

# RESHAPING PROJECT MANAGEMENT TOWARDS SUSTAINABLE DEVELOPMENT – METHODOLOGIES AND STANDARDS

DOSKONALENIE ZARZĄDZANIA PROJEKTAMI W KIERUNKU ZRÓWNOWAŻONEGO ROZWOJU – METODYKI I STANDARDY

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**Abstract:** In the contemporary business landscape, sustainability is emerging as a pivotal factor in project delivery, driven by stakeholder demands for ethicality, eco-consciousness, and economic efficiency throughout a project's lifecycle. This study aims to identify and elucidate the norms and standards governing sustainable project management practices within project organizations. Our findings unveil that sustainable project management transcends mere reliance on indicators, embracing a comprehensive package of activities. This multifaceted approach adapts project management mechanisms to different sustainability dimensions. An important result of the analysis of research materials is also the list of seven identified areas of project management subject to transformation towards sustainability. This study probes the realm of sustainability within project management, unveiling its potential to curtail costs, amplify opportunities, and bolster organizational success. The conclusions of the paper emphasize that SPM (Sustainable Project Management) is not just a trendy word, but a necessity in the face of contemporary global challenges. Organizations must actively adapt to the sustainability paradigm and effective leaders are crucial to the success of sustainable projects.

**Keywords:** project management, sustainable project management, sustainable development, sustainability

**Streszczenie:** We współczesnym krajobrazie biznesowym zrównoważony rozwój staje się kluczowym czynnikiem w realizacji projektów, napędzany żądaniami interesariuszy dotyczącymi etyki, świadomości ekologicznej i efektywności ekonomicznej w całym cyklu życia projektu. Celem artykułu jest identyfikacja i wyjaśnienie norm i standardów regulujących praktyki zrównoważonego zarządzania projektami w organizacjach realizujących projekty. Z ustaleń Autorów wynika, że zrównoważone zarządzanie projektami wykracza poza zwykłe poleganie na wskaźnikach i obejmuje kompleksowy pakiet działań. To wieloaspektowe podejście dostosowuje mechanizmy zarządzania projektami do różnych wymiarów zrównoważonego rozwoju. Ważnym wynikiem analizy materiałów badawczych jest także lista siedmiu zidentyfikowanych obszarów zarządzania projektami podlegających transformacji w kierunku zrównoważonego rozwoju. Niniejsze artykuł bada dziedzinę zrównoważonego rozwoju w zarządzaniu projektami, ujawniając jego potencjał w zakresie ograniczania kosztów, zwiększania możliwości i wzmocnienia sukcesu organizacji. We wnioskach z badania podkreślono, że SPM (Zrównoważone Zarządzanie Projektami) to nie tylko modne słowo, ale konieczność w obliczu współczesnych, globalnych wyzwań. Organizacje muszą aktywnie dostosowywać się do paradygmatu zrównoważonego rozwoju, a skuteczni liderzy mają kluczowe znaczenie dla powodzenia zrównoważonych projektów.

**Słowa kluczowe:** Zarządzanie projektami, zrównoważone zarządzanie projektami, zrównoważony rozwój

## Introduction

In the contemporary global landscape, the intersection of human activities and the natural environment has reached a critical juncture. Unabated industrialization, urbanization, and resource consumption have given rise to multifaceted challenges that transcend geographical boundaries,

posing a formidable threat to the equilibrium of our planet. In this context, the imperative for sustainability has emerged as a preeminent concern, seeking a harmonious reconciliation between human development and environmental preservation. Within this overarching narrative, project management, as a foundational discipline governing the

execution of initiatives, finds itself at the vanguard of transformative change. Sustainable development, characterized by the simultaneous pursuit of economic prosperity, environmental stewardship, and social equity, is an emblematic concept at the heart of contemporary global discourse. As the world grapples with pressing issues such as climate change, resource depletion, social inequalities, and ecological degradation, the urgency to reconfigure traditional project management paradigms into Sustainable Project Management (SPM) has never been more pronounced. In this context, project management, as a field focusing on the improvement of project planning, implementation and control processes, becomes a significant tool in the pursuit of sustainable development. This concept, in the literature and practice, is gaining in importance. It answers a difficult question: how can project goals be combined with long-term environmental, social and economic benefits? This article is an attempt to gain an in-depth understanding and exploration of the fundamental aspects, implications, and challenges of transforming project management towards sustainable development. Through a literature review and theoretical analysis, this article is devoted to explaining why SPM is becoming an increasingly indispensable element of modern management.

The article focuses on several key areas. First, it recalls the evolution of the SPM concept, finding its origins in a response to the increasingly urgent challenges of sustainable development. Secondly, we conduct a critical analysis of the scientific literature and industry norms and standards that shape the field of project management in the context of sustainable development. Thirdly, it shows the benefits and challenges of implementing SPM in various sectors. Ultimately, our work not only looks at the current situation, but also challenges the future. It calls for further research on what mechanisms, tools and strategies can be effectively implemented in the practice of project management so that they contribute to achieving sustainable development.

## 1. Literature review

The concept of Sustainable Project Management (SPM) was born in response to the growing and more urgent challenges related to sustainable development. The current global environment is characterized by increasingly complex issues such as climate change, biodiversity loss, social inequalities and others that require solutions at both global and local levels. Therefore, it's worth paying attention to the evolution of the SPM concept and

its genesis in response to these challenges. One of the main sources influencing the development of this concept were sustainability reports developed over the last few decades at the level of the United Nations Organization. Sustainability has become an issue of special concern after the announcement of a United Nation report entitled *Man and his Environment in 1969*. In this report, the most important environmental threats were characterized and presented to the public for the first time, including the issues such as poisoning and pollution of the environment, necessitating the protection of environmental elements such as soil, water and air; the lack of a connection between highly developed techniques and technologies and environmental requirements; the destruction of arable lands; unplanned development of urban zones; and the decreasing area of free, open areas and disappearance of biodiversity (UN, 1970). In the decades following the publication of this report, there was a series of conferences and publications expanding on the above issue, led by the United Nations Conference on Environment and Development (UNCED), which was organized in 1972 in Stockholm under the slogan: "Only One Earth". During this conference, the concept of environmental policy was introduced into international law. At that time the United Nations Environment Program (UNEP) was established. During this conference, the Declaration of the United Nations Conference on the Human Environment, consisting of 26 principles, was also signed, which was intended to provide guidance for States in their efforts to protect the natural human environment (CINTE, 1972). Another document developed on the initiative of the UN was the report of the World Commission on Environment and Development (WCED), published in 1987, entitled *Our Common Future*. It was specified in this report that sustainable development, understood as the need to meet the basic needs of present generations without limiting the chances of meeting at least the same needs for future generations, should become the central principle of the United Nations, but also of national governments and state institutions, organizations private and enterprises (UN 1987). A breakthrough event for popularizing the concept of sustainable development was the second United Nations Conference on Environment and Development in 1992 in Rio de Janeiro. During this conference – called the Earth Summit – two key documents were adopted. The first was a set of 27 principles of sustainable development, the so-called Rio Declaration – constituting a broad definition of sustainable development and the second document was an action program containing recom-

mentations and guidelines – the so-called *Agenda 21* (UN 1993). The arrangements in Rio de Janeiro were continued with the provisions of the Johannesburg Declaration in September 2002 and another UN conference in Rio de Janeiro, the so-called Rio +20, when the sad conclusion of which was that the world is still living at the expense of future generations, the debt is constantly growing and, in other words, the chances of future generations to meet their needs are dramatically decreasing (UNCSD 2012). The latest development at the United Nations level is the new Sustainable Development Goals, adopted by the Resolution of the UN General Assembly on September 25, 2015. *New Agenda – Transforming Our World: the 2030 Agenda for Sustainable Development* contains 17 Sustainable Development Goals (SDGs) and 169 related tasks (targets) to be achieved by the world by 2030. In the *Agenda*, the goals were assigned to 5 areas - the so-called 5xP: people, planet, prosperity, peace, partnership. (UN 2015). In addition to the activities of United Nations institutions, the latest regulations of the European Union will be of great importance for the transformation of project management towards sustainable development. In particular *The European Green Deal* (COM(2019) 640 final) – a package of policy initiatives which aims to set the EU on the path to a **green transition**, with the ultimate goal of reaching climate neutrality by 2050 and Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending *Regulation (EU) 2019/2088*, commonly known as the *EU Taxonomy Regulation*, mark a significant paradigm shift towards environmental sustainability.

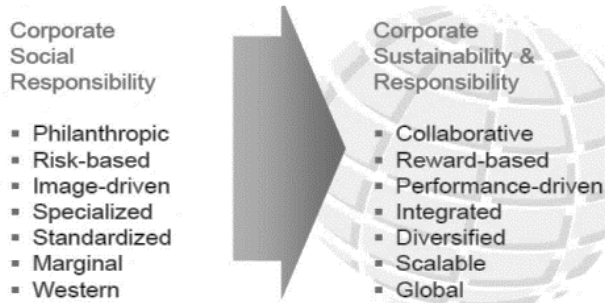
All the above UN and EU reports and regulations, but also the reports prepared for the Club of Rome, starting from the first *Limits to Growth* report (Meadows et al., 1973) and ending with the latest reports such as *Transforming our Economies from Ego to Eco* (Scharmer, 2022) or “From ‘greening’ the present system to real transformation – transforming resource use for human wellbeing and planetary stability” (Potochnik et al., 2022), as well as a whole range of reports from various governmental, non-governmental and corporate organizations on various aspects of sustainable development became the inspiration for the developing the concept of Sustainable Project Management (SPM). So by taking into account the growing concern about sustainability issues, many project researchers and practitioners have begun to notice that traditional project management

approaches often do not sufficiently consider sustainability aspects.

So what is the SPM concept about? Based on the definitions of project and project management presented by Project Management Institute (PMI), according to which a project is “a temporary effort to produce a unique product, service or result” and its management is “the application of knowledge, skills, tools, and techniques to project tasks in order to meet project requirements” (PMI, 2017), and at the same time defining a sustainable project “a project aims to achieve a desired outcome while protecting, conserving and improving the people and natural resources needed to meet the needs of future generations” (Moehler et al., 2018), sustainable project management can be defined as “a disciplined application of methodologies aiming to protect natural resources along with the other legitimate objectives of the project Kyriakogkonas et al. 2022).

Being the same as a traditional project management, SPM involves key 4 stages such as: initiation, planning, execution and completion. In all these stages a few criteria can be used in order to adopt sustainability and the most well-known set of criteria used by business is a set of three ESG criteria – Environmental-Social-Governance. Within environmental criteria, concepts such as lean management, industrial ecology or cleaner production (Nilsson et al., 2007, Khalili, 2015, UNIDO, 2015, De Bortoli et al., 2023) may be particularly applicable. In turn, within social criteria, special attention is paid to the impact on stakeholders. Corporate Social Responsibility (CSR) can be seen as a key element of social sustainability (Pirnea et al., 2011). Many of the areas of CSR have been indicated in communications from the European Commission. In particular, this is the development of corporate social responsibility instruments such as ethical codes, management standards, product labelling, socially responsible investments and others (COM (2001) 366; COM (2002) 347). Moreover, on 5 January 2023, the Corporate Sustainability Reporting Directive (CSRD) entered into force. This new directive modernises and strengthens the rules concerning the social and environmental information that companies have to report (Directive (EU) 2022/2464). The new rules will ensure that investors and other stakeholders have access to the information they need to assess the impact of companies on people and the environment and for investors to assess financial risks and opportunities arising from climate change and other sustainability issues.

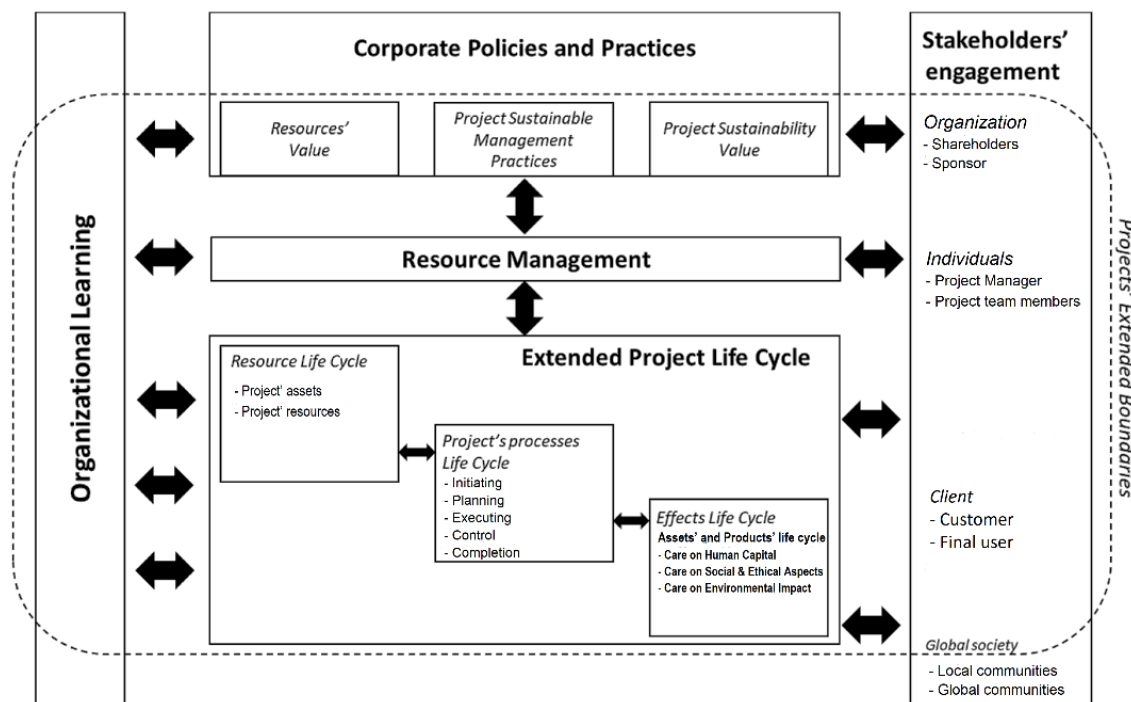
Furthermore, the CSR 2.0 model was proposed (Visser, 2010, 2014). According to the model, sustainability and responsibility are different yet complementary elements of CSR. The details of the model were presented on Figure 1.



**Figure 1.** CSR 2.0 model

Source: Visser W. (2010) CSR 2.0. The future of corporate social responsibility.

As part of the third ESG criterion - Governance, the key element is a set of various practices and rules that are of significant importance to the company's stakeholders. Corporate governance rating is most often verified in terms of criteria such as financial transparency; clarity of ownership structures; relations with funders, structure, and way of working and alignment of interests of managers and shareholders. According to the IUCN, governance for sustainability is a set of written and unwritten rules that link ecological citizenship with institutions and norms of governance (Dias, 2023). Considering a broader review of the literature, the SPM approach comes down to five dimensions that form a framework structure of elements are: Corporate policies and practices; Resource management; Life cycle orientation; Stakeholders' engagement and Organizational learning (Armenia et al., 2019). Figure 2. illustrates the relationships between the five elements of the framework.



**Figure 2.** Sustainable project management framework

Source: Armenia, S.; Dangelico, R.M.; Nonino, F.; Pompei A. (2019) Sustainable Project Management: A Conceptualization-Oriented Review and a Framework Proposal for Future Studies. *Sustainability*, 11, 2664.

Scientific publications on SPM such as (Silvius et al., 2012) integrate the concepts of sustainability in projects and project management and provide valuable guidance and insights. Moreover, there are studies on the impact of SPM on the effectiveness of projects. Some of them suggest a positive impact of sustainable management practices on

project performance (Chow, 2021) while others indicate a lack of conclusive evidence (Silvius et al., 2012). Some research indicates that regulations regarding sustainable development and environmental protection influence the development of SPM practices (Wang et al., 2023).

### 1.1. Standards supporting the Sustainable Project Management (SPM)

This part of the article attempts to identify the most important norms and standards supporting sustainable development and sustainable project management. First of all, the standards of the International Organization for Standardization (ISO) should be taken into account. It has developed a series of standards related to sustainable development. The most important of them are:

- ISO 14001:2015 **Environmental management systems – Requirements with guidance for use**. The international standard that specifies requirements for an effective environmental management system (EMS). It provides a framework that an organization can follow, rather than establishing environmental performance requirements. The topics covered by ISO 14001:2015 include: Context of the organization; Leadership; Planning; Support; Operation; Performance evaluation and Improvement. In addition to the ISO 14001 standard, the ISO 14000 series includes over 40 standards, including among others: Life Cycle Assessment standards (ISO 14040, ISO 14044 -ISO 14044); Environmental performance evaluation (ISO 14030 - ISO 14030; ISO 14063; ISO 14100); Environmental Labelling (ISO 14020 – ISO 14024) Environmental auditing and related environmental investigations (ISO 14015 – ISO 14017) and Greenhouse gas and climate change management and related activities (ISO 14064 – ISO 14067).
- ISO 26000:2010 **Guidance on social responsibility**. It provides guidance to all types of organizations, regardless of their size or location, on: concepts, terms and definitions related to social responsibility; the background, trends and characteristics of social responsibility; principles and practices relating to social responsibility; the core subjects and issues of social responsibility; integrating, implementing and promoting socially responsible behaviour throughout the organization and, through its policies and practices, within its sphere of influence; identifying and engaging with stakeholders; and communicating commitments, performance and other information related to social responsibility.
- ISO 50001:2018 **Energy management systems – Requirements with guidance for use**. This specifies requirements for establishing, implementing, maintaining and improving an energy management system (EnMS).

The intended outcome is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance and the EnMS.

- ISO 37001:2016 **Anti-bribery management systems – Requirements with guidance for use**. This is an international standard that provides guidelines and requirements for establishing, implementing, maintaining, and improving an anti-bribery management system within an organization. The standard is designed to help organizations of all sizes and types prevent, detect, and address bribery-related risks and misconduct. According to the standard, organizations are encouraged to develop and implement a clear and comprehensive anti-bribery policy that outlines their commitment to preventing bribery and sets the tone for the entire organization.
- ISO 37101:2016 **Sustainable development in communities – Management system for sustainable development – Requirements with guidance for use**. It is an international standard that focuses on the development and implementation of management systems for sustainable development in communities. This standard provides a comprehensive framework to guide communities, whether urban or rural, in their pursuit of sustainable development goals. By adhering to ISO 37101:2016, communities can enhance their capacity to meet the needs of current and future generations while fostering sustainable development, improved quality of life, and resilience in the face of global challenges.
- ISO 20400:2017 **Sustainable procurement – Guidance**. This standard offers comprehensive guidance for sustainable procurement practices. It provides organizations with a framework to integrate sustainability considerations into their procurement processes. It helps entities make informed choices, minimize environmental and social impacts, and drive positive change in supply chains.

The above standards, applicable to sustainable development as well as to sustainable project management, shows how individual standards and their goals become useful for organizations and help them achieve better results in the field of sustainability. The second group of standards presented below are those related to project management areas:

- **The Standard for Project Management and the PMBOK® Guide, 7th edition** – is the latest edition developed by Project mana-

gement Institute (PMI). It includes twelve principles of project management and eight project-performance domains critical for the effective delivery of project outcomes. In this latest edition of the guide there is a drastic shift from processes to performance domains which are focused on overall outcomes rather than just the processes and techniques used within a project's executions. Moreover, in the latest edition of the Guide, PMI has introduced an Agile Practice Guide, which describes applying agile principles and practices to project management (<https://www.pmi.org/>).

- **PRINCE 2 (Projects IN Controlled Environments)** – is a structured project management method and practitioner certification programme. PRINCE2 provides a scalable method for the management of all types of projects. Each process is defined with its key inputs and outputs together with the specific objectives to be achieved and activities to be conducted. Latest PRINCE2® 7 addresses changes in the project management sector and adapts to evolving working practices and technologies. ([www.axelos.com](http://www.axelos.com)).
- **ISO 21500:2021 Project, programme, and portfolio management – Context and concepts.** It provides a comprehensive framework for effective project management practices, offering guidance and principles applicable to projects of all sizes and types, regardless of industry or sector. The standard outlines key project management concepts, including project lifecycle phases, processes, and best practices. It emphasizes the importance of clear objectives, stakeholder engagement, risk management, and continuous improvement. By adhering to ISO 21500, organizations can enhance their project, programme, or portfolio management capabilities, leading to better project outcomes, increased efficiency, and improved communication among project teams and stakeholders ([www.iso.org](http://www.iso.org)).
- **PRiSM™ (Projects Integrating Sustainable Methods)** – is a methodology developed by Green Project Management (GPM), which transfers sustainable development goals to project management, i.e. one-off, unique and complex projects generating unique business value. GPM offers three levels of proficiency – GPM-b™ (Basic), GPM-s™ (Specialist) and GPM-m™ (Master) certification programs (Carboni et al. 2020). The fundamental assumption of the methodology is centered on

ecological and social sensitivity; sustainability indicators are considered as an important criterion at every stage of the project. If key requirements are not met, the step must be repeated, so that the result remains safe or beneficial to people and the environment (Carboni 2022, <https://gpm-emea.org/>).

The norms and standards presented above play a pivotal role in guiding organizations towards sustainable practices and effective project management. The standards encompass various aspects of sustainability, covering environmental, social, and economic dimensions. Additionally, they provide a structured framework for project management, ensuring efficiency and success. This compilation of standards serves as a valuable resource for organizations striving to integrate sustainability into their operations while adhering to best practices in project management, fostering responsible and effective business practices.

## 2. Materials and methods

The key materials for the preparation of the article were: the standards of the independent, non-governmental International Organization for Standardization (ISO); project management standards of leading international organizations: PMI, Axelos and scholarly literature. To conduct a comprehensive literature review, a systematic approach was employed for data collection. Literature searches were conducted in reputable scholarly databases such as Scopus and Web of Science. In addition, key European Union regulations relating to sustainable development have been identified, which also have an impact on project management. The analysis focused on works published between 2010 and 2023, however, several landmark publications from earlier years were also included. The main research methods used in preparing the article were analysis, synthesis and critical evaluation. During the literature review, attention was given to key elements concerning project management and aspects of sustainable development. Trends and the evolution of concepts related to project management were analysed. A literature synthesis approach was adopted to identify common themes and challenges. The collected materials and articles also underwent a critical evaluation regarding methodological quality, source reliability, and the validity of conclusions.

## 3. Results and discussion

The review of literature as well as existing norms and standards indicates the growing importance of Sustainable Project Management (SPM) in the

context of achieving sustainable development goals. Discussing this issue leads us to several key aspects that require in-depth reflection. As far as the traditional approach focuses on economic and financial goals, SPM goes beyond this framework, also taking into account social and ecological aspects. The integration of these three dimensions becomes essential in the context of achieving sustainable development. It remains an open question how to effectively implement this integrated approach in project management practice. It should be noted that organizational culture emerges as a key factor influencing the success of SPM implementation. Organizations must adapt their values and norms to the idea of sustainable development. However, the process can be complex, requiring the courage to change established practices and adopt a more sustainable approach. As it turns out, organizational culture is a key aspect of implementing SPM practices. Research shows that organizations that emphasize sustainability values are more likely to implement SPM (Zakrzewska, 2022, Wang et al., 2023). However, adapting organizational culture can be difficult and time-consuming. More and more organizations are implementing sustainable project management practices as part of their sustainability approach. Examples such as sustainable building plans and renewable energy project management illustrate the practical application of SPM (Wang et al., 2023; Chang, 2013). Attention should also be paid to certain controversies surrounding the communication of environmental activities by companies. In particular, it is related to greenwashing, which is an organization's mode of communication based on false or misleading declarations regarding the compliance of the product or its components with environmental protection principles. Such practices have led to the emergence of *green blushing*, according to which corporations deliberately avoid any communication pertaining to their efforts for sustainable development. Even if organizations make substantial green achievements, they decide not to communicate their greenness, for fear of being accused of greenwashing (Falchi 2022; He 2022).

Sustainable project management is not only an expression of high ethical standards and altruistic concern for the fate of the planet and others, but also a beneficial and profitable investment. The main assumptions of the PRiSM™ approach illustrates this well. In addition, the P5 impact model, which presents the complex network of impacts and interdependencies of each project, beyond the level of society (People) and the environment (Planet), P5 distinguishes the areas of products (Product), processes (Process) and economics (Prosperity)

more closely related to traditional business goals. Considering the model, we can easily see that caring for the high quality of natural resources and limiting their consumption, as well as respecting the rights of employees and consumers translate into lasting competitive advantages.

An important result of the analysis of research materials is also the list of seven identified areas of project management subject to transformation:

- **Project selection:** a need to align project portfolios with the defined taxonomy criteria to ensure they contribute to sustainable objectives outlined in the regulation.
- **Risk management:** project managers may need to integrate additional risk assessment and management processes related to environmental and social factors into their projects.
- **Funding and financing:** project managers may need to collaborate closely with financial specialists to ensure that the projects align with the taxonomy and can access funding from sustainable finance sources.
- **Reporting and documentation:** project managers might be required to incorporate additional reporting mechanisms and documentation to demonstrate how their projects align with environmental and social objectives outlined in the taxonomy.
- **Stakeholders' engagement:** project managers may need to enhance stakeholder engagement strategies, ensuring that the interests of environmental and social groups are considered. Moreover, collaboration with sustainability experts may become crucial during project planning and execution.
- **Supply chain:** project managers may need to work closely with supply chain teams to ensure compliance with sustainable criteria.
- **Trainings and skill development:** a new dimension emphasizing sustainable practices to project management, may require additional training and skill development to understand and integrate sustainability aspects effectively into project planning and execution.

Summarizing the analysed materials, in particular new standards and legal regulations, their multi-faceted impact on project management practices can be observed. By introducing a framework that encourages or mandates alignment with environmental sustainability criteria, project managers will be challenged to adapt their approach, consider new risk factors and integrate sustainability considerations into various aspects of project planning and implementation.

#### 4. Conclusions

A critical analysis of the literature shows that Sustainable Project Management (SPM) is an area of growing importance; but at the same time it is both complex and multidimensional and it directs us to several key conclusions that have important implications for the practice of project management and the shaping of research in this field.

Firstly, contemporary projects must consider and effectively integrate the three main dimensions of sustainable development: economic, social and ecological. There is a need to transform the project approach that has traditionally focused on achieving economic returns, towards finding a balance between these three dimensions, which is not always easy, but is essential to achieve sustainable development. The seriousness of the situation caused by the processes of recent decades means that organizations are increasingly developing comprehensive corporate social responsibility (CSR) policies that emphasize the rational management of natural resources, the stability of local communities and the prevention of the negative effects of growth. Initially treated as a temporary novelty, CSR has become established in companies' long-term strategies as one of their most important elements. Sustainable project management provides the organization with a number of benefits, such as: risk reduction, cost reduction, process optimization, better value chain management, considering the principles of environmental protection, health and safety in operational processes, easier obtaining financing for investments and activities, taking care of employees. All this builds a sustainable competitive advantage for the company. It is worth taking advantage of the opportunity to achieve it!

Secondly, the organizational culture must be the foundation for the success of SPM implementation. Organizations must align their values, norms, and goals with the sustainability paradigm. This transformation is not just about introducing new procedures, norms and standards but about a fundamental change in the way of thinking and approach to project management. Organizations that achieve this goal can better contribute to sustainable social development and environmental protection.

Thirdly, traditional project success indicators such as ROI (Return on Investment) or on-time delivery do not reflect the full scope of sustainable project management. There is a need to develop more extensive indicators that consider economic, social and ecological aspects. As organizations become increasingly required to report on their

sustainability impact, the need for such metrics will become even more pressing. Industry norms and standards, in particular ISO standards and project management standards are an important foundation for the development of the field of sustainable project management. However, there are challenges related to the lack of consistency and specificity in the standards, coupled with the need for more precise indicators for assessing the success of sustainable projects.

Finally, the debates on the impact of SPM practices on project performance continue. There is evidence to suggest that a sustainable approach can contribute to higher project performance, but there is also research that does not support such benefits. Continued research is needed that examines in more detail the contextual differences and circumstances in which SPM is most beneficial. One challenge is to continue to develop a coherent and practical theoretical framework for SPM. Such a framework will help organizations better understand and emphasize that SPM is not just a trendy word, but a necessity in the face of contemporary global challenges. Organizations must actively adapt to the sustainability paradigm and effective leaders are crucial to the success of sustainable projects. Furthermore, project researchers and practitioners should continue their efforts to understand and implement sustainable project management more comprehensively.

#### References

- A Guide to the Project Management Body of Knowledge (PMBOK guide)*. Sixth edition. (2017). Project Management Institute. Newtown Square, Pennsylvania.
- A Guide to the Project Management Body of Knowledge (PMBOK guide)*. Seventh Edition and The Standard for Project Management. (2021). Project Management Institute. Newtown Square, Pennsylvania.
- Aarseth, W., Ahola, T., Aaltonen, K., Økland, A., & Andersen, B. (2017). Project sustainability strategies: A systematic literature review. *International Journal of Project Management*, 35(6), 1071-1083.
- Armenia, S., Dangelico, R.M., Nonino, F., Pompei, A. (2019). Sustainable Project Management: A Conceptualization-Oriented Review and a Framework Proposal for Future Studies. *Sustainability*, 11, 2664. <https://doi.org/10.3390/su11092664>
- De Bortoli, A., Bjørn, A., Saunier, F. et al. Planning sustainable carbon neutrality pathways: accounting challenges experienced by organizations and solutions from industrial ecology. *The International Journal of Life Cycle Assessment* 28, 746-770. <https://doi.org/10.1007/s11367-023-02147-z>.
- Carboni, J., Duncan, W., Gonzalez, M., Milson, P. Young, M. (2020). *Zrównoważone zarządzanie projektami* [Sustainable Project Management]. Kraków: mp2mp.



- Chang, C. (2013). A critical analysis of recent advances in the techniques for the evaluation of renewable energy projects, *International Journal of Project Management*, 31, 1057-1067. <https://doi.org/10.1016/j.ijproman.2013.03.001>.
- Chow, T.C., Zailani, S., Rahman, M.K., Qiannan, Z., Bhuiyan, M.A., Patwary, A.K. (2021). Impact of sustainable project management on project plan and project success of the manufacturing firm: Structural model assessment. *PLoS ONE* 16(11): e0259819. <https://doi.org/10.1371/journal.pone.0259819>.
- Dias, F.T., Dutra, A.R., Cubas, A.L., Henckmaier, M.F., Courval, M., Guerra, J.B. (2023). Sustainable development with environmental, social and governance: Strategies for urban sustainability. *Sustainable Development*, 31(1): 528-539.
- Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014; Directive 2004/109/EC; Directive 2006/43/EC; and Directive 2013/34/EU, as regards corporate sustainability reporting.
- European Commission. (2001). Green paper – *Promoting a European framework for corporate social responsibility*. COM(2001) 366. <https://eur-lex.europa.eu>.
- European Commission (2002). Communication from the Commission concerning Corporate Social Responsibility: A Business Contribution to Sustainable Development. COM, 347. <https://eur-lex.europa.eu>.
- European commission (2019). European Green Deal. COM, 640. <https://eur-lex.europa.eu>.
- Falchi, A., Grolleau, G., Mzoughi, N. (2022). Why companies might under-communicate their efforts for sustainable development and what can be done? *Business Strategy and the Environment*, 31(5): 1938-1946. <https://doi.org/10.1002/bse.2991>.
- He, Q., Wang, Z., Wang, G., Xie, J., & Chen, Z. (2022). The Dark Side of Environmental Sustainability in Projects: Unraveling Greenwashing Behaviors. *Project Management Journal*, 53, 349-466. <https://doi.org/10.1177/875697282111042705>.
- ISO 14001:2015. (2015). *Environmental management systems Requirements with guidance for use*. Geneva: International Organization for Standardization.
- ISO 26000:2010. (2010) *Guidance on social responsibility*. International Organization for Standardization, Switzerland.
- ISO 50001:2018. (2018). *Energy management systems. Requirements with guidance for use*. Geneva: International Organization for Standardization.
- ISO 37001:2016. (2016) *Anti-bribery management systems. Requirements with guidance for use*. Geneva: International Organization for Standardization.
- ISO 37101:2016. (2016) *Sustainable development in communities. Management system for sustainable development. Requirements with guidance for use*. Geneva: International Organization for Standardization.
- ISO 20400:2017. (2016). *Sustainable procurement. Guidance*. Geneva: International Organization for Standardization.
- ISO 21500:2021. (2021). *Project, programme and portfolio management. Context and concepts*. Geneva: International Organization for Standardization.
- Khalili N. (2015). From cleaner production to sustainable development: the role of Academia. *Journal of Cleaner Production* 96, 30-43. DOI:10.1016/j.jclepro.2014.01.099.
- Kyriakogkonas, P., Garefalakis, A., Pappa, E. and Kagiias, P. (2022). Sustainable Project Management under the Light of ESG Criteria: A Theoretical Approach. *Theoretical Economics Letters*, 12, 1517-1538. doi: 10.4236/tel.2022.126083.
- Managing successful projects with PRINCE2®. Sixth edition (2017). London: AXELOS..
- Meadows, D.H. Meadows, D.L., Randers, J. (1973). *Granicie Wzrostu* [Limits to Growth]. Warszawa: PWE.
- Moehler, R., Hope, A., & Algeo, C. (2018). Sustainable Project Management: Revolution or Evolution? *Academy of Management Proceedings*, 13583. <https://doi.org/10.5465/AMBPP.2018.13583abstract>
- Nilsson, L., Persson, P., Rydén, L., Darozhka, S., Zaliauskiene, A. (2007). *Cleaner Production – Technologies and Tools for Resource Efficient Production*. Baltic University Press, Stockholm. <https://www.diva-portal.org/smash/get/diva2:604269/FULL-TEXT01.pdf>
- Organization for Standardization (ISO). (2017). ISO 21500:2017 - Guidance on project management. ISO.
- Pirnea, I.C., Olaru, M., Moisa, C. (2011). Relationship between corporate social responsibility and social sustainability. *Economy Transdisciplinarity Cognition*, 14(1): 36-43.
- Project Management Institute (PMI). (2017). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (6th ed.)*. Project Management Institute.
- Scharmer, O. (2022), Transforming our economies from ego to eco. *Earth4All project*. <https://www.clubofrome.org/publication/earth4all-scharmer/> (accessed on: 18.08.2023).
- Potochnik, J., Wijkman, A., Okatz, J., O'Connor, S., Nohl, R. (2022). From 'greening' the present system to real transformation – transforming resource use for human wellbeing and planetary stability. *Earth4All project*. <https://www.clubofrome.org/publication/earth4all-potochnik/> (accessed on: 18.08.2023).
- Silvius, G., Silvius, Schipper, R., Planko, J. (2012). *Sustainability in Project Management*. Surrey, UK: Gower Publishing, Ltd.
- UNCSD. (2012). *The Future We Want*. Report of the United Nation Conference on Sustainable Development. Rio de Janeiro. [http://www.un.org/ga-search/view\\_doc.asp?symbol=A/RES/66/288&Lang=E](http://www.un.org/ga-search/view_doc.asp?symbol=A/RES/66/288&Lang=E) (access on: 18.08.2023).
- UNIDO. (2015). *National Cleaner Production Centres. 20 Years of Achievement*. [https://www.unido.org/sites/default/files/2015-10/NCPC\\_20\\_years\\_0.pdf](https://www.unido.org/sites/default/files/2015-10/NCPC_20_years_0.pdf)
- United Nations. (2015). *A/RES/70/1 – Transforming our world: the 2030 Agenda for Sustainable Development*. <https://sdgs.un.org/2030agenda>.

- United Nations. (1970). *The Problems of the Human Environment. Report of the Secretary General*, August 21, 1970, doc. A/8037. <https://digitallibrary.un.org> (access on: 18.08.2023).
- United Nations. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. <http://www.un-documents.net/wced-ocf.htm> (access on: 18.08.2023).
- United Nations. (1993). *Report of the United Nations Conference on Environment and Development*. Rio de Janeiro, 3-14 June 1992. <https://www.un.org/esa/dsd/agenda21/Agenda%2021.pdf> (access on: 18.08.2023).
- Wang, Q, Li, H., Li, Y., Liu, J. (2023). How Do Perceived Regulations Influence Environmentally Sustainable Project Management? The Mediating Role of Commitment and Moderating Role of Triple Constraint. *Buildings*, 13(4):955. <https://doi.org/10.3390/buildings13040955>
- Visser, W. (2010). *CSR 2.0. The future of corporate social responsibility*. [www.csrinternational.org](http://www.csrinternational.org)
- Visser, W. (2014). *CSR 2.0. Transforming Corporate Sustainability and Responsibility*. London; New York: Springer.
- Zakrzewska, M. (2022). Sustainable project management concept development and research directions review. *Organizacja i Zarządzanie*, 157, 699-721.