



**FULFILMENT OF GOALS OF THE INTEGRATED PRODUCT POLICY  
IN POLAND IN COMPARISON TO OTHER EUROPEAN UNION MEMBER STATES**

*Justyna SŁONIMIEC, Paulina SZATKOWSKA, Natalia STĘPIEŃ  
Jagoda URBAN, Sandra DOBOSZ, Grzegorz BIERNACKI  
University of Zielona Góra  
Han Yeon Ji  
Chung-Ang University in Seoul*

**Abstract:**

The paper presents the progress of implementation of the Integrated Product Policy in Poland in comparison to other European Union member states. It provides a detailed evaluation of certain IPP instruments, i.e. taxes and green premiums, EMAS scheme, eco-labeling and green public procurements. The paper also provides an assessment of the progress of implementation activities and requests further studies in this respect.

**Key words:** *Integrated Product Policy, IPP, eco-labeling, green public procurements, green premiums, ecological taxes, Eco-Management and Audit scheme, EMAS*

**INTEGRATED PRODUCT POLICY (IPP)**

The increase of negative impact of production and consumption on the environment is one of the most significant problems the modern society needs to deal with. Environmental degradation and increase of consumers' ecological awareness encourages people to search for modern solutions aimed at reducing negative impact of commercial activities. In so doing, we can reduce environmental pollution, use resources reasonably and recycle products. Enterprises are forced to undertake environment-friendly actions which minimize the results of their business and limit hazards arising from particular product life cycles. It is feasible thanks to application of recommendations and instruments of the Integrated Product Policy (IPP).

The goal of the article is to present the progress of goals of the Integrated Product Policy in Poland in comparison to other European Union member states with regard to the analysis of IPP main instruments.

The Integrated Product Policy is an integral part of the sustainable development concept. IPP performs tasks related to production of ecological goods. Its major goal is to minimize the negative influence of enterprises on the environment. This policy applies both to enterprises and consumers. It promotes eco-friendly products whose impact on the natural environment is smaller or none. IPP primarily concentrates on designing, manufacturing and promoting products among consumers [31]. IPP aims to extend its ecological policy to include instruments responsible for improving products and services from the point of view of their impact on the environment during the product life cycle.

In 1997 the European Commission commenced works on creating a strategy aimed at supporting implementation

of the sustainable development concept. It was acknowledged that implementation of the concept will be feasible once the production processes have been improved, and negative impact of goods production processes and products at every stage of their life cycle has been minimized. On the 18th of June 2003 the European Commission accepted "Integrated Product Policy – approach based on the product life cycle in the environment". The document included the description of instruments, thanks to which it was possible to minimize the negative impact of enterprises' business, as well as take activities allowing strategy implementation. Development of IPP mechanism and propagation of scientific activities which would present negative phenomena [35] were deemed significant.

In February 2005 the Ministry of Environment prepared "Strategies of Implementing the Integrated Product Policy in Poland". The document presented among others the description of selected instruments of the Integrated Product Policy, and the progress of works on the implemented policy in the European Union and in Poland. Additionally, the document showed tasks assigned to enterprises, consumer's organizations and state administration, which were related to IPP, and recommendations for further actions with regard to fulfilling the policy's provisions [20].

The Integrated Product Policy includes instruments which are commonly used in the process of protecting the environment, but at the same time considered to be most effective. The policy encompasses the following instruments [17]:

- implementing and promoting ecological management systems, inter alia: Eco-Management and Audit Scheme (EMAS), ISO 14001, Cleaner Production Program,

- ecological labeling,
- financial instruments (taxes and green premiums),
- propagating environmental declarations,
- analyzing product life cycle,
- providing access to product environmental data,
- applying ecological criteria for tenders (green procurements),
- voluntary financial arrangements.

All instruments of the Integrated Product Policy should have an impact on regular improvement of products and services in order to minimize their negative influence on the natural environment.

**INTEGRATED PRODUCT POLICY INSTRUMENTS**

*Ecological taxes and green premiums*

Ecological taxes and green premiums are one of the most important instruments of the Integrated Product Policy. They play a crucial role in the environment protection policy in each of the European Union member states, and their major focus is to motivate enterprises to find solutions which would limit damage caused by human actions [29]. The taxes and green premiums encourage companies to internalize the negative effects of their business, whereas authorities have a chance to create and finance the policy with respect to the environmental protection [18].

Taxes and premiums shall be understood primarily as financial charges imposed on manufacturing enterprises or added to the product’s price. The reference books distinguish these two notions.

The Organization for Economic Cooperation and Development (OECD) defines green premium as a non-returnable payment to the benefit of the state being imposed on the tax base [8]. The green premium can be imposed on the unit whose business affects the natural environment [9]. The taxes can apply to ready products which, due to used raw materials in particular stages of life cycle, may pose a serious threat to the environment [7]. Such financial charges motivate manufacturers to seek new eco-friendly solutions, both in organization-related and technological processes.

Green premiums are costs the enterprises need to incur as a result of utilizing the environment, emitting pollution to the environment and using natural resources. In such case the manufacturers are obligated to pay for every pollutant emitted to the environment or unit of environmental pollution.

The main difference between green premiums and ecological taxes is the fact who actually bears costs and which funds supply it. Following the definitions, green premiums contribute above all to the Fund for Environmental Protection and Water Management [FEPWP] [16]. The “Polluter

Pays” principle is in force. It means that manufacturers are obliged to make a payment for their negative influence on the environment. In the case of ecological taxes, the final user, that is a consumer, is held responsible. Such environmental protection financing system in Poland combines manufacturers and consumers, as well as motivates them to look for new innovative solutions contributing to better natural environment.

There are the following forms of charges and taxes:

- administrative charges – payment to be made for official acts. These may include issuing permits and granting concessions. These charges are supposed to cover costs related to functioning of bodies responsible for environmental protection [3].
- emission charges – are concerned with payment for every unit of pollution emitted to the environment. The rate of this charge is dependent upon the amount of emitted pollution [10].
- tradable permits – these include pollution emission permits and environment use permits [32].
- user charge – payments made for using natural resources and services related to environmental protection. These charges can be incurred for water delivery and pollution elimination.
- product charges – these are payments for products which harm the environment in particular stages of their life cycle: manufacture, consumption and post-use phase [11].

The Minister of Environment announces the environmental unit rates on a yearly basis.

As we can see, there is an increase in prices incurred by enterprises year by year. As far as all charges listed in the table 1 are concerned, an increase in the last 3 years can be recorded. The highest increase of charges occurred with regard to gases and dusts emitted to the air by about PLN17 for 1kg in the years 2013-2015. As for placing waste on stockpile, there was an increase by over PLN12 for 1 Mg [24].

Since 1989, one of the bodies financing the environmental protection in Poland has been the National Fund for Environmental Protection and Water Management [NFEPWM]. Its budget has been supported mainly by issued greenhouse gases emission permits, environmental charges and fines, product charges, as well as fees for recycling of end-of-life vehicles [8]. Aside from the aforesaid charges, the budget is financed from state subsidies and supported by EU funds. NFEPWM finances tasks related to the protection of air, ground, waters, climate, nature and landscape, and devotes funds to ecology-related education and waste recycling. Interestingly, once a year in May the Fund presents the report on its activities for the previous year.

**Table 1**  
*Upper environmental unit rates in years 2013, 2014 and 2015*

Item	Payment base	Upper unit rate		
		2013	2014	2015
1.	Gases or dusts emitted to the air	371.43 PLN/kg	385.17 PLN/kg	388.64 PLN/kg
2.	Substances running through sewage to waters or ground	238.14 PLN/kg	246.95 PLN/kg	249.17 PLN/kg
3.	Cooling waters released to waters or ground	27.20 PLN/dam <sup>3</sup>	28.21 PLN/dam <sup>3</sup>	28.46 PLN/dam <sup>3</sup>
4.	Placing waste on stockpile	272.10 PLN/Mg	282.17 PLN/Mg	284.71 PLN/Mg
5.	Drawing groundwater	4.04 PLN/m <sup>3</sup>	4.19 PLN/m <sup>3</sup>	4.23 PLN/m <sup>3</sup>
6.	Drawing inland surface water	2.10 PLN/m <sup>3</sup>	2.18 PLN/m <sup>3</sup>	2.20 PLN/m <sup>3</sup>

Source: Own elaboration on the basis of the Notice of the Minister of Environment on environmental rates for 2013, 2014 and 2015

**Table 2**  
**Revenue of the National Fund for Environmental Protection and Water Management**  
**in 2010, 2011, 2012 and 2013 [in thousands of PLN]**

	All revenues	Environmental charges and fines	Product charge
2010	2 328 664	380 832	3 718
2011	2 458 148	398 647	4 349
2012	3 150 908	384 229	3 630
2013	2 173 893	183 785	3 547

Source: own elaboration on the basis of the Report by the National Fund for Environmental Protection and Water Management for the years 2010, 2011, 2012, 2013

The highest revenue amounting to PLN 3150908 NFEPWM received in 2012, whereas the lowest revenue dates back to 2013 when the Fund collected PLN 2173893. As for the product charge, the highest revenue was collected in 2011 and amounted to PLN 4349. In other years this amount remained regular and amounted to roughly PLN 3500. The most dramatic drop was recorded for environmental charges and fines. In 2012 the revenues on this account equaled PLN 384229, while in 2013 – only PLN 183785. They decreased by PLN 200000, that is nearly 50%.

#### *Eco-labeling propagation and promotion*

Another vital instrument of the Integrated Product Policy is ecological labeling which consists in placing special marks on product packaging. It is frequently referred to as eco-labeling. Eco-labeling is defined as a process of using a special quality label of the products which are found to be eco-friendly [1].

The primary goal of the eco-labeling is propagation of credible and precise information about ecological product features or rendering services which are more eco-friendly among products of the same sort. Eco-label may significantly influence the supply and demand of given products [27].

The symbols attached to packaging are called eco-labels. They can take a form of a graphical mark, an inscription or symbol. The eco-label is a carrier of information for consumers who can recognize the product's manufacturer and its impact on the natural environment. Placing eco-labels is aimed at encouraging entrepreneurs to undertake actions related to production which are less harmful to ecosystems. Eco-labeling is a voluntary process. Both private enterprises and state companies may apply for the eco-label [4].

Eco-labeling allows consumers to make conscious decisions while doing the shopping. Thanks to this, they can choose products which are safe for the environment. Such products are referred to as ecological products. The raw materials used to produce this sort of goods are not harmful to the environment or have been recycled [5].

The first eco-label was a Swedish "Miljopapper" mark incorporated in 1970. It was concerned with paper goods made of recycled materials. Another label was a German mark used in 1978, known and used up to the present day as Blue Angel (Der Blaue Engel). In 1989, following the initiative of the Nordic Council, the "Nordic Swan" label was introduced. The label was associated with 40 various groups of products. This label is granted to goods and production processes which are eco-friendly and user-friendly. In 1992 the common ecological label for European Union member states was introduced. This label takes a form of a special daisy with twelve stars and is granted to products on the basis of the analysis of their life cycles. The product must meet a set of criteria, inter alia the amount of produc-

tion waste, noise level, degree of pollution limitation, as well as material absorption and production energy consumption [2].

The first Polish eco-label was incorporated in 1998 by the Polish Center for Research and Certification [PCRC]. "ECO-LABEL" is granted to the product which have the highest environmental standards in their production process, which translates into environmental protection and minimization of negative impact on the environment during all stages of product life. Aside from eco-labels, PCRC also certifies the environmental management systems. At present, the organization grants nearly 20 various eco-labels [28].

In 2011 "Eco-Management" Student Research Club from the University of Zielona Góra conducted research among students of the University of Zielona Góra and Kiel University on the knowledge of common eco-labels. The research has showed that Polish and German students have difficulties in recognizing particular labels. The average number of all correct answers given by Polish students was 42%, while German students – 49%. The recycling mark was the most recognizable as 94% of German and 92% of Polish students answered correctly. The least recognizable label was European Eco-label. 16% of students from Zielona Góra and 22% of students from Kiel gave correct answers [12].

In 2013 the study on the knowledge of ecological labels among students of the Complex of Schools of Economics in Zielona Góra was carried out again. The average number of correct answers was 51%. The most recognizable label was Möbius strip which was recognized by 86% of respondents. Eco-label was found to be the least recognizable label again, as many as 77% of respondents did not know this mark [30].

#### *Eco-Management and Audit Scheme (EMAS)*

The Integrated Product Policy employs various instruments which aim to perform required tasks in the field of environmental policy. The European Union, as a member state community, has numerous instruments in the field of environmental protection and controlling their legitimacy. One of such solutions is the Eco-Management and Audit Scheme (abbreviated: EMAS).

EMAS is one of the union's instruments responsible for environment management devoted to various enterprises, organizations and public service institutions. By voluntary implementation of the scheme, enterprises choose to take pro-ecological actions in order to limit the negative influence on the natural environment [19]. It means that the enterprises which implement EMAS go beyond the basic scope of activities they take as part of environmental protection. Thank to this, they are entered into the registry and receive the certificate stating that the given company is eco-friendly.

The primary task of EMAS is to support organizations' activities by creating and implementing schemes, environmental programs and ecological policies by enterprises. It is essential to conduct regular studies on effects of implemented solutions, and then publish data on environmental activities. EMAS scheme also requires worker commitment and social dialog [23].

The scheme was incorporated in 1993 and is currently applicable in all EU members states and European Economic Area countries. The program intends to catch up with the world's powers, such as China, and leads to unite EU by creating a smooth zone which counteracts the deteriorating environment [6].

In the last couple of years Polish people were truly interested in registering in the scheme, yet the number of units in the scheme is inconsiderable. In 2013, 36 EMAS schemes were implemented in 36 enterprises. A year later 44 firms registered in the scheme. In April 2015, EMAS certificate was granted to 46 companies [34].

In spite of the increase in the number of schemes implemented in Poland, we can see the fall of implemented EMAS schemes in the European Union. In 2013, 3731 organizations had the scheme implementation certificate, while in 2014 – the number of registered organizations decreased by nearly 400, reaching 3341 implemented schemes. According to data from April 2015, the number of implementation dropped again by nearly 400, in comparison to the previous year, and amounts to 2949 [26].

Italy, Spain and Germany have the biggest number of schemes. According to the data provided by the European Commission, by April 2015 EMAS scheme certificate was granted in these countries to 1048, 908, 321 organizations, respectively [34].

#### Green Public Procurements

Another IPP instrument aiming to foster environmental protection and propagate ecological lifestyle is green public procurement.

Green Public Procurement is a program designed especially for public administration authorities. Procurements are green when public institutions and various business entities consider environmental requirements when purchasing products [33]. Green procurements aim to develop and propagate new technologies by searching for solutions which minimize a negative impact of product and services on the environment. In tenders, material harmfulness requirements are taken into account [25].

This instrument is optional, which means that every EU member state can choose the degree of implementation [14]. In 2012 in Poland the amount of costs borne as a result of green public procurements was 15,9 billion zlotys, which in the face of the budget amounting to 132,7 billion zlotys accounted for 12% [13]. Forecasts are more optimistic as the European Commission assumes that by the end of 2015 the number of green public procurements will rise by more than 50% (speaking of central level) and the same level will be retained locally in 2020 [15].

In 2011 the European Commission entrusted the Center for European Policy Studies with conducting the studies on environmental criteria during public procurements in European Union member states. Finland came first, where over 80% of procurements were concerned with environment. The Netherlands, Hungary and Latvia took further positions, where the procurement level was ranging from 60 to 80%. In Belgium, Austria, Italy and Romania the green procure-

ment level was 20-40%. The last positions were occupied by Poland, France, Great Britain, Bulgaria, Greece – in these countries the degree of considering the environmental criteria did not exceed 20% [33].

A developed pro-ecological policy of the European Union maintains the demands on the environmental protection, for instance on counteracting climate changes. It is vital to undertake actions which aim to popularize existing solutions within tender procedures. For this reason monitoring such criteria as product energy efficiency (e.g. computers) or possibility of recycling products favor ecological production and causes us to generate a positive image of the place we live in and let ourselves live in a eco-friendly environment [21].

#### CONCLUSIONS

Poland has been trying to implement the principles of the Integrated Product Policy for many years. Thanks to promoting particular IPP instruments, the interest in the environmental protection issues has been on the increase. Despite decreasing number of implemented EMAS schemes in the European Union, there is a slight increase in the interest in the scheme in Poland. Thanks to numerous eco campaigns, we can also see broader knowledge of existing eco-labels, which translates into the ecological awareness level. However, Poland should still take further actions promoting green public procurements to catch up with European Union member states which are effective in this respect.



*The publication has been formed within the framework of realization of a public assignment co-financed with the financial resources from the city hall of Zielona Góra. Assignment number SK-II.525.9.2015*

#### REFERENCES

- [1] W. Adamczyk. Ekologia wyrobów. Jakość, cykl życia, projektowanie, Warszawa: PWE, 2004.
- [2] A. Andrykiewicz, A. Seternus, J. Słonimiec, A. Trzeźniewski. „The assessment and use of Integrated Product Policy in Poland”, Management Systems in Production Engineering, no. 4 (8), 2012, p. 15-18.
- [3] B. Bartnicka, M. Ptak. Opłaty i podatki ekologiczne. Teoria i praktyka. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego, 2011, p. 57.
- [4] T. Borys, G. Kobylko, P. Rogala. „Ekoetykietowanie jako element systemu informacji o jakości”. Ekologia wyrobów, materiały konferencyjne. W. Adamczyk (ed.). Kraków: Akademia Ekonomiczna, 1997.
- [5] H. Bronakowski. „Rynek – marketing dóbr i usług ekologicznych”. Słownik podstawowych pojęć, Białystok: Wyd. Wyższej Szkoły Finansów i Zarządzania, 1997.
- [6] Centrum Doradczoszkoleniowe MALON Sp. z o.o. „EMAS (Eco-Management and Audit Scheme) – Europejski System Ekozarządzania i Audytu”. [On-line]. Available: <http://www.iso.org.pl/emas>. [Accessed: Jun. 10, 2015].
- [7] B. Dobrzańska, G. Dobrzański, D. Kiełczowski. Ochrona środowiska przyrodniczego. Warszawa: PWN, 2008, p. 319.
- [8] Environmental Taxes. [On-line]. Available: <http://www.oecd.org>. [Accessed: Jun. 10, 2015].
- [9] European Commission. Environmental taxes – a statistical guide, Luxembourg, 2001.

- [10] J. Famielec. „Instrumenty polityki ekologicznej w krajach OECD”. Biblioteka Ekonomia i Środowisko, no. 1, 2000, p. 69.
- [11] B. Fiodor. „Opłaty produktowe jako ekonomiczny instrument internalizacji środowiskowych niekorzyści zewnętrznych – istota, funkcje, cele”. Biblioteka Ekonomia i Środowisko, no. 29, 2002, p. 79.
- [12] M. Gawron, E. Kitta, A. Shageev, A. Zagajewski. „Europejski system ekoznaków i jego rola w ograniczaniu zagrożeń przemysłowych”. Management Systems in Production Engineering, no. 1 (1), 2011, p. 10-15.
- [13] Główny Instytut Górnictwa. „Zielone zamówienia publiczne w Unii Europejskiej”. [On-line]. Available: [http://cp.gig.katowice.pl/pdf/ziel\\_zam\\_pub.pdf](http://cp.gig.katowice.pl/pdf/ziel_zam_pub.pdf). [Accessed: Jun. 10, 2015].
- [14] Komisja Europejska. „Ekologiczne zakupy”. Podręcznik dotyczący zielonych zamówień publicznych, p. 5.
- [15] M. Krawcewicz. „Po co nam zielone zamówienia publiczne”. [On-line]. Available: [http://www.brief.pl/artukul,1167,po\\_co\\_nam\\_zielone\\_zamowienia\\_publiczne.html](http://www.brief.pl/artukul,1167,po_co_nam_zielone_zamowienia_publiczne.html). [Accessed: Jun. 10, 2015].
- [16] G. Liszewski (ed.). Opłaty samorządowe w Polsce – problemy praktyczne. Białystok: Temida 2, 2010, p.264-266.
- [17] E. Lorek. Polska polityka energetyczna w warunkach integracji z Unią Europejską, Katowice: Wydawnictwo Akademii Ekonomicznej, 2008, p.106.
- [18] P. Małecki. System opłat i podatków ekologicznych w Polsce na tle rozwiązań w krajach OECD, Kraków: Wydawnictwo Uniwersytetu Ekonomicznego, 2012, p. 2.
- [19] A. Matuszak-Flejszman. System zarządzania środowiskowego w organizacji. Poznań: Wydawnictwo Akademii Ekonomicznej, 2007, p. 126.
- [20] Ministerstwo Środowiska. Strategia Wdrażania w Polsce Zintegrowanej Polityki Produktowej, 2005.
- [21] Ministerstwo Środowiska. [On-line]. Available: <http://www.mos.gov.pl>. [Accessed: Jun. 10, 2015].
- [22] Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej. [On-line]. Available: <http://www.nfosigw.gov.pl>. [Accessed: Jun. 10, 2015].
- [23] W. Niedrzwicki. Zarządzanie środowiskowe. Warszawa: PWE, 2006, p. 133-140.
- [24] Obwieszczenie Ministra Środowiska w sprawie wysokości stawek za korzystanie ze środowiska w 2013, 2014 i 2015 roku.
- [25] M. Pchałek, A. Juchnik, P. Kupczyk. „Prawne aspekty zielonych zamówień publicznych”. Zielone zamówienia publiczne. Warszawa, 2009, p.9.
- [26] E. Piwonka-Krzeszowska (ed.). Współczesne problemy zarządzania organizacjami. Kraków: Miles, 2014, p.184.
- [27] PN-EN ISO 14020:2005 Etykiety i deklaracje środowiskowe. Ogólne zasady.
- [28] Polskie Centrum Badań i Certyfikacji. [On-line]. Available: <http://www.pcbc.gov.pl>. [Accessed: Jun. 10, 2015].
- [29] M. Ptak. „Podatki ekologiczne a system handlu uprawnieniami do emisji – zagadnienia teoretyczne”. Czasopismo Europejskiego Stowarzyszenia Ekonomistów Środowiska i Zasobów Naturalnych, Ekonomii i Środowisko, no. 1(41), 2012.
- [30] J. Słonimiec. „Ekoznakowanie a świadomość ekologiczna uczniów Zespołu Szkół Ekonomicznych w Zielonej Górze”. [Praca licencjacka]. Zielona Góra, 2013.
- [31] Sprawozdanie Komisji dla Rady, Parlamentu Europejskiego, Europejskiego Komitetu Ekonomiczno-Społecznego i Komitetu Regionów na temat stanu wdrażania Zintegrowanej Polityki Produktowej, COM, no. 0693, 2009.
- [32] J. Śleszyński. Ekonomiczne problemy ochrony środowiska. Warszawa: ARIES, 2000, p. 25.
- [33] Urząd Zamówień Publicznych. „Krajowy Plan Działań w zakresie zielonych zamówień publicznych na lata 2013–2016”, Warszawa, 2013.
- [34] „Welcome to EMAS!” [On-line]. Available: <http://ec.europa.eu/environment/emas>. [Accessed: Jun. 10, 2015].
- [35] Zintegrowana polityka produktowa – podejście oparte na cyklu życia produktów w środowisku, COM, no. 302, 2003.

Justyna Słonimiec, Paulina Szatkowska, Natalia Stępień,  
Jagoda Urban, Sandra Dobosz, Grzegorz Biernacki  
University of Zielona Góra  
“Eco-Management” Student Research Club  
ul. Podgórna 50, 65-001 Zielona Góra, POLAND  
e-mail: j.slonimiec@gmail.com; chill.out.pl@gmail.com  
Han Yeon Ji  
Chung-Ang University in Seoul, KOREA