

# Protected areas and green jobs versus environmental goods and services sector – competitive analysis

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## Abstract

The aim of the article is to compare three main definitions which are intertwined with green economy: protected areas and green jobs, versus environmental goods and services sector. This article refers to the most accepted approaches towards greening economy, which is based on sustainable development concept. Based on selected definition of green jobs the article presents an analysis of possible prevention young people's unemployment. In Poland about 15% of young people find their first employment in green jobs sector. Green jobs characteristic based on PKD is more specific than proposed by Eurostat EGSS definition.

**Keywords:** ecocodevelopment, European public goods, green jobs, protected areas.

## 1. Introduction

In the literature, there are many definitions of protected area (mostly due to differences between countries in normative acts) and green jobs, which are new subject of scientific discussion. Nowadays, the world's biggest actual problems are: economic sustainability (since the great recession of 2008-2009, which endangers progress on the environmental sustainability problem) and environmental sustainability (since the consequences of not solving the problem now are delayed and the problem receives too low priority to solve). Therefore, proposed solutions mostly are based on the sustainable development approach.

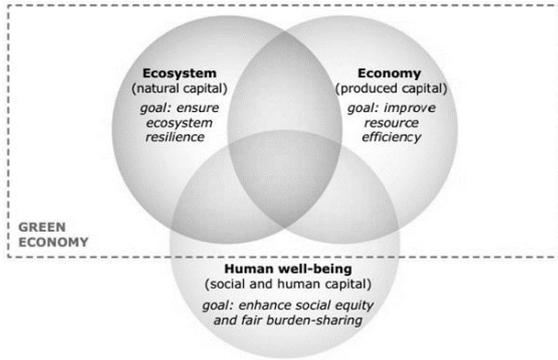
Sustainable development is 'such a course of inevitable and desirable economic development, which does not affect in a significant and irreversible human environment, does not lead to degradation of the biosphere and reconciles the laws of nature, economics and culture' (Poskrobko, 1998). For the purposes of this article we assumed that sustainable development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts (Brundtland Commission, 1987): the concept of 'needs', in particular, the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. This article presents the review of the most

important definitions and choose one specific for data analysis of protected areas. This text structure is organized as follow: first we analyse definitions and data (also suitable for Poland) then we synthesize all information to provide deduction about possible youth unemployment prevention using the green jobs in third part and finally induction, based on sustainable development idea comparison which allow to formulate set of conclusions.

## 2. The essence of protected areas and green jobs

There are two intertwined definitions of 'green growth' and 'green jobs' in international discussion and literature. Although these definitions are so close related they describe completely different aspects of modern economy making it green by implementation more environment friendly approaches. Therefore, green economy is next to social development one of pillars of sustainable development (figure 1). Topics of green jobs and green economy emerged after crisis in 2008-2009. This new idea is not only to solve current problems caused by crisis but also to prevent its future consequences and similar recessions. Crisis 2008-2009 negatively influenced labour market which had problems with unemployment till 2014. The idea of change the old paradigm of economy to green one is coming up from conviction that sustainable development can help with fair and decent sharing and distribution of goods combined with protection of nature. Green economy is economy which supports growth and development of whole economy and provides access to natural capital which is fundamental for human wellbeing. This approach is deeply connected with idea of sustainable many were appointed by Agenda 21 development by effective realization of its goals which. The initiatives of building green economy or creating green jobs, which are connected with environmental protection, require more statistical monitoring methods by chosen factors and assessment of process making economy 'greener'. Analysis of data in chosen sector of Polish economy is substantial for implementation of policies which support eco-innovations and investment in green technologies.

Moreover, factors of green jobs influence changes in environment, economy and society.



**Figure 1.** Green economy and its areas of interest, Source: The green economy (EEA, 2012)

The idea of green economy is presented on figure 1, as combination of ecosystem, economy and human well-being. European Environment Agency (EEA) identified the transition to a 'green economy' as a key priority in the

years ahead. It defined a green economy as 'one in which environmental, economic and social policies and innovations enable society to use resources efficiently, thereby enhancing human well-being in an inclusive manner, while maintaining the natural systems that sustain us' (EEA, 2012). In 1987 Brundtland Commission proposed: 'The network of protected areas that the world will need in the future must include much larger areas brought under some degree of protection' (Brundtland Commission, 1987). The commission had also a vision that 'over the long term the opportunities for development will be enhanced' also for all economy coming out directly from protected areas (Brundtland Commission, 1987). Polish law does not define precisely what is protected area, however the Environment Protection Act (Pol. *ustawa o ochronie przyrody*) describe rules, mechanisms and ways of environment protection taking into account the requirements of sustainable development (Journal of Laws, 2004).

**Table 1.** Protected area categories characteristics in Poland compared with categories of IUCN

Category by IUCN	Description
1a - strict nature reserve	Protected areas that are created and managed mainly for the purposes of research or for the protection of large, unspoiled areas of wilderness. Their primary purpose is the preservation of biodiversity and as essential reference areas for scientific work and environmental monitoring.
1b - wilderness area	
2 – national park	A natural area of land and/or sea designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations; (b) exclude exploitation or occupation inimical to the purposes of the area; and (c) provide foundation for spiritual, scientific, educational, recreational, and visitor opportunities all of which must be environmentally and culturally compatible.
3 - natural monument or feature	An area containing one or more specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.
4 - habitat/species management area	An area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.
5 - protected landscape/seascape	An area with coast and sea, as appropriate, where the interaction of people and nature over time has produced an area with significant aesthetic, ecological and/or cultural value and often with high biological diversity.
6 - protected area with sustainable use of natural resources	An area containing predominantly unmodified natural systems managed to ensure long term protection and maintenance of biological diversity while providing at the same time a sustainable flow of natural products and services to meet community needs

Source: authors own interpretation based on (Dudley, 2008).

Protected areas or conservation areas are locations which receive protection because of their recognized natural, ecological and/or cultural values (Journal of Laws, 2004). In international literature, there are definitions which state that protected area is 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural

values' (Dudley, 2008). There are six categories of protected areas defined by Polish law (Journal of Laws, 2004) presented in table 1, moreover these categories are common with proposed by International Union for Conservation of Nature (IUCN) (Dudley, 2008). The special protected areas are also appointed by Natura 2000, which is a network of nature protection areas in the territory of the EU.

**Table 2.** Green jobs categories in Poland based on PKD and ILO proposition

PKD section	PKD group	PKD description of group	Group characteristic proposed by ILO and BLS
A - agriculture, forestry, hunting and fishing	02.1	Silviculture and other forestry activities, excluding the acquisition of forest products	Organic agriculture; sustainable forestry and soil, water and wildlife conservation
	02.4	Service activities related to forestry	
C - industrial processing	27.1	Manufacture of electric motors, generators, transformers, switchgear and control electricity	Energy efficient equipment, appliances, buildings and vehicles, and goods and services that improve the energy efficiency of buildings and the efficiency of energy storage and distribution.
	27.2	Manufacture of batteries and accumulators	
	27.3	Manufacture of wiring and wiring devices	
	27.4	Manufacture of electric lighting equipment	
	27.9	Manufacture of other electronic equipment	
D - production and supply of electricity	35.1	Production, transmission distribution and trade of electric energy	Electric energy from renewable sources or nuclear
E - water supply; sewerage, waste management and remediation activities	36.0	Collection, purification and distribution of water	Pollution mitigation; greenhouse gas reduction; and recycling and reuse goods and services.
	37.0	Sewage disposal and treatment	
	38.1	Waste collection	
	38.2	Waste treatment and disposal	
	38.3	Materials recovery	
	39.0	Remediation activities and other service activities related to waste management	
O - public administration and defence; compulsory social security	84.1	Public administration and economic and social policy	Governmental and regulatory administration; and education, training, and advocacy goods and services
	84.2	Services to the entire society	

Source: authors own interpretation based on (ILO, 2008), (BLS, 2010) and (PKD, 2007)

Green jobs definition should be objective and measurable – and this second part makes most troubles for researchers and statistic offices around the world. The Eurostat definition of environmental goods and services sector (EGSS) offers a range of measures to support the types of goods common in protected areas from agriculture, management practices needed for the provision of public goods, both environmental and social as some green jobs. In addition to biodiversity and landscape, agriculture the environmental goods and services sector can also help to provide other environmental public goods, such as high quality air, soil and water and a stable climate as well as improving the resilience of the land to natural disasters. The definition focused on result of human action defines green jobs as: ‘jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources’. Another approach concern more process states that green jobs are: ‘jobs in which workers’ duties involve making their establishment’s production processes more environmentally friendly or use fewer natural resources’. Based on these two approaches it is possible to measure and identify categories of green jobs based on Polish Classification of Activities (Pol. *Polska Klasyfikacja Działalności*, PKD) and International Labour Office (ILO, 2008) which are compared with Bureau of Labour Statistics United States Department of Labour (BLS, 2010) in table 2. The PKD is based on ISIC proposed by UN and

UE standards of NACE (PKD, 2007). Definition based on PKD is more specific than proposed by EU general definition of EGSS. The EGSS domain is the ideal framework to collect data on employment that directly depends on the production of outputs intended to protect the environment and to manage natural resources. Green jobs are places of employment that contribute to preserve or restore the environment, applied in traditional sectors such as manufacturing and construction, or in new, emerging sectors such as renewable energy and energy efficiency (Rutkowska-Podołowska *et al.*, 2016). Moreover, green jobs are a solution for young, unemployed people who not only can find employment but can become entrepreneurs in this sector of economy. Undoubtedly Poland is a developed country with its social curiosities visible in ambitious expectations of the youth and their great disappointment. It seems that we are still at a very important, difficult and dangerous point which needs action of authorities and proper legislation.

### 3. Development of rural areas and youth unemployment prevention

Various factors instigate social change which is also brought about by generations. Not only socio-economic theories and hypothesis, but also the conclusions of observers and analysts of social life show the significance of generational change. It is frequently stated that ‘if

generational change is not taking place, the world is not moving forward'. What are characteristic of such moments are the expectations harboured by the society and hopes connected with the rise of the younger generation. Also, when society faces problems with sustainable development, we turn to the young and assume that their innovativeness will allow for tackling new challenges. Greening the modern economy is vital to increase decent employment opportunities for young people. This approach can enhance the use of effective resources and labour

productivity, and can support poverty reduction and social inclusion (Rutkowska-Podołowska *et al.*, 2016). For young people, the transition from education to work and employment is a very important process. A shift from education to employment (table 3) is also a difficult process, influenced by complex and not youth-friendly demographic and macroeconomic trends.

**Table 3.** Green jobs based on PKD and young people participation in green jobs

Name of voivodship in Poland	Green jobs			Young people transition into green jobs as their first employment		
	2014	2015	change	2014	2015	change
Dolnośląskie	159 404	160 634	0,77%	29 170	36 285	24,39%
Kujawsko-Pomorskie	98 993	99 101	0,11%	10 360	10 158	-1,95%
Lubelskie	110 228	109 032	-1,10%	7 682	7 766	1,09%
Lubuskie	50 771	52 035	2,43%	4 940	5 469	10,71%
Łódzkie	130 285	130 508	0,17%	12 978	24 582	89,41%
Małopolskie	166 010	167 649	0,98%	17 789	19 276	8,36%
Mazowieckie	594 078	594 102	0,00%	61 921	76 719	23,90%
Opolskie	50 102	50 163	0,12%	3 351	3 501	4,48%
Podkarpackie	86 413	85 362	-1,23%	8 890	9 881	11,15%
Podlaskie	50 503	51 091	1,15%	4 897	5 091	3,96%
Pomorskie	126 326	128 595	1,76%	10 333	12 123	17,32%
Śląskie	335 278	327 652	-2,33%	24 774	20 787	-16,09%
Świętokrzyskie	55 092	55 533	0,79%	4 230	4 887	15,53%
Warmińsko-Mazurskie	66 156	66 102	-0,08%	5 797	5 828	0,53%
Wielkopolskie	210 638	210 723	0,04%	26 912	26 846	-0,25%
Zachodniopomorskie	88 690	89 242	0,62%	6 127	6 685	9,11%
Poland	2 378 967	2 377 524	-0,06%	240 151	275 884	14,88%

Source: authors own interpretation based on (Bank Danych Lokalnych, 2017).

Despite being increasingly well educated and less in number, young people are group that is mostly affected by the second wave of crisis in 2009-2014. Moreover, young people living in rural areas or in neighbourhood of protected areas are more endangered by exclusion from labour market due to lack of infrastructure helpful for business. Table 3 shows that about 15 % of young people find their first employment in green jobs sector. In years 2014-2015 Mazowieckie was region with the highest amount of green jobs in 2014 and 2015 on the opposite was Opolskie region with the smallest number. However, in region Łódzkie the highest number of young people has undertaken their first employment in green jobs in the same period. The right solutions for them are green jobs proposed in this article. Even there is a slow increase of number of green workplaces (table 3) characteristic for young people are professional aspirations, ambitions and plans connected with migration to bigger cities, which is for them essential not only in terms of liberation from parental control, but also in terms of following one's life. An approach to involve young people in green jobs sector and

enhance economy growth based on green activities is innovative for countries facing new challenges on their labour markets, such as extremely high young people unemployment.

#### 4. Conclusions

Due to civilization changes the traditional employment system is being replaced by various atypical forms, so greatest threat is related to employment instability. Legal measures, which were supposed to make the labour market more flexible and decrease unemployment areas, lead to its segmentation. Disparities between segments can be mitigated by green jobs and development of green economy, however they have to be part of intelligent specializations proposed as part of responsible and sustainable development. The world economy is on very early stage of standardization its factors of greening economy or green jobs creation. It is expected that due to lack of experience young people will be pushed towards the end of the queue that consist of people searching for employment. Poland is one of the countries in which

temporary employment is dominant. This affects mainly young people, who are threatened with the prospect of endless and continuous internships. However, there are regions of Poland with significant number of green jobs, which are very first places of young people's employment. The article points out the economic importance of green jobs as a relevant category in the economic practice presenting a review of green jobs definitions. Definitions of protected areas in Poland adhere to the IUCN definitions and allow to use guidelines for rural development based on green jobs.

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