to assess because they are very specific and each industry and each process is not a subject of our analysis.

Using more renewables for power generation, in particular solar photovoltaics, wind, biomass, hydro, geothermal and landfill gas, would open some 1,300 jobs by 2030, mainly in the sector of photovoltaics. The segment is rather labor intensive, especially if small installations are placed on roofs. Establishing such a sector has best employment perspective among supply technologies.

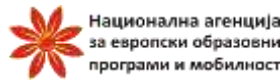
On the energy supply side, policies and measures include an increase of efficiency of existing power plants, a switch to lower-carbon fossil fuels and renewables in power, heat and transport applications.

Increasing energy efficiency of current power plants will generate only a small number of jobs during the retrofit phase, but in the long run retrofit will also bring automation, so no new jobs are expected.

Using more renewables for heat supply is also a good option: solar thermal, biomass, and heat pumps. Establishing solar thermal sector may open 600 new jobs by 2030.

Using more biofuels for transport may also be good for employment in case that biofuels are locally produced. However, local production of biofuels seems not to be an economically viable option in Macedonian conditions.

This initial assessment reveals a wealth of existing opportunities to scale up the reductions of greenhouse gas emissions along with an increase of the green job's potential. It creates a space of



opportunities for the whole Balkan region – effective, readily achievable set of actions to reach a prosperous and stable environmentally healthy world for all.

Green jobs - Case studies in Macedonia

One of the critical issues surrounding the discussion of green jobs is that there is no agreed understanding of the term or measures to ensure claims of 'greenness'. Nor is there clarity about the type of social relations in which green jobs are achievable³⁶. For example, the International Labor Organisation (ILO) defines a green job as one which simply 'reduce(s) the environmental impact of enterprises and economic sectors, ultimately to levels that are (ecologically) sustainable'. However, the notion of ecological sustainability is highly problematic. It has been conceptualized, particularly by corporate and political interests, to represent the sustainable economic growth through technology and market based environmental solutions such as emission trading schemes. A more comprehensive vision of ecological sustainability sees it as requiring the maintenance of biodiversity, ensuring ecological integrity, maintaining the stock of natural capital and providing for intergenerational equity. Determining what is ultimately sustainable has become highly contested, resulting in the 'green' label being applied to a wide range of occupations. This ambiguity is best illustrated by the Australian Workers Union's (AWU) claim that jobs in the steel industry should be classified as green, because steel is recyclable and is an essential component of renewable energy technologies such as wind turbines. The ambiguity concerning what can be characterized as a green job has resulted in attempts to distinguish 'classes' or 'shades' of green work.

In order to analyze the opportunities and potential for establishing green jobs in Macedonia, one should evaluate the possible market for the improvement of energy efficiency in the residential sector. Namely, we should analyze both sides of the market:

- The supply side, such as potential for businesses that offer or need these services
- The demand side, such as households and needs for energy efficiency in the residential sector.

Analyses of the supply side should identify the circumstances in the framework of the businesses in regards to conducting energy efficiency activities in Macedonia. When assessing the energy saving potential of an average participant, four major priority sectors can be identified:

- Residential sector
- Commercial and service sector
- Industrial sector
- Transportation sector

In 2006, these four sectors spent 96.5 percent of the total energy in Macedonia. Traditionally speaking, professionals in the energy sector are focused on creating new reserves of energy, new systems of production and transportation of energy, new refineries and pipelines. Energy efficiency with the end consumption is usually a lower priority. This especially is the case in Macedonia where there are many opportunities for decreasing the amount of energy needed for performing the same tasks. However, there are no studies that monitor how energy efficiency contributes to the economy.

In Macedonia, there are no surveys on the market breakthrough or on the distribution of products that use energy, which is a necessary starting point for estimating the potential of energy savings. Besides these restrictions, the experience of the country and the extensive work in this field of neighboring

countries clearly show that the potential for energy savings is huge and that energy efficiency has to be a priority in the energy sector. The Statute on Energy Efficiency of Buildings, adopted in 2008, made the first significant step in the direction of energy control and marking of buildings by determining the maximum values of the insulation's heat-penetration of these objects. However, it should be mentioned that these rules are voluntary, not compulsory.

4.2 Austria

The EU defines green jobs as those that, irrespective of which sector they are in- be it manufacturing, technology, or services- minimize environmental damage and preserve natural resources. Green jobs exist in many different areas, for instance in renewable energies, sustainable construction and renovation, as well as in water and wastewater management, and include both highly skilled and unskilled labour, in addition to apprenticeships.

The main purpose of green jobs is to make a contribution to environmental protection. This is why green jobs are present in all economic and social areas, and also why existing job types can become green jobs.

In Austria, every 20th job is a green job, with roughly 11% of the nation's GDP being generated in this sector. According to Statistics Austria in 2017 211.730 people had jobs in the environment sector.

The Austrian employment agency considers jobs as "green" according to the definition of Eurostat as well as the Labour Force Survey and national statistical definition: activities which contribute within the context of a profession, to saving energy, utilising renewable energies, save natural resources and protect the eco system, preserve the biological diversity and avoid waste and air pollution.

GREEN SKILLS

technical skills e.g. risk assessment and management of biowaste, energy consumption knowledge, ...

generic skills, above all, customer orientation and sales management, consulting skills, planning, ...

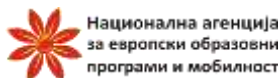
Green jobs are primarily jobs in the following sectors:

- include the building construction, civil engineering and other construction sectors;
- energy supply and renewable energy;
- trade, transport, traffic;
- agriculture and forestry;
- tourism and leisure industry;
- wastewater and waste management.

Green Jobs Master Plan

The Green Jobs Master Plan³⁷³⁸ was established in 2010. Its main goal is to raise the number of green jobs from around 185,000 by another 100,000 employees by the year 2020. Austria is already well on its way to reach this goal. The latest statistics (dated February 2011) indicate approx. 200,000 green jobs for 2009.

The master plan's focus is on the areas of:



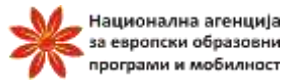
- Agriculture and forestry
- Environmental technology and renewable energy as well as Tourism and leisure industries
- To ensure that employees in the area of green jobs have a high level of qualification, innovative and need-based further training and education options in the environmental management sector must be provided.
- Constant improvement and innovation are basic requirements of sustainably successful products, technologies and services and therefore essential for creating and securing jobs.
- A further key priority is the promotion of networking and cooperation between all players involved in the environmental management sector. Due to the size structure of domestic businesses, the strength of the Austrian environmental industry and the associated employment situation depends on targeted networking and intensive cooperation.
- One of the key areas is the support and promotion of internationalization. Effective marketing abroad is crucial to ensure the economic growth of the domestic environmental management sector and thus the creation of green jobs in Austria.
- The promotion of sustainable investments and sustainable consumption by creating targeted investment and consumption incentives, which stimulate the demand for eco-friendly products, technologies and services along the entire value added chains, has a noticeable effect on the whole employment situation.
- The active creation of public awareness is another critical factor in achieving a transition to ecological and sustainable growth within the society. Values characterize investment and consumption behavior. This makes awareness raising a key educational task to create and secure green jobs in Austria.

When doing research about sustainability projects and green practices in the area where InterAktion is active, we were in contact with 6 municipalities and 4 companies. As it appears, the goal to operate in a responsible manner was in the core of all the entities. All could provide examples of sustainable solutions.

Judenburg, Deutschfeistritz and Mürzzuschlag: municipalities taking part at the “e5 programme for towns and municipalities”.

The e5 programme encourages Austrian municipalities to act in a sustainable manner at all levels: in dealing with energy, consumption, mobility and the economy. Many municipalities want to make their energy supply substantially independent from fossil energy in terms of heat, electricity and mobility while at the same time retaining value-adding activities, income and jobs in the region. As part of klimaaktiv, e5 provides consultancy and certification services to towns and municipalities that are committed to energy transition and climate protection. A network of highly qualified e5 advisors and a standardised rating scheme across Europe make it easier for the e5 municipalities to define measures in six central core areas of operation and also to allow their progress to be rated by independent experts.

Austrian communities taking part in the e5 programme for energy-conscious municipalities are automatically part of the “European Energy Award” programme – the European e5 counterpart, which evolved in 2004 from the Austrian e5 and Swiss “Energienstadt” (energy town) programmes. If more than half of all possible measures to increase energy efficiency, supply renewable energy and for climate



protection have been implemented, the municipality is awarded the “European Energy Award”. Where a municipality actually manages to implement more than 75 percent of all potential energy and climate-related measures, it is awarded the “European Energy Award Gold”. In 2017 as many as 19 Austrian municipalities out of a total 122 European municipalities already held the gold European Energy Award – Austria is therefore among the front-runners in Europe. The target at present is for half of all Austrians to be living in e5 municipalities and regions by 2025. <https://www.klimaaktiv.at/english/savingenergy/e5.html>

ökofriends A joint project by Lebenshilfe Trofaiach Lebenshilfe Hartberg and Lebenshilfe Judenburg, which promotes social inclusion and recycling. People with disabilities are collecting and sorting old mobile phones. The project aims at creating 30 jobs for people with disabilities. <https://lebenshilfe.at/oekofriends-umweltschutz-und-arbeitsplaetze-fuer-menschen-mit-beeintraechtungen/>

Stadtwärme Leoben is another great sustainability project, bringing together the Municipality Leoben, the energy provider Stadtwerke Leoben and the factory Voest Alpine. By searching for sustainable solutions to use the waste heat for the citizens and in the same time reduce greenhouse emissions, they have developed a project using waste heat of the factory to warm households. <https://www.stadtwerke-leoben.at/stadtwaerme-leoben.html>

Bioenergie Aichfeld GmbH, a Joint Venture by Zellstoff Pöls AG and Bioenergie Wärmeservice GmbH, is also a project using waste heat to warm households. In 2011 Zellstoff Pöls AG realised a large district heating project and now delivers district heating to the communities Pöls, Fohnsdorf, Judenburg and Zeltweg through an 18 km long supply network. With this the company Zellstoff Pöls AG came closer to the goal of annual CO₂ savings of 25.000 tons and the slogan „Q² your heating advantage from Pöls“ has become reality for approx. 15.000 households. <http://www.waerme-vorteil.at/>

The Municipality of Trofaiach is not a member of the e5 programme, however, they are constantly looking for sustainable solutions at different fields and are supporting the citizens to develop sustainable projects themselves. The municipality is developing the city in a sustainable way, always taking the opinion and wishes of its citizens into consideration. For their projects on the revival of the city centre, the municipality was awarded with the OEGUT-Environment-Prize in 2018 (category Participation and Civic Engagement). Among other, together with three different organisations/institutions (Stadtwerke Trofaiach GmbH, Lebenshilfe Trofaiach, Trofaiacher Kunsthandwerker) the municipality have opened a re-use shop in the city centre, the shop does not only stand for a more sustainable shopping, but also represents a place, where people can meet and exchange ideas, plans, etc. <https://www.oegut.at/de/initiativ/umweltpreis/2018/partizipation.php>

The Municipality of Gleisdorf – Spatial Energy Planning, winner of the OEGUT-Environment-Prize 2018 (category Sustainable Communities). The spatial energy planning was essential to achieve the goal of a CO₂-neutral municipality Gleisdorf in 2050. The goal was to develop and implement sovereign, integrated spatial energy planning. The involvement of the population and all relevant stakeholders played an essential part. The results already flowed into the urban development concept, the zoning plan and into other projects (for example in the field of district heating, renovation, promotion incentives, public transport, bicycle traffic, inter-municipal cooperation, etc.). <https://www.oegut.at/de/initiativ/umweltpreis/2018/nh-kommune.php>

Compuritas - a social entrepreneurship company in Graz, a pioneering company in the field of IT re-use. Many Austrian companies replace their IT hardware with brand-new devices after 3 to 4 years. Although

the once high-quality business hardware they purchased is still, for the most part, functional, the devices end up in the garbage dump. The company Compuritas is striking new, innovative paths in this area. They obtain outdated computers, screens and other IT hardware no longer in use in Austrian companies and professionally recycle them. <https://shop.compuritas.at/>

What all of them have in common and what seems to be a path to the success is cross-sectoral cooperation and involvement of different stakeholders, organizations and end-users.

4.3 Poland

Definitions:

In official classification of activities there is no such an activity as ‘green jobs’, although there is a section of activities which are related to e.g. water supply or waste management. It means that definitions of green jobs can be different depending on institution/company.

The Polish Classification of Activities (PKD) does not contain the definition of green jobs, however distinguishes Section E, which covers professions related to water supply, sewage and waste management as well as activities related to reclamation [CSO, 2016]. This article assumes that green jobs are positions work as specified in Section E of the PKD, as they are identical to the definitions proposed by the MOP and UNEP³⁹.

Person of Marshall Office in Krakow said that

The Marshal's Office itself does not create green jobs, understood in accordance with the definition developed by The Bureau of Labor Statistics, as a workplace related to economic activity, but through its regulatory and control activities in the field of the environment or spatial planning, contributes to the sustainable development of the region and creating such jobs in the economy.

Again, it means that depends from the needs, place, and person definitions of green job can be different, sometimes even exclusive each other's (e.g. one definition says that energy sector can create green job, but another that it doesn't because energy sector uses a lot of water, what is not coherent with principles of sustainable development).

Municipal Greenery Management on my question about what is green job answered:

Through green jobs, we understand the situation in which new jobs are created for the purposes of carrying out activities subject to broadly defined green initiatives and sustainable development.

As I've found, European Commission understanding of what is green job is:

Green jobs can include those with direct and indirect environmental benefits⁴⁰.

According to 2013 figures, environmental economy or ‘eco-industry’ companies employ over 4.2 million people, with a turnover of more than EUR 700 billion. The environmental goods and services sector helps manage pollution and natural resources. This covers inter alia waste management, air pollution, controlling and cleaning up soil, as well as recycling, renewable energy and water supply. Green jobs do not just include those in the eco-industry sector. Organic farming, sustainable agriculture and eco-tourism all depend on a healthy environment, and many other jobs are impacted indirectly. For example, food manufacturing depends on the land's ability to produce good-quality crops⁴¹.

- **Is there a need for green jobs?**

In Poland there is a need of creating green jobs in every meaning - or as workplaces related to nature protection, gardening etc. Or on administrative level where different eco-friendly initiatives, resolutions and projects can be approved, or on the level of innovations, e.g. in company which is selling solar panels. Poland and some of its cities as e.g. Krakow, Warszawa, Wroclaw are one of the most polluted cities in Europe, so it is crucial to implement more and more ideas how to make our country better and healthier place to live.

- **BEST PRACTICES:**

Given examples are from Krakow and Małopolska Voivodship area, because I learned about them directly Municipalities' representatives.

1. This is an example which is at the same time good practice in matter of creating new green jobs, but also educating citizens about sustainable solutions:

LIFE PROJECT:

In Małopolska Voivodeship there is LIFE project established in 2015 or 2016, where each commune in the voivodeship had to hire a person who will be in role of eco-manager/eco-advisor. It means that every person who wants to find eco-friendly solution for his/her household or company, can contact this eco-manager and consult an idea.

As said one of workers in Krakow's municipality

It can be assumed that it [LIFE project] creates about 150 green jobs. It consists of 110 created from scratch thanks to the project of jobs for eco-advisers and the functioning of 40 experts working with project partners (at least in communes which are partners). These persons carry out innovative, pilot actions whose effects directly implement the principle of sustainable development, including case of liquidation of pollution from the so-called low emissions⁴².

2. EKOSPALARNIA - ECO-INCINERATOR

Another example from Małopolska is Ekospalarnia - eco-incinerator, which was built in 2016 in Kraków by Krakowski Holding Komunalny S.A. Eco-incinerator is giving a jobs to 100 people at this moment.

'The eco-incinerator was created as a response to the ecological and energy needs of Krakow as part of the project "Municipal Waste Management Program in Krakow". It is the latest and most important part of this system; it enables to utilise municipal waste generated by the inhabitants of Krakow and the recovery of energy from it.

The thermal recycling technology is the most mature and environmentally responsible solution to waste. This is confirmed by the many years of European experience in which thermal processing of waste with recovery of energy form the basis of the entire waste management system.

The ECO-INCINERATOR allows to process 220 thousand tons of municipal waste during the year. Approximately 65,000 MWh of electricity and 280,000 MWh of heat are produced as a result of the combustion. The energy obtained by way of the thermal transformation process is largely organic and renewable⁴³.

Project Goal:

The implemented project was aimed at building a missing installation in the system for processing municipal waste, ie the Thermal Waste Recycling Facility. This facility is one of the most important elements of the created waste management system and is an integral part of it.

3. POCKET PARKS

Third idea of best practices is the project of Greenery Management about creating pocket parks (pocket because of the size - up to 5000 m²) in urban area of Krakow. One of the reasons of implementing this project was an issue of accessibility of green areas for citizens. That's why ideas for pocket parks were also discussed during open consultations meeting during which adults and children were invited and could present their ideas for park's management.

The idea of pocket parks is a response to a very important issue of accessibility of green areas for residents of large urban agglomerations. The ideal situation is the one where everyone has a park, square, or other green area around 5-15 minutes walk from the place of residence.

What is crucial in our project is the fact that pocket parks are completely different spaces than a typical square. Each of them is based around a different topic, around a different idea. So we have a prehistoric park, a mathematical or floral garden. In each of them there are also educational elements that make these places have many social functions. They integrate the local community, enrich the knowledge of users, are places that you can discover and visiting one of them encourages you to get to know others.

Social consultations turned out to be a very important element in the implementation of the task. Showing opportunities to residents and organizing meetings at which we ask them about the real needs and functions that they would like to make a given place cannot be overestimated. It is the residents who know best what is needed in a given place, what is missing, what the social structure of a given location affects needs. Otherwise, the park will be located on the estate, where families with children predominate, otherwise the recipients will be eg seniors⁴⁴.

5. Green jobs and their importance for achieving sustainable development

Green jobs are very important in achieving sustainable development goals in the meaning of ecology, environmental protection, waste management, renewable energy etc. For instance in Poland there is still a lot to do in this topic because of the polluted air and still low awareness for how people's behavior influence on our planet - especially in smaller towns and on countryside. What we need are more green jobs connected with education - workers, who will be on one side influencing environment by their actions, but also will be able to give an advice, consult with ideas and provide specific tools accordingly to knowledge about sustainable developments principles and goals. In all our countries we do have activists who can be heard and seen in media, and who are spreading knowledge about e.g. ecology, but we are still missing professionals on administrative and political level, who would be giving good examples not only on a paper while signing new strategy, but also by their knowledge and actions.

Additionally we would like to emphasize that green jobs will contribute to:

- Increasing employment rates and fulfill the gap in the labour market, influencing the results on grass root level activities in line with the demands of the sustainable development agenda 2030.
- Solving environmental problems on national as well as on European level.

- Strengthening the capacities of the young entrepreneurs for foundation of green businesses, supporting green ideas.
- Raising awareness about the importance of the necessity of sustainable development primarily among the young entrepreneurs but also among the public.

6. Conclusions and recommendations

The concept of SD is recognized, although awareness of its wide aspects is still not widely implemented. Within the project were collected a lot of interesting and valuable projects and initiatives which are focused on education or implementation of different SD-friendly solutions, but still in our countries have a lot to be done on this topic in different areas.

We can see that educational offer in the topic is attractive, and a lot of young people are interested in becoming sustainability experts. But on other hand good willing of the business sector for offering jobs in the field of sustainable development, promote social corporate responsibility, opinions of youth workers seems like in particular cases is missing.

The development of new standards of occupation and categorization of the occupations within the green job's category it was estimated that has quite a potential to deliver the necessary skills demanded by the labour market in line with the requirements for achieving sustainable development goals.

It was recognized that is very important to establish SMART goals in matter of Sustainable Development in Municipalities and on government politics level in order to develop effective way of monitoring activities and encourage for follow-up activities so finished projects may have chance to grow and spread SD principles further.

The other companies should follow the successful practices of the companies perceived as sustainability leaders in different sectors. They should be directed towards establishment of a system for monitoring, setting SMART indicators and creating a system for monitoring of the progress of implementation adapted to their needs.

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³⁹ <http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.cejsh-8773c198-75ee-4303-b4e2-7e69b10bdbcb/c/10.pdf> Adam Sulich, 'ZIELONE MIEJSCA PRACY – DIAGNOZA SYTUACJI STUDENTÓW I ABSOLWENTÓW POLITECHNIKI WROCŁAWSKIEJ', Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach, Nr 315, 2017

⁴⁰ <https://ec.europa.eu/social/BlobServlet?docid=14107&langId=en> Public Employment Services and Green Jobs Analytical paper (August 2013), [28.04.2019]

⁴¹ https://ec.europa.eu/environment/efe/themes/economics-strategy-and-information/green-jobs-success-story-europe_en 'Jobs for a green future', 13/07/2017, [28.04.2019]

⁴² <https://powietrze.malopolska.pl/en/life-project/>

⁴³ <https://khk.krakow.pl/en/eco-incinerator/> about Eco-incinerator, [27.04.2019]

⁴⁴ https://docs.google.com/document/d/1YvtLK5UCd5YPpZ6K5PIfxYpgorc_9F9aMAMOIz3ZogQ/edit?usp=sharing