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THE EU ECOLABEL AS A MARK OF ENVIRONMENTAL EXCELLENCE – A LITERATURE REVIEW

Sustainable development and the reduction of the use of non-renewable resources are gradually becoming central issues for the EU growth plans. In the face of those inevitable changes, the voluntary labeling system – EU Ecolabel – is gaining importance. The study aimed to conduct a systematic review of the scientific literature on the EU Ecolabel labeling system and to identify and evaluate the existing trends. In the course of the study, the main research trends regarding labeling were determined. Among the most popular research topics were those relating to a specific category of products. Within this group, the largest number of studies in the analyzed period concerned issues related to tourism. Of particular value are the publications introducing the basis for defining criteria for new products, which so far have not been subject to the EU Ecolabel certification. A negative conclusion from the conducted review is the low involvement of researchers from Poland in the studies on the EU Ecolabel.

Keywords: EU Ecolabel, labeling, environmental management, market communication.

1. INTRODUCTION

Growing consumerism is becoming a great threat to societies when considering the limited natural resources of the Earth and their inevitable depletion. The constant development of trade, the growing demand for consumer products and the ever-expanding offer of goods on the market pose great challenges to producers, who increasingly resort to exploring so far untouched sources of raw materials. This brings on the declining ability of the environment to regenerate resources and leads to a climate crisis (Kirchmeier-Young et al., 2019; Schoolmeester et al., 2019). What is more, the effects of over-exploitation of the Earth's resources are most visibly manifested in places such as Pakistan, East Africa, and China, which are far from the areas of greatest consumption, and thus largely remain overlooked (5 ways countries can adapt…, 2022).

The current situation should draw consumers' attention towards buying more sustainably. Yet, this is not often the case; that is why environmental labeling schemes

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developed in accordance with the standards of the International Organization for Standardization can prove a very useful tool. Similar conclusions can be drawn from the report (Altenburg, Assmann, 2017) – according to which, the introduction of mandatory labeling schemes will help ensure transparency in markets and enable consumers to recognize products with different environmental impacts. One example of such a labeling system is the EU Ecolabel. It is a laudable initiative of the European Commission, launched already in 1992 (Council Regulation (EEC) No 880/92). In its original version, the label was intended to: promote the design, production, marketing, and use of products that have a reduced environmental impact (compared with similar goods) throughout their life cycle and provide consumers with better information about the environmental impact of products. Over time, the criteria underwent the process of gradual reassessment and change, coming closer to the currently prevailing concepts of environmental protection; particularly, to the concept of the circular economy.

Due to the growing role and importance of the EU Ecolabel, the aim of the study was to conduct a systematic review of the scientific literature on the EU Ecolabel labeling scheme and to assess the existing trends.

2. THE EU ECOLABEL AS THE EUROPEAN LABELING SYSTEM

The EU Ecolabel is completely voluntary, and its certification process is carried out by an independent authorized entity. To date, there are about 60 designated entities in the European Union, whose main tasks are: carrying out the certification procedure and regularly verifying whether a given product consistently meets the criteria of the EU Ecolabel (Regulation 66/2010). The regulations applied during the certification process make the EU Ecolabel classified as the first type of environmental labeling scheme according to ISO 14050:2020. The overarching aim of eco-labeling is to promote products characterized by a high level of ecological efficiency and which are in line with the EU policy of sustainable consumption, limiting the negative impact on the environment, citizens' health, climate, and natural resources.

The graphic form of the EU Ecolabel is specified in Annex II to the European Commission Regulation 2017/1941 (Fig. 1). It may also take the form of a graphic object with a text field, as specified in the criteria for a given product group.

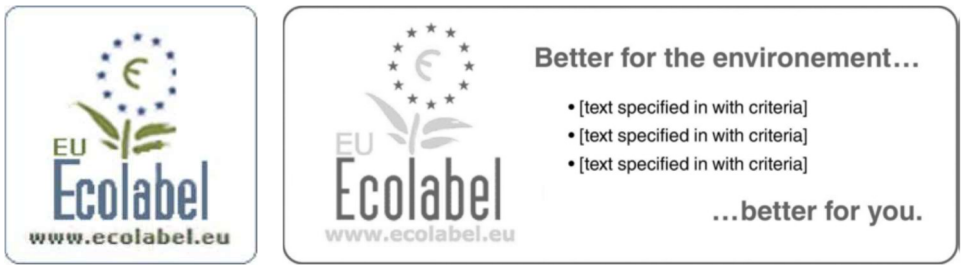

Figure 1. The graphic form of the EU Ecolabel

Source: (Commission Regulation (EU) 2017/1941 of 24 October 2017).

Currently, certification for the EU Ecolabel is possible for 12 product groups, some of which also include subgroups. These are (The EU Ecolabel Product Catalogue, 2022):

- Cleaning up, including Detergents for Dishwashers, Hard Surface Cleaning Products, Industrial and Institutional Automatic Dishwasher Detergents, Hand Dishwashing Detergents, Laundry Detergents, Industrial and Institutional Laundry Detergents, Indoor Cleaning Services,
- Clothing and Textile Products, including: Textile Products, Footwear,
- Coverings, including: Wood-, Cork- and Bamboo-Based Floor Coverings, Hard Covering Products,
- Do-It-Yourself, including: Indoor and Outdoor Paints and Varnishes,
- Electronic Equipment, including: Electronic Displays,
- Furniture,
- Gardening, including: Growing Media, Soil Improvers and Mulch,
- Lubricants,
- Other Household Items, including: Bed Mattresses,
- Paper Products, including: Graphic Paper, Tissue Paper and Tissue Products, Printed Paper, Stationery Paper, Paper Carrier Bag Products,
- Personal and Animal Care Products, including: Absorbent Hygiene Products; Animal Care Products; Cosmetic Products; Rinse-off Cosmetic Products,
- Tourist Accommodation, including: Hotels; Camp Sites.

According to the latest data update, as of September 2022, as many as 87 485 products (goods and services) have obtained the right to use the EU Ecolabel mark (EU Ecolabel key figures…, 2022). In the last 6 months, the largest increase in ecological products offered on the market has been observed in the following categories: Indoor Cleaning Services (+24%), Lubricants (+13) and Industrial and Institutional Laundry Detergents (+11%). Figure 2 shows the number of certified products in each category.

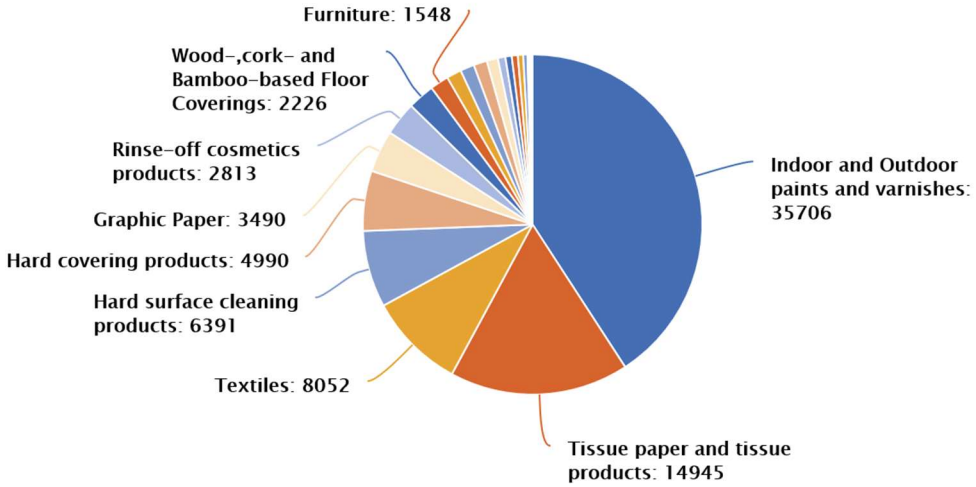

Figure 2. Distribution of the EU Ecolabel certified products per product group

Source: (EU Ecolabel facts and figures, 2022).

In the longer term, certification of the following products is planned to be introduced: solar photovoltaic modules, toys, food retail stores, cartridges, and renewable energy from new installations (Strategic Working Plan..., 2020). The establishment of the criteria and conditions for possible assessment of these products are now widely discussed.

3. MATERIALS AND METHODS

To achieve the research objective of the study, the method of systematic literature review (SLR) was adopted (Lenart-Gansiniec, 2021). It is a method that allows for the critical evaluation and synthesis of publications that meet a set of predefined eligibility criteria. In this case, the study aimed to find and analyze scientific papers that concerned the EU Ecolabel labeling scheme. Conducting such a review helps assess the state of knowledge, identify existing publications, and defining research issues or problems (Tranfield et al., 2003).

For the purposes of this study, the publications were searched for using three international databases: ScienceDirect, Scopus, and Web of Science. In the search, the following keywords were used: "EU Ecolabel" in titles, abstracts, and keywords. The period from 2019 inclusively up to 2022 was analyzed. To classify and present the results, the diagrams and guidelines from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses were applied (PRISMA) (Page et al., 2021).

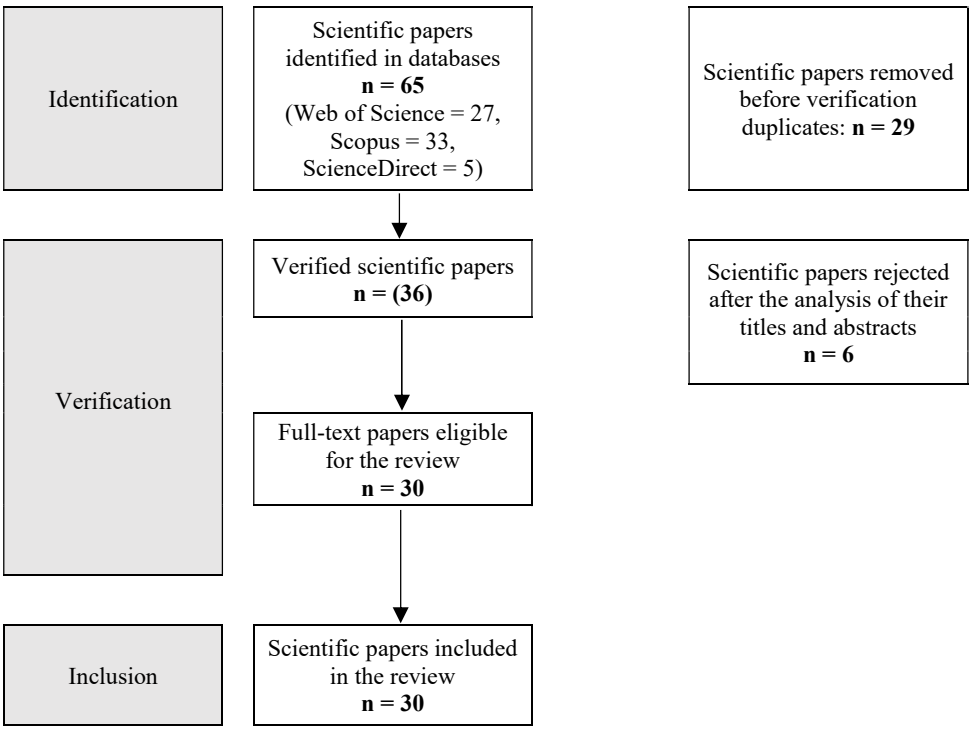

Figure 3. The PRISMA diagram

Source: own elaboration based on (Page et al., 2021).

On completing the search for publications, they were further analyzed, and the duplicate papers were removed from the collection. In the last stage, after reviewing the papers, those publications which, despite containing the term "EU Ecolabel", were not related to the labeling system, were rejected.

The search yielded a total of 65 entries with the term "EU Ecolabel" in the abstract, title or keywords. In the first stage, 29 papers turned out to be duplicated and were excluded from further analysis. Therefore, only 36 scientific publications were verified in the next stage. The verification stage consisted in reading the content of the articles. As a result, 6 papers that referred to the EU Ecolabel logo only were rejected. After this stage, the process of selecting scientific publications was completed and the substantive content analysis began.

4. RESULTS

A systematic review of the available literature has led to the identification of 30 (n=30) publications that concerned the EU Ecolabel. These studies can be divided into two groups:

1. Research papers related to a specific product category (n=18).
2. General research papers without specifying product categories (n=12).

The first group included 18 publications. The most frequently examined product category within the EU Ecolabel labeling scheme was tourism (hotels, accommodation, etc.). As many as 9 publications dealt with this topic. Other specific thematic areas included: construction, household goods, cosmetics, photovoltaic/solar panels, paper products, oils, furniture, textiles, and growing media. The percentage share of each of the product groups identified during the study is shown in Fig. 4.

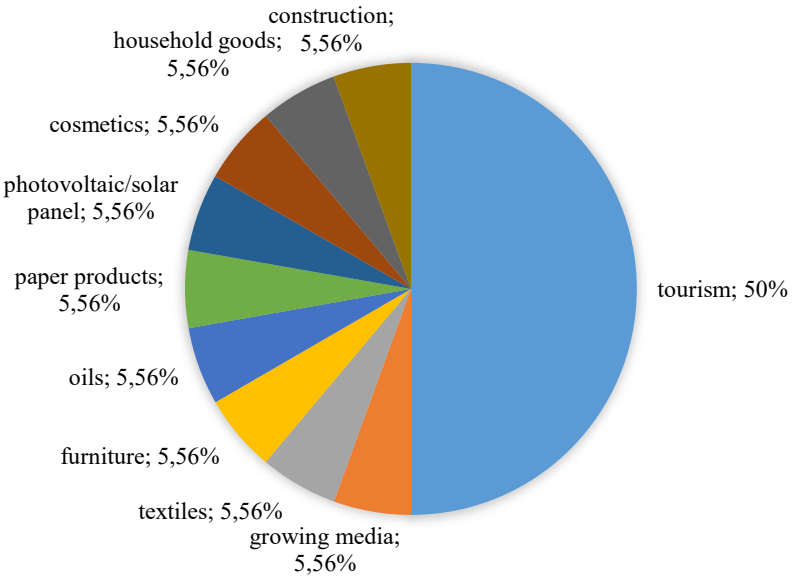

Figure 4. A pie chart representing the most frequently examined individual product categories as part of studies on the EU Ecolabel labeling scheme

Source: own elaboration.

The studies which, during a systematic review of the literature, were marked as papers focusing on a specific product category, can be classified into three sub-categories in terms of their subject matter and purpose of the research:

- studies on improving the criteria for already existing product groups,
- studies on the creation of criteria for new product groups,
- studies on the role of the EU Ecolabel in the market of a given product.

Improving the criteria for granting the EU Ecolabel was postulated, among others, by Merino and Prats (2020). The authors pointed to a particularly high level of environmental friendliness of the sea beaches that received the Blue Flags certificate. It was further recommended that the criteria of this voluntary certificate should be included in the EU Ecolabel requirements. In the field of tourism, two more publications dealt with the topic of reducing the impact of this industry on the natural environment. L. Cirrincione et al. (2020a) focused on creating a tool for more economical management of electricity. In turn, L. Cirrincione et al. (2020b) pointed to the need of changing the certification requirements, which should also cover the construction infrastructure used in tourism. Other proposed changes to the existing criteria include suggestions for the household category. The authors of the paper drew attention to the consumption footprint indicator, which can describe the impact of household consumption on the environment in Europe. According to the authors of this study, apart from the characteristics of a given good, the intensity of consumption also has an impact on the environment (Castellani et al., 2021). Some papers also addressed the subject of improving the criteria in the cosmetics category. More specifically, the authors postulated the introduction of a ban on the use of plastic microspheres in cosmetic products (Anagnosti et al., 2021). Similar publications concerned the paper industry. In the criteria for granting the EU Ecolabel, Ribeiro et al. (2020) proposed setting limits as well as discussed specific methods for the removal of AOX from production wastewater.

Similar research, but on the subject of furniture, was conducted by Donatello et al. (2021). The authors proposed introducing some changes in the future updates of the EU Ecolabel criteria for this category. It was suggested that such revisions should address more balanced and flexible requirements for potential applicants.

The second direction observed in the literature on the EU Ecolabel were publications in which it was postulated to extend the scope of certified categories to include further products. The proposals encompassed marble products and photovoltaic/solar panels. Capitano et al. (2022) reviewed the requirements and the evaluation of the marble production process. In the course of the research, simplified methods for assessing pollutant emissions have been proposed, which can be included in the EU Ecolabel certification criteria. In turn, Polverini et al. (2021) assessed the possibilities of technical development and innovations that can be implemented in environmental policies, including the EU Ecolabel certification criteria. This analysis has led to the identification of key performance indicators of solar panels that can be included in the EU Ecolabel criteria.

The third group of studies related to the EU Ecolabel are papers primarily focusing on the role of the EU Ecolabel certificate on the market. Consumers are among the most important market participants. Therefore, Dragomir et al. (2020), in a study conducted in Romania focused specifically on this group. It turned out that ecolabels boasted a high level of publicity among consumers in this country; however, they were also characterized by some levels of ambiguity and uncertainty. On the other hand, Preziosi et al. (2019), on

examining the behaviour of consumers in Portugal, confirmed that the EU Ecolabel certificate is noticed by hotel guests and influences their loyalty towards thus certified hotels.

Other market participants, namely managers and executives, became the object of attention in the research of Barbulescu et al. (2019) and Vesce et al. (2019). Research by Barbulescu et al. (2019) made it possible to determine the pro-environmental measures that should be undertaken in the operation of the managed enterprises – in this case, hotels, and the EU Ecolabel criteria which are most difficult to be met. In turn, Vesce et al. (2019) conducted research with the participation of managers who decided not to implement the EU Ecolabel. This point of view is most useful in terms of understanding the phenomenon of non-acceptance of the label. The authors of the paper identified and presented the strengths and weaknesses of the EU Ecolabel. An interesting perspective was presented by Koszewska (2019), who focused on the market participants from the public sector. The paper described the role of labels in EU public procurement. As is well known, this section of the market has substantial means, but at the same time, it does not become a frequent subject of research.

The second group of reviewed scientific publications included papers that did not concern specific products but covered the topic of the EU Ecolabel in general. This group included 12 publications. For this part of the EU Ecolabel literature, a division into two subgroups was proposed: research papers (n=6) and conceptual and review papers (n=6).

The research papers covered a wide range of topics related to the EU Ecolabel. Among others, Luceri et al. (2021) assessed the impact of the EU Ecolabel for consumer products on decision-making among Italians. Research results have shown that the level of information on environmental issues, concern for the environment and the perceived usefulness of the EU Ecolabel positively influence the willingness to use products bearing the logo. Marrucci et al. (2021) examined the customers of the EU Ecolabel licensed and non-licensed companies. The conducted analysis identified the market factors at play and the benefits for the EU Ecolabel holders. However, the lack of a marketing and communication policy coordinated at the European level was indicated as a weakness of the certification scheme.

Very interesting conclusions were drawn from the research by Pineiro-Villaverde and Garcia-Álvarez (2020). It was proposed to promote the use of recycled raw materials in public works and to impose the need for Ecolabel certification in order to conclude a contract with public administration bodies. It should be remembered though that the above-mentioned studies were general, they did not apply to specific products or services, the range of certification of which is very wide (12 categories of products and services).

The last group of identified publications were so called conceptual and review papers. Among the publications qualified for this group were papers by Sala et al. (2021), focusing on current legal acts of the European Union (EU) and the communications on the issues of: LCT, LCA, life cycle costs (LCC) and environmental footprint. All of these were reviewed from the perspective of recent years. In turn, Cordella et al. (2020) analyzed material efficiency requirements within the EU Ecolabel criteria. The authors drew attention to the need to urgently implement the requirements regarding, for example, the minimum lifetime of products. Pollex and Lenschow (2020) dealt with a slightly different topic. They focused on legislative policies in the areas that are addressed to producers and consumers. The activity of the decision-makers in terms of environmental protection most visibly manifests itself in the form of the instruments introduced by them, namely legal acts, which mainly

shape the current reality. Legal issues related to the EU Ecolabel were the subject of research by Du (2021), who analyzed the principles of the EU Ecolabel labeling scheme from the point of view of international trade law. The author concluded that it is highly unlikely that the EU Ecolabel certification would be incompatible with the TBT (Technical Barriers to Trade) agreement.

A graphical summary of the conducted literature review is presented in Fig. 5.

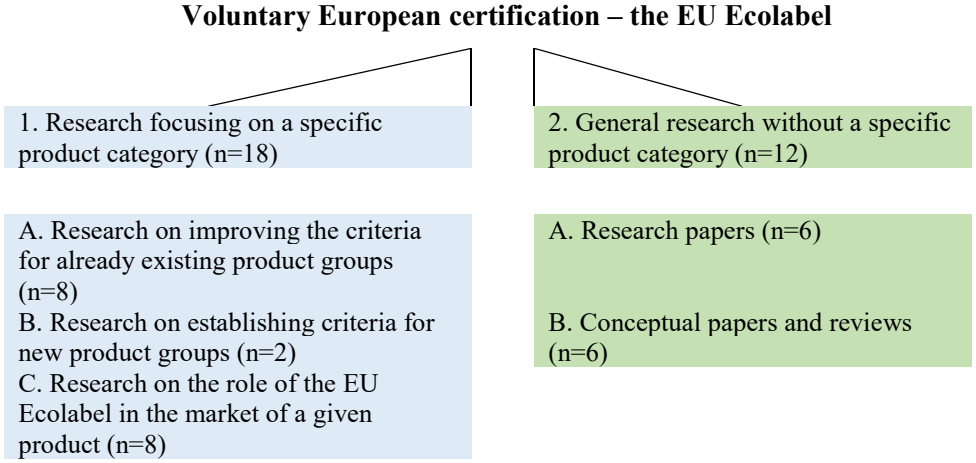

Figure. 5. The classification of scientific papers related to the EU Ecolabel, published from 2019 onwards

Source: own elaboration.

5. CONCLUSIONS

The presented systematic literature review concerns a very important problem, which is environmental protection. All citizens of the European Union should be made aware of the threats resulting from the rapid degradation of the environment, but they should also have the knowledge and opportunities to choose products with the least negative impact during everyday shopping. The EU Ecolabel system seems to be an excellent tool for implementing these postulates. The review of the latest publications has made it possible to determine the main international trends and research directions related to the EU Ecolabel. Especially papers related to specific categories of certified products deserve high praise. Certainly, many of these studies set new standards and requirements of environmental friendliness for various products. Attempts to lay the groundwork for future requirements for a growing family of products that can be certified in the future (e.g., solar panels) are also very welcomed. Research conducted on various market participants (e.g., consumers, enterprises) is also an interesting direction. In the group of studies concerning specific product categories, most attention was devoted to research related to tourism. Undoubtedly, this is the result of a large share of this sector in the economy of several European Union countries.

The second direction of the reviewed papers were general studies without specifying the products that are subject to voluntary EU Ecolabel certification. Some of the research

papers assigned to this group seem to be too general. As a result, its contribution to the improvement and development of the EU Ecolabel is rather low in the author's opinion. With the current number of 12 categories, which are a cross-section of many products and services, research with general characteristics seems to be poorly suited to the real problems and challenges of the EU Ecolabel scheme. The shortcoming of these works is also their narrow scope, limited to one country. The results of the systematic review suggest a paucity of publications on the EU Ecolabel that would encompass the entire EU.

On the other hand, conceptual papers and reviews are undoubtedly very important, as they allow to assess the progress and directions when it comes to eco-friendly products in the perspective of recent decades. Conclusions and observations collected in this way constitute valuable foundations for designing and setting new directions for environmental protection.

From the perspective of Poland, the review showed a lack of published research papers that would concern Polish society or enterprises. It seems that the aim of increasing the popularity and effectiveness of the EU Ecolabel instrument should be undertaken on a wider scale, especially in countries on the verge of transforming their energy sector.

The limitations of this study include the time range from which publications were searched (from 2019 onwards), which can be extended in future research. In addition, a characterization of the countries in which the research was conducted and the countries of origin of the authors of the publications should be considered. When analyzing the EU Ecolabel labeling scheme, it should be noted that even its continuous improvement will not in itself improve the situation of the environment. The most important element of this system are responsible and ethical companies and conscious consumers. Only the balanced actions of both of these entities will substantially contribute to slowing down the climate catastrophe that may be approaching the entire humanity.

REFERENCES

5 ways countries can adapt to the climate crisis, (2022) United Nations, Environment Programme [Access: 15.11.2022]. Access on the internet: https://www.unep.org/news-and-stories/story/5-ways-countries-can-adapt-climate-crisis.

Altenburg, T., Assmann, C. (2017). *Green Industrial Policy*. Concept, Policies, Country Experiences. Geneva, Bonn: UN Environment; German Development Institute / Deutsches Institut für Entwicklungspolitk (DIE).

Anagnosti, L., Varvaresou, A., Pavlou, P., Protopapa, E., Carayanni, V. (2021). *Worldwide actions against plastic pollution from microbeads and microplastics in cosmetics focusing on European policies. Has the issue been handled effectively*? *„Marine Pollution Bulletin",* Vol. 162, https://doi.org/10.1016/j.marpolbul.2020.111883.

Barbulescu, A., Moraru, A.-D., Duhnea, C. (2019). *Ecolabelling in the Romanian Seaside Hotel Industry – Marketing Considerations, Financial Constraints, Perspectives*. *„Sustainability",* 11, 265. https://doi.org/10.3390/su11010265.

Capitano, C., Cirrincione, L., Peri, G., Rizzo, G., Scaccianoce, G. (2022). *A simplified method for the indirect evaluation of the "embodied pollution" of natural stones (marble) working chain to be applied for achieving the Ecolabel brand of the product*, *„Journal of Cleaner Production"*, Vol. 362, https://doi.org/10.1016/j.jclepro.2022.132576.

Castellani, V., Sanyé-Mengual, E., Sala, S. (2021). *Environmental impacts of household goods in Europe: a process-based life cycle assessment model to assess consumption footprint*. „*Int J Life Cycle Assess"* 26, https://doi.org/10.1007/s11367-021-01987-x.

Cirrincione, L., Peri, G., Rizzo, G. Scaccianoce, G. (2020a). *Leading agritourism facilities along Nearly Zero Energy paths: proposal of an easy-to-use evaluation method*. Energy Efficiency in Buildings and Industry, 75th National ATI Congress – #7 Clean Energy for all (ATI 2020), E3S Web Conf. Vol. 197.

—— (2020b). *Towards Nearly Zero Energy and Environmentally Sustainable Agritourisms: The Effectiveness of the Application of the European Ecolabel Brand*. „Appl. Sci.", 10, https://doi.org/10.3390/app10175741.

Commission Regulation (EU) 2017/1941 of 24 October 2017 amending Annex II to Regulation (EC) No 66/2010 of the European Parliament and of the Council on the EU Ecolabel, OJ L 275, 25.10.2017.

Cordella, M., Alfieri, F., Sanfelix, J., Donatello, S., Kaps, R., Wolf, O. (2020). *Improving material efficiency in the life cycle of products: a review of EU Ecolabel criteria*. *„Int J Life Cycle Assess"*, 25, https://doi.org/10.1007/s11367-019-01608-8.

Council Regulation (EEC) No 880/92 of 23 March 1992 on a Community eco-label award scheme, OJ L 99, 11.4.1992.

Donatello, S., Cordella, M., Kaps, R., Kowalska, M., Wolf, O. (2021). *Correction to: Are the existing eu ecolabel criteria for furniture products too complex? An analysis of complexity from a material and a supply chain perspective and suggestions for ways ahead*. *„Int J Life Cycle Assess"*, 26, https://doi.org/10.1007/s11367-021-01948-4.

Dragomir, L., Mazilu, M., Dobrescu, A., Malmare, R. (2021). *Certification and promotion of sustainable tourism: consumers attitude towards EU Ecolabel*. *„Forum geografic"*, XX(1), https://doi.org/10.5775/fg.2021.143.i.

Du, M. (2021). *Voluntary Ecolabels in International Trade Law: A Case Study of the EU Ecolabel. „Journal of Environmental Law"*, Vol. 33, Issue 1, March, https://doi.org/10.1093/jel/eqaa022.

EU Ecolabel facts and figures (2022) [Access: 15.11.2022]. Access on the internet: https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home/business/ecolabel-facts-and-figures_en.

EU Ecolabel key figures as per September (2022) [Access: 15.11.2022]. Access on the internet: https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home/business/ecolabel-facts-and-figures_en.

ISO 14050:2020 – *Environmental management – Vocabulary.*

Kirchmeier-Young, M.C., Gillett, N.P., Zwiers, F.W., Cannon, A.J., Anslow, F.S. (2019). *Attribution ofthe influence of human-inducedclimate change on an extremefire season*. „Earth's Future", 7, https://doi.org/10.1029/2018EF001050.

Koszewska, M. (2019). *The role of ecolabels in creation of life-cycle criteria: The case of textile and clothing products* [in:] Andhov, M., Caranta, R., eds., Cost and EU Public Procurement Law: Life-Cycle Costing for Sustainability. London: A. Wiesbrock Routledge.

Lenart-Gansiniec, R. (2021). *Systematyczny przegląd literatury w naukach społecznych. Przewodnik dla studentów, doktorantów i nie tylko.* Warszawa: Wydawnictwo Naukowe Scholar.

Luceri, B., Zerbini, C., Vergura, D.T. (2021). *Eu Ecolabel: The Role of Environmental Labels in the Purchasing Decision-Making Process. „Micro & Macro Marketing, Società editrice il Mulino"*, Issue 2.

Marrucci, L., Iraldo, F., Daddi, T. (2021). *Investigating the management challenges of the EU Ecolabel through multi-stakeholder surveys*. *„Int J Life Cycle Assess"*, 26, https://doi.org/10.1007/s11367-021-01866-5.

Merino, F., Prats, M.A. (2022). *Are blue flags a good indicator of the quality of sea water on beaches? An empirical analysis of the Western Mediterranean basin*. *„Journal of Cleaner Production”,* Vol. 330, https://doi.org/10.1016/j.jclepro.2021.129865.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D. (2021). *The PRISMA 2020 statement: an updated guideline for reporting systematic reviews*. *„BMJ”*, 372. https://doi.org/10.1136/bmj.n71.

Pineiro-Villaverde, G., García-Álvarez, M.T. (2020). *Sustainable Consumption and Production: Exploring the Links with Resources Productivity in the EU-28*. *„Sustainability”*, 12, https://doi.org/10.3390/su12218760.

Pollex, J., Lenschow, A. (2020) *Many faces of dismantling: hiding policy change in non--legislative acts in EU environmental policy. „Journal of European Public Policy”,* Vol. 27, Issue 1, https://doi.org/10.1080/13501763.2019.1574869.

Polverini, D., Dodd, N., Espinosa, N. (2021). *Potential regulatory approaches on the environmental impacts of photovoltaics: Expected improvements and impacts on technological innovation*. *„Progress in Photovoltaics: Research and Applications”*, Vol. 29, Issue 1, January.

Preziosi, M., Tourais, P., Acampora, A., Videira, N., Merli, R. (2019). *The role of environmental practices and communication on guest loyalty: Examining EU-Ecolabel in Portuguese hotels*. *„Journal of Cleaner Production”,* Vol. 237, https://doi.org/10.1016/ j.jclepro.2019.117659.

Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel, OJ L 27, 30.1.2010.

Ribeiro, J.P., Marques, C.C., Portugal, I. Nunes, M.I. (2020). *Fenton processes for AOX removal from a kraft pulp bleaching industrial wastewater: Optimisation of operating conditions and cost assessment*. „Journal of Environmental Chemical Engineering”, Vol. 8, Issue 4, https://doi.org/10.1016/j.jece.2020.104032.

Sala, S., Amadei, A.M., Beylot, A., Ardente, F. (2021). *The evolution of life cycle assessment in European policies over three decades*. *„Int J Life Cycle Assess”*, 26, https://doi.org/ 10.1007/s11367-021-01893-2.

Schoolmeester, T., Gjerdi, H.L., Crump, J., Alfthan, B., Fabres, J., Johnsen, K., Puikkonen, L., Kurvits, T., Baker, E. (2019). *Global Linkages – A graphic look at the changing Arctic* (rev. 1). UN Environment and GRID-Arendal, Nairobi and Arendal. www.grida.no

Strategic EU Ecolabel Work Plan 2020–2024 (2020), European Commission, Directorate-General, Environment Circular economy & Green growth, December [Access: 15.11.2022]. Access on the internet: https://ec.europa.eu/environment/ecolabel/ documents/EU%20Ecolabel%20Work%20plan%220202-2024%20Dec%202020.pdf

The EU Ecolabel Product Catalogue (2022) [Access: 15.11.2022]. Access on the internet: http://ec.europa.eu/ecat/.

Tranfield, D., Denyer, D., Smart, P. (2003). *Towards a methodology for developing evidence-informed management knowledge by means of systematic review*. *„British Journal of Management”*, 14(3).

Vesce, E., Giachino. C., Beltramo, R., Re, P. (2019). *The Importance of Changing Perspectives: Non-EU Ecolabel-Certified Establishments in the Hospitality Industry*, Tourism Analysis, Vol. 24, No. 3, https://doi.org/10.3727/108354219X15511865533130.