State of non-financial reporting of polish representatives of the mining industry in a sustainable social dimension

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Abstract. An important problem faced by mining enterprises is the impact of their activities on the natural environment, as well as on the health and life of people. The exploitation of mineral deposits leads to changes in land relief, degradation of soil and lands, damage to vegetation, hydrogeological and hydrological transformations and atmosphere pollution. Nevertheless, perceiving mines only in terms of the damage resulting from the exploitation is unfair. Therefore, the article presents three Polish representatives of the mining industry in the context of the requirements they have met, acting in accordance with the principles of sustainable development. Selection of KGHM Polska Miedź S.A. (copper ores and other accompanying elements), Lubelski Węgiel Bogdanka S.A. (hard coal) and the Capital Group Polska Grupa Energetyczna S.A. - Mining and Conventional Energy S.A. (lignite), dictated by their significant share in the mining industry in Poland. The article lists and groups aspects related to the society both in terms of working conditions and the relationship of companies with the local community. The analysis of aspects resulted from a detailed study of reports of integrated mining companies prepared annually, in accordance with the guidelines of global corporate social responsibility standards. The benefits resulting from the care of enterprises for the society in the region of their activity were specified, and furthermore, aspects which are omitted, and according to the article authors should be included in reports, were indicated.

1. Introduction

According to the report of the World Commission on Environment and Development "Our Common Future" of 1987, a sustainable development is understood as a process of changes which ensures satisfying the needs of present generation without a negative impact on the development capabilities of future generations, i.e. by means of integrated activities in the field of economic, social and environmental development. Very similar interpretation of integrated economic, social and environmental objectives in the mining sector can be found in Munduli and Barve [1]. The authors of the article have developed a framework for sustainable development for Indian mining enterprises. Regarding sustainable mining in the world, literature has been written [2-5] interpreting the principles of sustainable development in the context of the mining industry and presenting guidelines for mining enterprises wishing to operate in a sustainable manner. In order to contribute to sustainable development, a mine is obliged to minimize the impact on the environment throughout the entire life cycle, from search initiation to reclamation [2]. While reviewing the Polish literature which addresses this matter, one may read about the implementation of these issues in the context of mining
development as a key to the protection of raw materials and energy, as regards economic growth, conservation of natural resources and the environment as well as social responsibility [6]. In numerous studies, the role of sustainable development by combining these concepts with corporate social responsibility (CSR) is emphasized [7 - 13].

Integrated reporting is closely related to broadly understood concepts, i.e. the policy of sustainable development, socially responsible business and industry concepts that have recently become popular, including responsible mining [14, 15]. Reporting of non-financial data in domestic conditions is of particular importance, as in accordance with the Accounting Act of 15 December 2016, which implemented Directive 2014/95/EU. At the beginning of 2017, the presentation of non-financial data (E - Environment, S - Social, G - Governance) became an obligation of entities meeting the criteria of the number of employees (500 people for public interest entities under the Directive to expand non-financial information) and total amounts on the balance sheet (> EUR 20 million) or net income (> EUR 40 million) — and this refers to the discussed companies as well. Combination of the financial statements with the non-financial data report has generated the product in the form of an integrated report by means of which an entrepreneur communicates with the environment (various stakeholder groups) and proves that he has nothing to hide, which raises public confidence [16, 17].

According to CSR principles, integrated reporting is one of the steps needed to improve the image of enterprises of strategic importance in the domestic economy; it favours better relations between companies and employees, local community and state administration at various levels. It is a dynamic process based on a number of guidelines and standards that have been shifting over the years, including GRI guidelines, ISO 14001 and ISO 26000 standards.

Sustainable development in the mining industry has become a challenge not for the mining investors [18, 19, 20]. The article aims to answer the question of how the mining industry, negatively perceived by public opinion, struggles with stereotypes and aspires to become an environmentally friendly and socially responsible sector.

2. Materials and Methods
The companies taken into account are joint-stock companies listed on the Warsaw Stock Exchange (WSE). They create industry indices, that reflect the situation of particular branches of the economy in Poland LW Bogdanka and KGHM belong to the national stock exchange index WIG-GÓRNICTWO (WSE – Mining), while PGE is part of the WIG-ENERGIA (WSE – Energy) portfolio. Moreover, all entities create the RESPECT Index (RI), which was the first in Central and Eastern Europe to be established in Poland and it associates companies managed in a responsible and sustainable manner. It was launched at the end of 2009 (1st edition; it involved 16 companies at that time) and its purpose is to assess the economic situation of Polish companies with the highest rating, listed on the domestic regulated market of the Warsaw Stock Exchange. This assessment includes the first economic stage (a selection of entities with the highest financial liquidity) and the second stage (an assessment of practices in the field of corporate governance, information governance and investor relations). The third stage is the verification of the entity's initiatives addressed to stakeholder groups. Last, the assessment stage takes the form of a survey completed by companies, which is audited by an external company (the ecological and social areas of the company's activities), which corresponds to the idea of a socially responsible business (CSR).

Invariably from the beginning of the ratings (11 editions), KGHM P.M. S.A. has been participating in the creation of RI value, constituting approx. 10% share in the index portfolio. PGE SA Capital Group has been building the value of RI portfolio invariably since 2011 (approx. 8%), while LW Bogdanka S.A. (0.64%) made its debut in RI ratings in the 2nd edition and except for the one-year interval (edition 7) it is currently one of the 24 companies that form the index.
The basic materials for the detailed analysis of the analysis were the companies' reports (integrated reports), prepared in accordance with the guidelines of global standards Global Reporting Initiative - GRI G4 [21]. Some additional environmental pieces of information are taken from the document “Environmental protection policy” in PGE. When analysing the reports of the aforementioned companies, the focus was placed on the latest documents describing the activities of companies in 2015, 2016 and 2017 [22-29]. Reports on business activity from earlier years were less comprehensive, smaller in terms of volume and contained only some references to GRI rules, on top of which there was no clear description of indicators.

In addition, the materials available on the websites of companies have been analysed, paying particular attention to issues related to their activities affecting the society in the context of sustainable development. The scope of reported social and environmental non-financial indicators and their values or quality was examined. Although there are four social subcategories among the standards, i.e. employment and decent work (LA), human rights (HR), society (SO) and product liability (PR), the analysis concerns only the area that is common to all entities. These include: the total number of newly employed employees, the dynamics of leaving and the fluctuation index, the determinant of work safety, employee training and other social activities described in chapter 3.

3. Results
3.1. Analysis of integrated reports from the environmental and social perspective
As a result of the conducted analysis of integrated reports, the scope of implementation of environmental and social indicators by selected mining companies was compared. The number of indicators included in the reports of integrated companies published in the last three years is presented in Table 1.

| Concern | KGHM 2015 | KGHM 2016 | KGHM 2017 | KGHM 2018 | KGHM 2019 | LW BOGDANKA 2015 | LW BOGDANKA 2016 | LW BOGDANKA 2017 | PGE 2015 | PGE 2016 | PGE 2017 |
|---------|-----------|-----------|-----------|-----------|-----------|------------------|------------------|------------------|----------|----------|----------|
| Environmental | 16 | 16 | 16 | 15 | 14 | 4 | 26 | 26 | 22 | 6 | 5 | 7 |
| Social | 15 | 16 | 14 | 8 | 7 | 7 | 30 | 30 | 30 | 10 | 8 | 12 |
| Industry | 3 | 4 | 4 | 4 | 5 | 3 | 11 | 11 | X | 0 | 0 | 0 |

Based on the data contained in the table above, it can be stated that LW Bogdanka did not change the number and scope of indicators in reports in 2015-2016 (the report for 2017 was prepared according to new guidelines GRI Standards), KGHM PM noted changes in case of single indices, while KGHM International resigned from reporting over 10 indicators in 2017 compared to previous years. This applies mainly to environmental indicators, including indicators indicating significant spills (EN24), fines (EN29) or a number of grievances (EN34). The lack of the data mentioned may be related to the lack of an undesirable phenomenon in question. It is also worth mentioning that the form of reporting in the latest KGHM study is imprecise. In the report for 2017, as it has been the case before, there is a table at the end of the report with reported indicators for both KGHM Polska Miedź and KGHM International. However, it is inconsistent with the content of the entire report, in which indicators are included that are not included in the summary table. This results in the fact that the
synthetic presentation of data, instead of facilitating the reception by summarizing the presented content, is misleading because of its incompleteness. In the case of PGE, in 2017, several environmental (EN8, EN29) and social (LA11, SO3, SO4 and PR8) indicators were supplemented. When comparing the integrated reports of the analysed companies for 2015 and 2016, it was noticed that in 2016 the following indicators did not appear in the reports: E29 (PGE), E9 and E10 (KGHM) which occurred a year earlier – environmental category, and LA10 (KGHM INTERNATIONAL LTD.), LA11 (PGE), LA12 (KGHM), SO3, SO5 (KGHM INTERNATIONAL LTD.) – social category. Indicators completed in 2016 were also identified, and these included LA5 (KGHM PM), HR2 (PGE), SO6 (KGHM INTERNATIONAL LTD.), SO8 (KGHM PM), EU28 (PGE), whilst the industry indicator MM6 in the KGHM report was also supplemented.

A detailed list of environmental, social and sector-specific indicators can be found in [30] the nomenclature, including all indicator symbols that will be compliant with GRI G4 guidelines [21, 31].

3.2 Analysis of selected indicators – the social aspect

CSR viewed from the social perspective was defined in the literature as voluntary corporate activities (subsidies from the budget), targeted at improving the social conditions of various groups of stakeholders [32, 33].

The classification of social indicators includes four sub-categories: hiring and decent work practices (LA), human rights (HR), society (SO) and product responsibility (PR). Detailed analyses involved the values of only those indicators that were included in the reports of all three companies, and the method of their presentation enabled the performed comparison. The first discussed indicator is the total number of newly hired employees, departures and the fluctuation indicator (LA1), with changes in employment presented jointly without division into groups. In terms of CSR, employees are the target group of stakeholders.

Social data (Figure 1) relates to the activities of companies only from 2015 - 2016. The latest data for 2017 for some companies the data is difficult to verify due to the inconsistency of the information presented in relation to previous years.

![Figure 1. Total number of employees (own study based on the report of KGHM, LW Bogdanka, PGE [22-29])](image)
Before analysing the value of the indicator, the number of employees of the three capital groups from the mining sector was compared (Figure 3). Out of the three entities, KGHM Group employs the largest number of people. People working at KGHM Polska Miedź S.A constitute about 54% of all employees. In the case of LW Bogdanka Group, about 85% of employees work in the mine, and about 56% of the total number of employees of the PGE Group work at PGE Górnictwo i Energetyka Konwencjonalna. Further comparisons will concern only those companies whose activities are related to mining and processing of minerals. The number of newly hired employees is illustrated in Figure 2.

![Figure 2. Number of newly hired employees (own study based on the report of KGHM, LW Bogdanka, PGE [22-29])](image)

As indicated above, in KGHM PM and LW Bogdanka the number of newly hired employees increased in 2016 in comparison to 2015. On the other hand, PGE Górnictwo i Energetyka Konwencjonalna employed almost three times less people at the same time. The number of new employees in KGHM PM amounts to 5.3% in relation to all employees, 1.6% in LW Bogdanka and 0.7% in PGE Górnictwo i Energetyka Konwencjonalna.

Departures affect changes in the number of personnel (Figure 3). In 2016, an increase in departures in KGHM PM was noted in comparison to the previous year, while in the other two companies discussed a decrease in departed employees was observed. Correspondingly, in the case of the three companies, the percentage of employees who left their jobs accounted for 5.0% of the total labour force in KGHM PM, 3.6% in case of LW Bogdanka and 4.2% in PGE Górnictwo i Energetyka Konwencjonalna respectively. As indicated above, KGHM PM is the most stable company in terms of employee fluctuation (staff liquidity), where the number of people leaving the company and new employees remains at a similar level.
Yet another indicator which was subject to the analysis concerns occupational health and safety. The incidence rate indicator (calculated according to the formula: number of accidents / 1 thousand employees) may be assumed as the determinant of work safety status. The change in the value of such an indicator has been presented on the chart of Figure 4.

Figure 4. The incidence rate indicator* (own study based on the report of KGHM, LW Bogdanka, PGE [22-29])

* the values for KGHM PM and LW Bogdanka stem directly from the integrated reports, for PGE GiEK the values are estimated

Companies operating underground are characterized by higher accident rates. This was confirmed by the data provided in the integrated reports. Both in KGHM PM and in LW Bogdanka, the incidence rate is higher than in case of PGE Górnictwo i Energetyka Konwencjonalna, and in 2016 it increased slightly.
Another LA9 indicator refers to the number of training hours per year per one employee (investment in human resources); the total number of hours (excluding the employment structure and gender) is shown in Figure 5.

![Figure 5. Total number of training hours (own study based on the report of KGHM, LW Bogdanka, PGE [22-29])](image)

The greatest amount of training hours in total occurred in KGHM PM, namely 31.45 hours on average per one employee. In LW Bogdanka, there were 16.58 training hours per one employee per year, and at PGE Górnictwo i Energetyka Konwencjonalna - 7.76 hours in 2016.

At KGHM PM and LW Bogdanka, the changes were small (<1%). Whereas in PGE GiEK in 2016, compared to the previous year, the number of hours allocated for training increased by over 30%.

Employees of the aforementioned entities obtain special benefits, such as additional medical care (enhancing health care) (PGE, KGHM) and meetings for employees aimed at health education and cancer prevention (PGE), additional retirement benefits (PGE, KGHM), electrical energy subsidies (PGE) or additional life insurance (PGE, KGHM, INTERNATIONAL LTD). The basic group of beneficiaries for social benefits is extended to include family members of employees.

With regard to social activities conducted by the discussed enterprises, philanthropic activity is at the forefront, involving running a foundation that supports various projects. An important form of social activity is multi-directional volunteering, which has become more attractive among the employees of: PGE - "Pomagamy" foundation, LWB – "Solidarni Górnicy" foundation, as well as the KGHM PM Foundation. It is certainly a multidirectional advantage due to the fact that entrepreneurs partially grant financial support to these initiatives (expenses), volunteers (including employees) can express themselves through helping people in need, and the beneficiaries of this help feel grateful and appreciated. An example of such initiatives is a project whose aim is to help employees whose children begin their school education and ones who need financial support for this purpose. PGE (in polish Energetyczny Tornister eng. energy school bag), LW Bogdanka (in polish Tornister Pełen Uśmiechów eng. Schoolbag full of smiles) as well as KGHM (in polish Ołówkowe eng. school layette) are involved in such programs. Support for social issues is implemented through a variety of assistance tools, including financing of treatment, rehabilitation and medical equipment for former and current mine employees, as well as employees of companies, who work in mines, as well as their families.
In addition, all entities engage in sport sponsorship of e.g. local clubs. PGE is the title sponsor of the Speedway PGE Extra League. For many years, the company has been cooperating with professional teams, including PGE Skra Belchatów (volleyball), PGE Turów Zgorzelec (basketball) and PGE GKS Belchatów (football). Polska Grupa Energetyczna became a title partner (in mid-2017 - a one year contract) of PGE Vive Kielce, the most recognized Polish handball club. What is more, one of the key sponsorship projects of PGE Group since July 2015 has been the title sponsorship of the most modern multi-functional arena in Poland - PGE Narodowy. PGE sponsors both successful clubs with rich traditions as well as individual sportsmen, whilst at the same time getting involved in sponsoring cultural events. LWB is the main sponsor of the Górnik Łęczna football club (extra league) and cooperates in the field of multidisciplinary development of the Academy of Sport. KGHM supports both professional as well as amateur sports. These include the football club Zagłębie Lubin, the volleyball team MKS Cuprum Lubin, three handball teams (MKS Zagłębie Lubin, SPR Chrobry Głogów and MSPR Siódmeka Legnica) and Polish tennis players Łukasz Kubot and Michał Przysiężny. KGHM organizes and supports sports events, including Bieg Piastów (Gears of the Piasts) in Jakuszyce. The following institutions were in the group of the beneficiaries of the KGHM Foundation in 2016: Interschool Sports Club "Piast" Głogów, Interschool Sports Club "Orlik" Przemków, Association of Basketball Lovers in Lubin, Sports Club "Konfeks" Legnica and many others.

Both KGHM and PGE are involved in sponsoring various cultural events. All the aforesaid activities of the entities are the reflection of their integration with the local environment.

4. Conclusions

Companies involved in mining operations directly interfere with the natural environment. About geotechnical problems in KGHM from the point of view of mining safety can be found in [34, 35, 36] or in [37] work on compliance with health and safety at work rules. Their sustainable development can be realized, among others, through their socio-environmental initiatives. Integrated reports oblige "large entrepreneurs" to additionally report non-financial data and search for the forms of activity that could be beneficial for the environment and the society. Based on the analysis of integrated reports submitted by KGHM, PGE and LW Bogdanka, it is possible to distinguish which environmental and social aspects are convergent for these entities (in accordance with GRI guidelines). Who is the national leader in environmental activities (LWB 26 out of 34 indicators included in the integrated report), and who is involved in the initiatives for the employees and the local community (all analysed companies). Thus, the activities, which prove that a given company is a reliable employer (number of employees and their rotation) investing in the development of its personnel (trainings) associating them as part of the activities of its foundation and voluntary work, were articulated. The article focuses on active social assistance combined with philanthropic activities. As practice shows, all mining companies engage in foundation projects, and thus, support various groups of stakeholders, i.e. personnel – a time of volunteer work and a specific group of direct beneficiaries - these are the recipients who receive this type of assistance. All these companies are involved in sports sponsorship dedicated to a broader group of stakeholders, i.e. sportsmen and club activists constitute a group of direct stakeholders, another group of recipients being the community (not only local), among whom one may note sponsors' own employees (those passionate about sports events). Activities in the scope of CSR in the social dimension involve voluntary actions performed for the purpose of improving the living conditions of various groups of stakeholders. The affiliation of companies to the national RI stock index is an expression of these initiatives. According to the authors, the knowledge about the additional activities of mining companies may contribute to a change of the perception of the mining industry by communities not directly related to the functioning of the mining plant, as well as lead to an increase of the loyalty of their employees, stakeholders and customers [38, 39].
To sum up, to gather complete information about companies, it is necessary: 1. Clear and consistent presentation of the company, so that the content is not misleading, and that it is possible to compare the information in reports made available in subsequent years in an accessible manner. 2. Indicators referring to undesired phenomena in reports should appear in information, even when they do not occur. Based on the analysed examples, it was concluded that there are no consequences in this respect. 3. Reporting of indicators listed in the GRI guidelines in the mining industry is not justified in the full scope as noted in the paper [12]. Paying attention to this in the published reports would be facilitation for each group of stakeholders.

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