

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/324173070>

Environmental rating of oil and gas companies in Russia: How assessment affects environmental transparency and performance

Article in *Business Strategy and the Environment* · November 2018

DOI: 10.1102/bse.2049

CITATIONS

13

READS

1,466

4 authors, including:



Evgeny A Shvarts

Institute of Geography of the Russian Academy of Sciences

75 PUBLICATIONS 527 CITATIONS

[SEE PROFILE](#)



Alexander Pakhalov

Lomonosov Moscow State University

27 PUBLICATIONS 70 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Environmental ratings of extractive industries in Russia and its dynamics [View project](#)



Financial Advocacy in Nature Conservation [View project](#)

Environmental rating of oil and gas companies in Russia: How assessment affects environmental transparency and performance

E. Shvarts¹  | A. Pakhalov² | A. Knizhnikov¹ | L. Ametistova¹

¹World Wide Fund for Nature (WWF) Russia, Moscow, Russia

²Faculty of Economics, Lomonosov Moscow State University, Moscow, Russia

Correspondence

Evgeny Shvarts, World Wide Fund for Nature (WWF) Russia, Nikoloyamskaya str., 19, bld 3, 109240, Moscow, Russia.

Email: eshvarts@wwf.ru

Funding information

advisory CREON Group, Grant/Award Number: RU013105; the GEF/UNDP/Russian Ministry of Nature Resources and Ecology Project "Mainstreaming biodiversity conservation into Russia's energy sector policies and operations", Grant/Award Number: RU013208; WWF Netherlands, Grant/Award Number: NL - 9Z1428

Abstract

The article discusses the evolution and current state of transparency of environmental performance data in the Russian Oil and Gas sector. We build upon our first-hand experience in a transparent, publicly available information and third-party-verified rating system. Based on 2014–16 successive annual ratings, we conclude that implementing “soft” responsibility mechanisms can improve environmental responsibility standards and transparency in the oil and gas industry. At the same time, in terms of improving environmental performance of oil and gas companies it is reasonable to assume an emerging trend. Its full realization will require (1) longer rating time, including that for public exposure to misleading environmental performance information and the use of poorly verified nonfinancial reporting; (2) application of independent analysis of satellite monitoring information to the professional audit and public verification of nonfinancial reporting; and (3) sophistication of guidelines for professional audit and public verification of nonfinancial reports.

KEYWORDS

environmental impact, environmental management, environmental responsibility, information disclosure, rating, Russian oil and gas industry

1 | INTRODUCTION

Russia is the second largest producer of natural gas globally and the third largest producer of liquid hydrocarbons, after the United States and Saudi Arabia (U.S. Energy Information Administration, 2017). Although the oil and gas (O&G) sector is responsible for about 58.1% (69.5% in 2014) of the value of Russian exports (Federal Custom Service, 2017), none of the Russian companies was evaluated as “Sample of the best-in-class companies from the mining, O&G industries” in the global study by Raufflet, Barin Cruz, and Bres (2014).

Contemporary environmental regulatory tools draw on a combination of “hard” mandatory regulatory measures imposed by the government and “soft” voluntary commitments to environmental responsibility standards adopted by companies (Prakash & Kollman, 2004). Mandatory regulatory requirements aim to cut off the most irresponsible companies, but do very little to create incentive for better performing businesses. Under such conditions companies opt to adopt the minimum requirements, but are reluctant to go beyond legality and become more sustainable (Prakash, 2001). At the same time, some industries choose to adopt voluntary environmental

standards, which they believe will increase their competitive advantage in environmentally sensitive markets and afford access to longer-term and affordable sources of finance (Prakash & Potoski, 2012; Trumpp & Guenther, 2017; van Beurden & Gössling, 2008).

The rate of adoption of voluntary standards varies across economic sectors (Delgado-Márquez & Pedauga, 2017; Guenther, Hoppe, & Poser, 2006; E. Shvarts, Bunina, & Knizhnikov, 2015). Significant differences have been observed among industries representing so-called “soft commodities” (timber, pulp and paper, marine bioresources, aquaculture, beef, palm oil, etc.) and the O&G industry (Ranängen & Zobel, 2014). Oil and gas are less sensitive than other economic sectors because before oil prices collapsed by 50% in 2014, the O&G market was mainly a “seller's market” if compared with the “consumer market” of “soft commodities.” In 2016, competition between O&G companies with other sources of fuel and energy became stricter and the environment responsibility of O&G producers began to have potential competitive advantage.

During the 2000s, high oil prices were a key factor in Russia's economic development. Russian O&G companies are actively involved in international trade (over 70% of O&G is exported). Moreover, 60%

of Russian oil and 90% of gas are supplied to European Union (EU) countries, making this industry highly dependent on European demand (Paillard, 2010). Some O&G companies with large production volumes (Rosneft, Gazprom Neft, Gazprom, Zarubezhneft) are owned by the government. The largest of these companies, facing weak pressure from civil society, had utilized their state-owned status to avoid meeting requirements related to the transparency and environmental responsibility of their operations, including a shift to production of Euro-4 and Euro-5 environmental standards gasoline and utilization of associated petroleum gas (APG).

After the reduction in oil prices, improving environmental responsibility is even more important for companies, as it helps them to improve their public image and attract more environmentally sensitive institutional investors. Therefore, improving environmental standards and transparency in the O&G industry through implementing “soft” responsibility mechanisms is a critical task aimed at reducing environmental risks.

The O&G sector lacks certification schemes like those currently in use in “soft commodities” sectors, such as the Forest Stewardship Council (FSC) system in forestry, the Marine Stewardship Council (MSC) certification for marine bioresources and the Aquaculture Stewardship Council (ASC) certification in aquaculture. Major sustainable development frameworks, such as the UN Global Compact (UNGC), OECD Principles for Corporate Governance, International Council on Mining and Metals (ICMM) principles for sustainable development and the Global Reporting Initiative (GRI), Integrated Reporting (Berliner & Prakash, 2012; Moran, Lodhia, Kunz, & Huisin, 2014; Raufflet et al., 2014), are far more general and provide less accountability—with the possible exception of GRI—and do not provide direct and simple communication with consumers and supply chain business partners. For UNGC it was demonstrated that UNGC members sometimes tend to downplay their sustainability commitments: enjoying the benefits of program membership without making costly changes to their human rights and environmental practices (Berliner & Prakash, 2015).

The well-known Extractive Industries Transparency Initiative (EITI) is a global standard to promote open and accountable management and seeks to address the key governance issues of the oil, gas and mining sectors (Van Alstine, 2017). At the same time, many developed countries with significant extractives sectors, such as the USA (withdrew in October 2017), Canada, Australia, Chile, many European countries (excluding Norway, UK and Germany) are not EITI members. At least partly for this reason, major economically emerging countries (all BRICS countries including Russia) consider it politically unacceptable to become EITI members in contrast to less developed African, Asian and Central and South American countries.¹ State-owned companies are trying to avoid participation in EITI if their owning state is not an EITI member. Post-Soviet countries with significant shares of extractive industries in their economics (Azerbaijan, Kazakhstan) have problems with EITI implementation (Öge, 2017; Wilson & Van Alstine, 2014): Azerbaijan decided to withdraw from EITI in March 2017 following the EITI Board's decision to suspend the country. There are

also problems and difficulties in EITI implementation in Kazakhstan (Öge, 2017; Vakulchuk & Overland, 2018). Positive influences of EITI on environmental transparency is limited, especially in major emerging countries such as Russia.

Ratings and rankings by third-party evaluators are becoming an increasingly important tool for improving corporate environmental performance (Kelley & Simmons, 2015). This approach was widely implemented in the financial industry toward potential investment recipients, as it is in a unique position to move corporations toward corporate sustainability (Delmas & Blass, 2010; Koellner, Weber, Fenchel, & Scholz, 2005). An important finding was that ratings may generate diffuse or spillover effects even among unrated firms. An increase in the number of peer companies being rated is often associated with reductions in greenhouse gases (GHGs) and pollutant emissions (Sharkey & Bromley, 2015). Environmental, social and governance (ESG) rating agencies have emerged in response to the needs of responsible investing actors for reliable data on the performance of firms (Avetisyan & Hockerts, 2017). There have been some attempts to use various Sustainability Indices (Searcy & Elkhawas, 2012) and Green Ratings (Gupta & Goldar, 2005; Powers, Blackman, Lyon, & Narain, 2011) to encourage “good corporate citizens” that act above formal state requirements, often to pursue a competitive advantage, and to push “bad corporate citizens” to meet mandatory environmental standards. Several developing countries have launched public disclosure programs, including China, Philippines and Indonesia (Blackman, 2010; García, Sterner, & Afsah, 2007; Wang et al., 2004). Studies show that these programs have reduced the percentage of firms that are not complying with environmental regulations.

Ratings and scorecards proved to be an effective soft tool to (1) increase transparency and (2) improve production and operations standards and practices for a range of soft commodities, including timber, soy and palm oil (e.g., Walker, Patel, & Kalif, 2013). Because the scorecards dealt mostly with fast moving consumer goods (FMCGs) and retail sectors, which are widely exposed to consumer pressure, this tool showed rapid and tangible improvements. However, extractive industries have so far remained a *terra incognita* for such mechanisms, and their effectiveness here has yet to be investigated more deeply. The ranking approach was already implemented for oil, gas and mining companies on indigenous rights in the Arctic (Overland, 2016). In addition, multicriteria indicators for Sustainability Ratings in suppliers of O&G industries have been developed for Brazil (Barata et al., 2014).

Progress has been made in the development and implementation of voluntary environmental responsibility standards for mining and extractive industries (Hilson, 2012; Lodhia & Hess, 2014; Moran et al., 2014). However, these studies deal with O&G companies mainly in developed countries, with only Brazil (Raufflet et al., 2014), Nigeria (Odera, Scott, & Gow, 2016), Kazakhstan (Mahmood & Orazalin, 2017) and Mexico representing the developing world. In contrast to developed countries, firms in developing countries perceive relatively little pressure from the public with regards to corporate social responsibility disclosure (Ali, Frynas, & Mahmood, 2017; Henry, Nysten-Haarala, Tulaeva, & Tysiachniouk, 2016). Current representation of western companies such as BP and Shell as corporate social responsibility “world leaders,” and Asian state-owned oil companies as “bottom

¹E.A.S.'s consultations with Russia G20 Sherpa and Ministry of Foreign Affairs during Russia G20 Chairmanship in 2013.

feeders" (Pegg, 2012) may increase the significance of the best international voluntary environmental standards as a benchmark for fair global competition in environmental responsibility. However, the case of the BP Deepwater Horizon oil spill in the Gulf of Mexico does not support the above-mentioned statement (Matejek & Gössling, 2014). Another example is the Russian Surgutneftegaz Oil Company (no foreign shareholders), which demonstrates the highest score in environment responsibility among companies in Russia (E. A. Shvarts, Knizhnikov, Pakhalov, & Kilzie, 2015; E. A. Shvarts, Pakhalov, & Knizhnikov, 2016). This example suggests that some of the national players in emerging economies may repeatedly demonstrate high levels of environmental performance. Theoretically, international environmental responsibility standards should close the gap in environmental responsibility implementation between companies from different countries and regions facing varying levels of mandatory legal requirements.

This article is aiming to test two research hypotheses:

Hypothesis 1: *Environmental ratings could be effectively used to increase transparency and improve environmental performance in a wider range of contexts and sectors, including sectors not widely exposed to consumer pressure (i.e., soft commodities and FMCGs), than previously believed.*

Hypothesis 2: *Wider proliferation and application of international voluntary environmental standards and ratings in emerging economies could potentially create disincentives for those Foreign Direct Investments (FDIs) which seek to invest in "pollution havens" (Copeland & Taylor, 1994; Copeland & Taylor, 2004).*

We have previously developed a ratings method for the environmental responsibility of O&G companies, implemented for companies acting in Russia (E. Shvarts, Bunina, et al., 2015; E. A. Shvarts et al., 2016). The following three research questions were posed:

Question 1: Can voluntary mechanisms based on international environmental responsibility standards have a significant impact on the O&G sector, comparable to the influence of international voluntary standards applied to soft commodities (timber, marine biological resources, aquaculture, palm oil, soy, etc.)?

Question 2: Are there significant differences in levels of environmental responsibility between different types of oil companies depending on their ownership status (state owned vs. privately owned)?

Question 3: Are there significant differences in levels of environmental responsibility between oil companies depending on the degree of their internationalization (Russian ownership and capital vs. international/foreign ownership and investors)?

In our previous publication (E. A. Shvarts et al., 2016) it was difficult to objectively verify and test such research questions with data and experience of environmental responsibility rating results for only one year (2014 rating on data for 2013). The current article is devoted to verification of those hypotheses and questions on the basis of 3-

year dynamics of the rating data and results (2014–2016), which should provide more definite answers.

2 | RATING METHOD

There were two phases to the development of the rating method: Phase 1 (2005), choose what is important from an environmental point of view; and Phase 2 (2013–2016), how to evaluate it. The rating criteria are based on the Environmental Standards for Operations of O&G Companies Acting in Russia developed in 2005 during Phase 1. The document was created by a coalition of nongovernmental environmental organizations and experts as a common environmental public standard for improvement of O&G companies' environmental policies, procedures and practices. During the last decade, this public document has played an important role in establishing and improving corporate environmental policies of Russian O&G companies. International O&G companies operating in Russia are well acquainted with this document as well.

Phase 2 of the rating method development was exercised by WWF Russia in 2014 and is subject to continuous adjustments including feedback from the O&G companies (WWF Russia, 2016). The rating project was developed to green the O&G sector, introduce environmental practices in the scope of priorities of the O&G companies, and drive regulatory activities by the Russian governmental agencies (E. A. Shvarts et al., 2016; E. A. Shvarts, Knizhnikov, et al., 2015). At the time of writing, this is the only instrument in Russia allowing comparative assessment of the level of environmental transparency and practices of the largest O&G companies.

2.1 | Rated companies

Companies to be included in the rating were selected based on their volume of production. The lower limit was set at 1.5 million tons of oil equivalent. In 2015, 21 of the companies included in the rating produced 96% of the total oil and condensate in Russia. Table 1 details company names, estimated hydrocarbon production volumes (million tons of oil equivalent), stock exchange listings, information on foreign shareholders and whether the Russian state (or regional government) is a shareholder.

Some companies listed in Table 1 are shareholders of other companies in the same table (Gazprom owns Gazprom Neft and Sakhalin Energy; Gazprom Neft and Rosneft own Slavneft and Tomskneft VNK). All companies in Table 1 were reviewed and rated as independent entities, as they maintain their own corporate policies, including environmental and social responsibility policies, and are not under operational control of their shareholders.

2.2 | Rating approach

The rating criteria focus on topics which are usually underestimated by the industry's legal requirements and Russian corporate standards such as biodiversity protection, stakeholder engagement, zero leaks and oil spills, renewable energy use and so on. The rating also emphasizes transparency as the O&G gas industry in Russia is a historically closed community.

TABLE 1 Participants of the 2016 Environmental Responsibility Rating of Oil and Gas Companies in Russia

Company name	Publicly traded at stock exchange (yes/no)	Presence of foreign shareholders ⁸	Participation of the state (Russia and/or authorities of Russian regions) in share capital ⁹	Oil and gas condensate production volume (million tons, 2015)
Rosneft	Yes	Yes (BP)	Yes	190.9
Lukoil	Yes	No	No	86.6
Surgutneftegaz	Yes	No	No	61.4
Gazprom Neft	Yes	No	Yes	33.6
Tatneft	Yes	No	Yes	26.5
Bashneft	Yes	No	Yes ¹⁰	17.9
Slavneft	No	No	Yes	16.2
Gazprom	Yes	No	Yes	16.2
Tomskneft VNK	No	No	Yes	9.9
RussNeft	Yes	Yes (Glencore)	No	8.6
Exxon Neftegas Lmt	No	Yes (Exxon)	Yes ¹¹ (production sharing agreement (PSA) Sakhalin 1)	7.6
Neftisa-Belkamneft	No	No	No	6.9
Salym petroleum	No	Yes (Shell)	Yes	6.5
Sakhalin energy	No	Yes (Shell, Mitsui, Mitsubishi)	Yes (PSA Sakhalin-2)	5.3
NOVATEK	Yes	Yes (Total)	No	4.3
Irkutsk oil company (INK)	No	No	No	4
Zarubezhneft	No	No	Yes	3.2
Alliance-NNK	No	No	No	2.33
Arctic gas	No	No	Yes	1.97
Total E&P Russie	No	Yes (Total)	Yes ¹² (Kharyaga PSA)	1.48
Transneft	Yes	No	Yes	479 ¹³

Source: Company information, NRA estimates.

⁸Value is positive if the share of foreign investors is not less than 10%.

⁹Value is positive if the share of the state is not less than 10%.

¹⁰At the time of rating compilation, the main shareholder of Bashneft was a privately owned Sistema JSFC. In December 2014, Sistema JSFC and its subsidiaries transferred the controlling stake of Bashneft shares to the Russian Federation represented by the Federal Agency for State Property Management (Rosimushestvo) on the basis of Moscow City Arbitration Court ruling.

¹¹Exxon Neftegas Limited is the operator of the Sakhalin 1 international consortium project that comprised the following participants: Exxon Neftegas Limited—a subsidiary of U.S.-based ExxonMobil, Rosneft, acting via its affiliates RN-Astra and Sakhalinmorneftegas-Shelf; Japanese consortium SODECO and Indian state-owned oil company ONGC Videsh Ltd.

¹²Total E&P Russie is the operator of the Kharyaga PSA international consortium project that comprised the following participants: Total E&P Russie—a subsidiary of French-based Total, Statoil, Zarubezhneft and NNK (Nenets Oil Company).

¹³Oil transportation volume.

The rating method includes an assessment of 28 criteria, grouped into three sections: Environmental Management, Environmental Impact and Disclosure/Transparency.

Section 1 (Environmental Management). In most cases criteria in this section are significantly stricter than mandatory environmental regulations in Russia. These criteria correspond to the best global standards and practices in the O&G business.

Section 2 (Environmental Impact) evaluates the scale of O&G companies' impact on the environment (i.e., air, water and land resources) during project implementation. In most cases the criteria are based on components of official statistics on environmental protection. This section includes quantitative values that are transformed to a qualitative scale by comparing criteria to industry average indicators. The industry average indicators, when

not available from official sources, are calculated as an arithmetic mean of companies' values participating in the rating. For comparative analysis across the companies, the data are used per production unit (Table 2).

Section 3 (Disclosure/Transparency) evaluates the extent of companies' readiness to disclose information with respect to the environmental impact of their industrial activities.

The list of rating criteria was given in E. A. Shvarts et al. (2016, pp. 147–148) and the updated list of criteria is provided as an Appendix to this article.

The rating was calculated as follows. Companies were assigned color flags—Red, Yellow or Green—for each of the criteria. For Sections 1 and 3 color flags were assigned based on the following approach: “Yes”—green, “Partially” (e.g., some subsidiaries of the company

TABLE 2 Average criteria values for rated companies

Criterion	Number of companies used for average value calculations in 2015/2014	Average value for rated companies (2015 data)	Average value for rated companies (2014 data)
Specific gross emissions of air pollutants	14/13	2.09 kg/ton of oil equivalent	3.16 kg/ton of oil equivalent
Specific gross emissions of GHG	11/–	48.14	Not calculated
APG utilization rate	14/14	85.9%	84.88%
Specific volume of polluted water discharged to surface water bodies	13/12	0.05 m ³ /ton of oil equivalent	0.001 m ³ /ton of oil equivalent
Fresh water withdrawal	14/13	1.85 m ³ /ton of oil equivalent	1.04 m ³ /ton of oil equivalent
Ratio of annual waste generation volume to annual waste management volume (managed = utilized + decontaminated by the company + transferred to third parties)	13/13	0.84	0.65
Polluted land area ratio for beginning and end of the reporting year	12/10	0.17	0.18
Specific pipeline leaks rate	13/10	22.9 leaks per 1000 km of pipeline	41.46 leaks per 1000 km of pipeline
Specific amount of oil, condensate and oil products spilled as result of accidents and leaks	14/10	0.06 kg/ton of oil equivalent	0.0015 kg/ton of oil equivalent
Share of excess charges in total payments for adverse environmental impact (ratio of environmental charges for excess emissions, discharges and waste disposal to total environmental charges for the reporting year)	8/8	25.9%	38%
Share of environmental fuel	10/10	99.24%	94.37%
Energy production from renewable sources	10/10	0.53%	0.53%

implement the criteria)—yellow, “No”—red. For Section 2, a red flag was assigned if criterion-specific data were not available in the public domain (yet the company definitely had such data); a green flag was assigned when the value of criterion was equal to or higher than the industry average; and a yellow was awarded when the values were lower than the industry average. When a criterion was not relevant for the given company (e.g., the company does not produce fuel), no flag was assigned.

At the next stage, points were assigned to calculate the rating for every section. A red flag counted as 0 points, a yellow as 1 point and a green flag as 2 points. For each section companies were assigned an average of their points for criteria in the corresponding section. In this calculation, only those criteria that had been assigned color flags were taken into account. That is, criteria that were not relevant for the given company were not included in the calculation. As a result, every company was assigned final points for Environmental Management, Environmental Impact, and Transparency. Final points varied from 0 to 2.

The final rating was calculated for every company by averaging three values assigned in accordance with the previous stage.

Evaluation was carried out in all segments, from exploration and production (E&P) to processing; values were calculated separately for production and processing.

The rating was calculated by a professional rating agency (National Rating Agency, NRA), which was selected through a competitive tender. The rating is based only on publicly available information regarding activities of companies on the territory of the Russian Federation. Publicly available information is understood as annual business and sustainability reporting, reports on environmental protection

(including regional reports) available to the public, as well as any documents published at the official websites of companies (including their subsidiaries) with mandatory inclusion of references to relevant website menu pages along with interviews of corporate representatives for federal and regional media.

2.3 | Section average year-to-year dynamics

If the environmental management and transparency (Sections 1 and 3) average for the company is directly proportional to the amount of information disclosed, the environmental impact (Section 2) is scored depending on the industry average values calculated as an arithmetic mean for all companies participating in the rating. Therefore, the company's score depends not only on its own indicators, but also on the values specified by other rating participants. As a result, a higher score in the environmental impact section requires not only disclosure of indicators, but also commitment to improve. The environmental effect of this approach is shown in Figure 1.

2.4 | Method evolution/progress

Criteria can undergo certain changes—switch from qualitative to quantitative criteria (ex. GHG), criteria removal (ex. disturbed lands) or addition (ex. voluntary insurance), criteria toughening (ex. Energy efficiency, biodiversity) and so on.

Since 2014, the rating criteria have been undergoing certain changes triggered by the following factors:

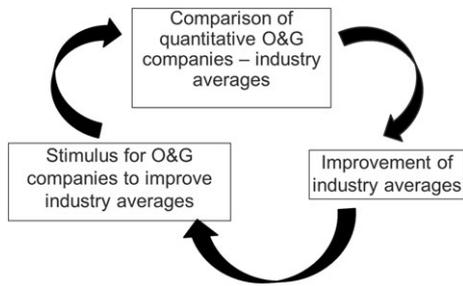


FIGURE 1 Environmental effect of the rating approach to quantitative data.

1. Changes in environmental legislation. For example, the GHG calculation method was approved on a state level in 2015 and this criterion migrated from the qualitative Section 1 (as GHG registration) to quantitative Section 2 (as specific GHG emissions) starting in 2016. By contrast, because most of the companies reached 100% environmentally friendly fuel (i.e., Euro 4 and 5, 4-5 class diesel, natural gas moto fuel and biofuel) production (ensured by existing regulations), the criterion was removed from the rating starting in 2016.
2. Increased transparency of companies. Because the availability of biodiversity conservation programs is in place in most companies, the biodiversity criterion was transformed in 2015 and now includes five subcriteria instead of a single qualitative one used in the first-year rating assessment. As another example, the energy efficiency criterion was tightened because most of the companies responded affirmatively to the initial question (i.e., existence of an energy efficiency program). Today, not only is the program availability evaluated, but also its positive or negative implementation dynamics.
3. International practices development. In line with best international practices, the new criteria have been introduced to cover voluntary environmental risk insurance and the “green office” principles in corporate offices. Also, criteria concerning GRI compliance have been modified following GRI evolution itself.
4. Dialogue and cooperation with companies. Collaboration on the wording/clarifications of criteria as part of annual methodology meetings with the O&G companies is becoming increasingly common. For example, the waste criterion wording has been streamlined, and the wording of some quantitative and qualitative criteria has been elaborated on. In addition, the disturbed land area criterion has been removed due to its legal ambiguity (explained by the companies’ experts).

Note that implementation of fundamentally new criteria in the first year of their incorporation in the rating takes place in a test mode. Specifically, the results obtained under the new criteria are not included in the final company evaluation for that year. Therefore, the rating developers have an opportunity to collect additional feedback from the companies on the adequacy of each criterion and give them time to disclose the required information.

2.5 | Dialogue with O&G companies

Constant engagement with the participating companies is a key principle of the rating. The process of engagement with the O&G companies was not a smooth one and went through various stages. Resistance and refusal to cooperate at the start of the process was gradually switched to cooperation and constructive dialogue in the third year. Regular face-to-face consultations with relevant stakeholders (normally heads and managers of Health, Safety and Environment units of O&G companies) were conducted to establish and improve the rating's methodology. The challenge was to simultaneously make amendments to the rating methodology based on consensus between representatives of O&G companies and the developers of the rating and not to violate the Environmental Standards for Operations of O&G Companies Acting in Russia developed by environmental nongovernmental organizations (NGOs) in 2005. As a result, more and more companies were motivated to send their representatives to consultation meetings for their opinion to be heard and considered.

An interesting observation is that each company participating in the annual methodology discussions suggested criteria modifications (whether a change of wording, additional criteria or removal of criteria) to show itself in the most favorable light. Nevertheless, an open discussion of proposals among all discussion participants allowed the exclusion or minimization of the above-mentioned effect as representatives of other companies immediately noticed prejudice or bias of any offered innovations and/or clarifications.

Another driver of positive dynamics of the dialogue with O&G companies is that preliminary results of the rating (the first version of compiled data for each company) are available for the feedback from each company. Thus, all companies are offered an opportunity to disclose lacking information, and therefore wider environmental information disclosure and appropriate feedback is ensured. As a result, confidence and reliability of the rating from the O&G companies is increased from year to year.

3 | RATING RESULTS

3.1 | Companies’ nominations in 2016

Table 3 presents results of the 2016 Environmental Responsibility Rating of O&G Companies in Russia. Score dynamics in comparison to the previous year of rating are also provided. The last column presents the transparency level of each company. There are three levels of transparency:

- High. Companies with a high level of transparency publish nonfinancial reports complying with international GRI standards of sustainable development.
- Basic. Such companies publish environmental reports but do not follow GRI guidelines.
- Low. Companies with a low level of transparency provide only brief disclosure of environmental information on corporate websites without providing any quantitative environmental impact indicators.

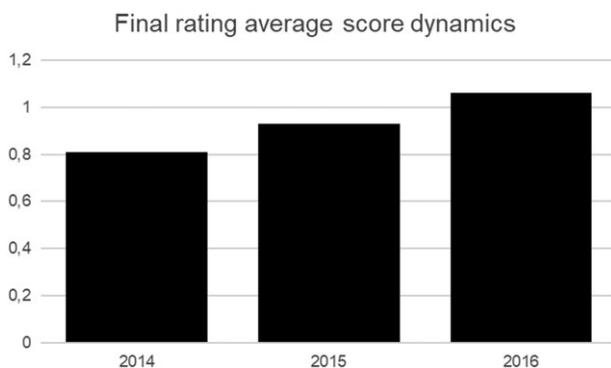
TABLE 3 Results of the 2016 Environmental Responsibility Rating of Oil and Gas Companies in Russia (2015 data)

Company name	Final ranking	Final rating score	Score dynamics (in comparison to 2014 data)	Transparency level
Sakhalin energy	1	1.8593	+0.3371	High
Gazprom	2	1.7201	+0.1814	High
Surgutneftegaz	3	1.6830	+0.1005	Basic
Lukoil	4	1.6527	+0.2790	High
Salym petroleum	5	1.6376	+0.2932	Basic
Exxon Neftegas Ltd	6	1.6302	+0.5672	Basic
NOVATEK	7	1.4063	+0.4396	High
Gazprom Neft	8	1.3795	+0.3593	High
Rosneft	9	1.3555	-0.0014	High
Zarubezhneft	10	1.2397	-0.1825	High
Irkutsk oil company (INK)	11	1.2217	+0.3328	Basic
Total E&P Russie	12	1.1831	+0.1905	Basic
Tatneft	13	1.0539	-0.1953	High
Bashneft	14	0.8076	-0.1.082	High
Transneft	15	0.6386	+0.1571	Basic
Tomskneft VNK	16	0.4733	+0.0423	Low
Slavneft	17	0.4627	+0.0688	Low
Alliance-NNK	18	0.2934	+0.0106	Low
RussNeft	19	0.2328	-0.0265	Low
Neftisa-Belkamneft	20–21	0.1481	-0.0371	Low
Arctic gas	20–21	0.1481	0	Low

3.2 | Analysis of rating results

Within 3 years of its start (2014–2016), the average level of environmental transparency demonstrated a steady growth in most companies. The trend is confirmed by the 3-year average rating score dynamics: 0.81 in the first rating (2014), 0.93 in the second (2015) and 1.06 in the third (2016) (two-point scale, Figure 2). This trend can also be illustrated by the fact that an overwhelming majority (14 out of 21) of the rated companies demonstrated a score increase during the reporting year (Table 3). It is also remarkable that some companies adjust their reporting practices to the rating format (e.g., Zarubezhneft), confirming the rating significance for the sector and for O&G companies.

Companies are certainly aware that their stakeholders have direct access to the rating information because it is available online. Also, Russian mass media is paying increasing attention to the rating of environmental responsibility of O&G companies: there were 93

**FIGURE 2** Final rating average score dynamics.

publications about rating results in the print media and on the Internet in 2014, 90 such publications in 2015, 100 in 2016 and 128 in 2017.

The above information indicates that the voluntary (nonregulatory) mechanisms of ensuring transparency and environmental responsibility are quite effective and applicable to the largest O&G companies operating in Russia. This leads to the conclusion that O&G companies are also—to some certain extent—subject to the market-driven voluntary environmental mechanisms on a par with private companies in less economically and politically important sectors. The combined impact of state regulation preventing violations of governmental standards (i.e., the use of “below the market” corporate practices) and voluntary environmental responsibility mechanisms aiming at higher standards can have a positive cumulative effect on corporate practices in the O&G industry.

The greatest amount of information was disclosed in Section 1, Environmental Management (average score 1.2 in 2015), followed by Section 3, Transparency (1.07) and finally Section 2, Environmental Impact (average score in 2015 was 0.99). At the same time, it is notable that disclosure dynamics are highest in terms of quantitative environmental impact indicators based on the Form 2-tp² and federal statistics data. In the last 3 years, data disclosure in this section has gone up by 62%, validating the rating as a sound tool for increasing business transparency. We believe that reporting changes will lead to changes in practices, because when at least three companies with assured sustainability reports or confirmed data provide objective information, it becomes much easier to find potentially incorrect information. An increase in data disclosure leads to an improvement in criteria

²Russian environmental compliance government reports for water, air emissions, waste, remediation and environmental impact payments.

comparability and allows for more confident statistical analysis (high significance of standard deviation in calculations of average sector environmental impacts). The rating system is forcing companies to disclose information and pay attention to stricter environmental standards, which could—in the longer run with different kinds of third-party verification and/or confirmation—lead to real improvement in environmental performance. The rating system is changing corporate behavior and that influence can be harnessed and refined over time.

3.3 | Nonfinancial reporting

The most famous voluntary international standard for nonfinancial reporting is the GRI. Rating analysis for 2014–16 showed positive dynamics with nonfinancial reporting under the GRI standard. In 2013, only one in nine companies reported under the new GRI G4 standard, whereas the 2015 landscape was quite the opposite, with eight of nine companies reporting under the standard. At the same time, the level of public assurance (traditional version for Russia—public confirmation by the Council of Non-Financial Reporting of the Russian Union of Industrialists and Entrepreneurs (RSPP) Nonfinancial Reporting Council) remains stable throughout the period under evaluation (six companies), while the number of companies, using professional certification of their statements, has decreased. Starting from 2014, only one company (Rosneft) assures its reporting, engaging certified external experts (in particular, Ernst & Young). In 2013, there were three such companies. This decreasing trend in the number of professional verifications of nonfinancial reports among Russian O&G companies is an emerging feature that requires further observations for its reasonable explanation and therefore is an important topic for future research.

3.4 | Industry average score year-to-year dynamics

After introducing changes in the calculation of certain criteria and considering that the sample structure has been amended, the 3-year dynamics can be followed only for some quantified rating values. However, most of them show an improvement. In particular, there has been an annual 3-year decrease recorded in the volume of specific emissions of pollutants into the atmosphere and growth in the APG utilization ratio (Figure 3).

By contrast, positive year-on-year APG flaring dynamics declared by almost all rated companies contradict the World Bank data, estimating APG flaring levels based on remote sensing data (satellite imagery with subsequent data interpretation). Thus, according to the Federal State Unitary Enterprise CDU TEK (Central Dispatching Department of Fuel Energy Complex), APG flaring in Russia in 2015 totaled 11.6 billion m³, while the World Bank data³ showed this to be 19.4 billion m³. This large discrepancy suggests an urgent need for data verification—namely, developing a tool for remote assessment of APG flaring by O&G companies operating in Russia. At present, the companies do not have confidence in the World Bank data for APG flaring.

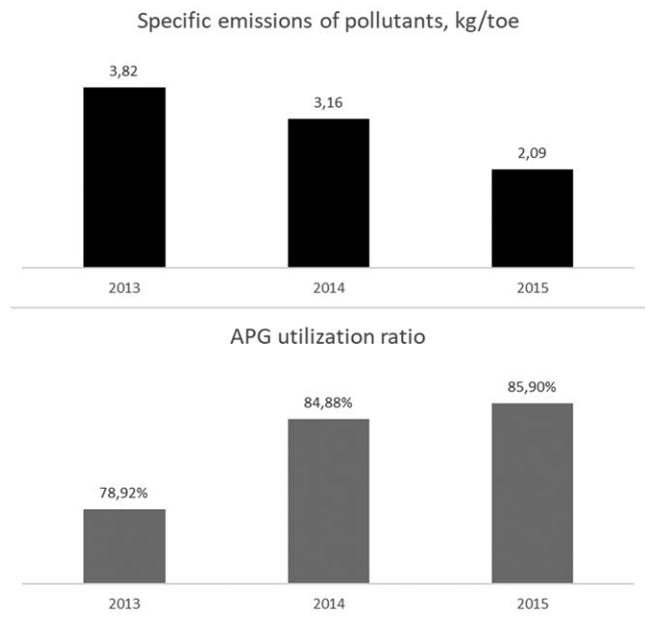


FIGURE 3 Industry average dynamics based on 2014–16 ratings.

Among other indicators with unequivocally positive 3-year dynamics are the share of environmentally friendly fuel in the total production volume (the overwhelming majority of rated companies have reached 100% or are approaching this level), as well as power generation from renewable energy sources. In the first case, the rating developers opted to exclude the environmentally friendly fuel criterion from the rating as being no longer relevant (average value for rated companies 99.24%; minimum value per rated company 94.78%). In the second case, an increasing number of companies note that their share of renewable energy sources is significantly above zero. The most substantial growth in renewable energy was demonstrated by Lukoil, with 5% of its total energy production in 2015.

Note that changes in the criteria quantified could be caused both by sophistication of the corporate environmental policies and by an expanded sample of the rated companies for which the averages were calculated. Thus, in 2013, specific wastewater discharge into surface water bodies and the rate of specific pipeline leaks were submitted by only seven companies, whereas in 2015 this number was 13. Even more serious is the disclosure dynamics for specific amounts of oil, condensate and oil products spilled because of accidents and leaks: six companies in 2013 and 14 in 2015. In general, it can be assumed that the increasing number of companies disclosing information on quantitative environmental impact criteria is leading to a gradual increase in the reliability of the average values and their dynamics as the rating matures.

4 | DISCUSSION

4.1 | Criteria disclosure resistance

The greatest resistance to disclosure among companies is caused by the criteria relating to oil spills and oil-spill readiness. Explanations

³The data for APG flaring (as part of the sum of Associated Petroleum Gas and Non-Associated Gas flaring presented on the WB flaring data charts, <http://www.worldbank.org/en/programs/gasflaringreduction>) was provided by the representative of the WB Global Gas Flaring Reduction Partnership.

from companies vary from “oil spill contingency plan disclosure threatens terrorist attacks” to “there is no place on the website for a large number of documents.” Continuous dialogue with the O&G companies is leading to progress in this regard. As a result, eight companies published their contingency plans for certain projects, and oil spills were disclosed by 14 companies (six and six companies disclosed corresponding values in 2013).

Environmental impact assessment (EIA) documentation should be available to the public. This is a mandatory condition for a company developing a project in Russia. However, companies are often reluctant to disclose and discuss EIA with their stakeholders. Positively, however, during the 3 years of the rating assessment EIA disclosures have increased two-fold, *inter alia*, owing to the rating (seven companies in 2013 and 14 companies in 2015 published EIA materials in the public domain).

The criteria reflecting public awareness of accidents and controversial ecological situations were even more sensitive. There are annual requests from the O&G companies to adjust the wording. A step forward in the dialogue with the companies and rating development was based on regular reviews on disputed (conflict) situations and accidents/incidents prepared by WWF Russia on a quarterly basis. The reviews are prepared based on open (i.e., available online) information sources—state authorities (Rostekhnadzor⁴, Rosprirodnadzor⁵, Ministry of Energy, Rosselkhozadzor⁶, Russian Attorney office, courts), media reports, and major Russian and international environmental agencies. Before publishing such reviews in the public domain, the companies are given a chance to share clarifying information for possible corrections in the document drafted. Thus, there is an unbiased database which will be used to evaluate public awareness of accidents and controversial ecological situations. As a result, it is hoped that the rating and public oversight will help to address one of the most sensitive issues concealed by the O&G companies.

4.2 | Method limitations and potential improvement

Rating analysis revealed data variations among companies of several orders of magnitude for some environmental performance indicators. For example, the distribution of pipeline accidents for 2015 (Figure 4) can be perceived as two clusters of data—indicators in the first group vary in the range of the first 100, whereas the second group indicators are in the order of one (including companies declaring no accidents on their pipelines in the reporting year). It is also interesting to look at the dynamics of these disclosures. Just one company with stable disclosures in 3 years of the rating and a leader in the number of pipeline accidents certifies its nonfinancial reports involving professional auditors, thus significantly increasing the level of reliability in its data. Other companies with high values in previous years either refrained from disclosure in 2016 or

declared values from the second cluster (three times lower than in 2015). These companies either were certified by the RSPF Nonfinancial Reporting Council or stopped nonfinancial reporting, thus significantly decreasing the level of reliability in their data. It is also noteworthy that companies in the second cluster reporting zero or close to zero values either publish their nonfinancial statements without professional or public assurance, or assure through the RSPF Nonfinancial Reporting Council, which because of insufficiently transparent procedures, is unable to identify obvious manipulations or concealment of important environmental facts in nonfinancial reporting. Therefore, the system of nonfinancial reporting assurance in Russia allows manipulations or concealment of true environmental information.

There are cases of data removal or replacement on corporate websites registered after the rating process is over (so-called “floating pdf files”). The organizers suggested the following incentive to resolve this problem. Subsequent data collection will consider each company's data for the last 3 years, and if certain data have been removed or replaced, feedback to companies will include a proposal to act on the initially analyzed set of data. If there is an adequate explanation—new website, new methodology, unaccounted data, and so on—the data change is accepted. If the answer is inadequate or there is no answer at all, the current year calculation assigns red flags (0) to the criteria for which the previous year data have been removed or replaced. Thus, the overall score for the section and overall rating will be reduced for companies failing to explain removal or replacement of the previous year's data on their websites. This amendment to the rating method was announced 1 year ahead of the next rating calculation.

The companies frequently disclose data showing them in a positive light. These data, however, may not meet the rating criteria and be appropriate on a pro forma basis only. For example, atmosphere emissions from stationary sources are declared as total atmosphere emissions. In addition, the emissions data do not cover all divisions of the company and exclude the most “dirty” subsidiaries. Finding such “inaccuracies” and their discussion with the companies require environmental experts involved in calculating the rating. Ideally, the rating aims to make companies disclose all statistical reports filed with the government. However, there are certain pitfalls even here—the companies are attempting to appear “white and fluffy” and the bottom line is not always accurate.

Improvements to the statistical data in environmental and nonfinancial reports as a result of the rating, dialogue with the companies and innovative techniques (ex. remote sensing) should on the one hand help federal, regional and local authorities to exercise state environmental control, and on the other allow environmental NGOs and civil society organizations to exercise public control and monitoring. For this, we are planning to increase attention to the quality of major public assurance bodies (such as the RSPF commission on nonfinancial/sustainability reporting), support and potentially train NGOs and general public in involvement in different forms of sustainability reporting and corporate public data verification, as well as assessing the work of the “Big Four” audit companies and other auditor companies for systematic mistakes and dishonest verification of sustainability reports.

⁴Russian Federal Environmental, Industrial and Nuclear Supervision Service.

⁵Russian Federal Service for Supervision of Natural Resources Use.

⁶Russian Federal Service for Veterinary and Phytosanitary Surveillance.

Criterion (unit)	Number of companies disclosing information	Sample mean	Sample minimum	Sample maximum
Rate of pipeline accidents leading to spills of oil, condensate or oil products (accidents / 1 thousand km of pipelines)	13	22,9	0	150

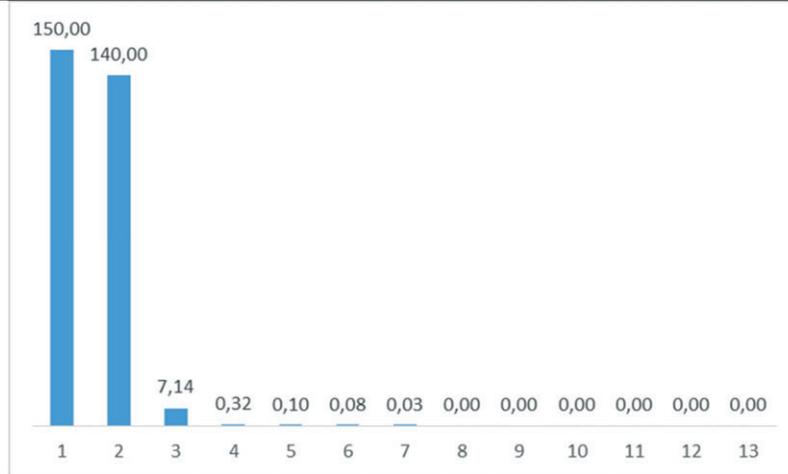


FIGURE 4 Rate of pipeline accidents. Each column corresponds to a certain O&G company. Company numbering is from maximum to minimum. [Colour figure can be viewed at wileyonlinelibrary.com]

5 | CONCLUSION

Verification of our research questions based on 3-year data dynamics of O&G companies in Russia regarding environmental responsibility rating allows us to come to the following conclusions.

Question 1: Can voluntary mechanisms based on international environmental responsibility standards have a significant impact on the O&G sector, comparable to the influence of international voluntary standards applied to soft commodities (timber, marine biological resources, aquaculture, palm oil, soy, etc.)?

The answer to this is yes regarding increased transparency. Over the last 3 years, an increasing number of companies have disclosed information showing dynamics both in terms of expanding information access—oil spill response plans, EIA documentation and so on—and significant increase in the number of companies disclosing quantitative environmental impact indicators.

Regarding improving environmental performance, today we can only talk about an emerging trend. Its full realization will require:

- A longer rating time, including that for public exposure to misleading environmental performance information and the use of unaudited and poorly verified nonfinancial reporting.
- Expansion of independent analysis of satellite monitoring information and its application in the professional audit and public verification of nonfinancial reporting following from the analysis of corporate data on APG utilization dynamics and World Bank's

APG campaign, as well as from abnormal data spreads (2–3 orders of magnitude) for oil spills per 1,000 km of pipelines reported by different companies.

- Sophistication of the guidelines and rules for professional audit and public verification of nonfinancial reporting, including sanctions for any proven bias in the professional audit as well as requirement for early nonfinancial disclosure on the website and early notification of local stakeholders before the start of public verification. The GRI recommendation that professional auditing of financial and nonfinancial reporting is to be carried out by different audit companies should also be beneficial.
- Potential declining coefficients for nonpublicly verified data from sustainability (nonfinancial) reporting and other public data/sources.

Question 2: Are there significant differences in the levels of environmental responsibility between different types of oil companies depending on their ownership status (state owned vs. privately owned)?

The 2014–2016 results do not reveal significant disparities in the environmental responsibility of public and private O&G companies. The rating leaders include both purely private companies (Surgutneftegaz) and those with significant government stakes in share capital. This can be partially explained by the differences in the nature of the state-owned companies. Thus, the relatively small (in terms of total production) state-owned Zarubezhneft (production 3.2 million tons in 2015; 16th in terms of oil production among rated companies),

operating globally in a competitive market, demonstrates availability of corporate practices and their positive dynamics on a par with the most transparent and responsible private companies. In general, small state-owned companies behave similar to private companies, as both lack administrative leverage usually exercised by large state-owned companies in Russia. At the same time, the state monopoly Transneft, which is responsible for oil transportation in Russia, is at the end of the top 20, taking last place in terms of disclosure and transparency.

The O&G sector in Russia is one of the most globalized sectors of the Russian economy with the widest presence of sustainability reporting and ISO 14001 certification (E. Shvarts, Bunina, et al., 2015). This is one of the reasons why voluntary regulatory systems can influence business policies even in nondemocratic contexts, except for small and some medium-sized, purely domestic companies without international shareholders and listing on international stock-exchanges (e.g., Tomskneft VNK, Slavneft, Russneft, Alliance-NNK, Arctic Gas).

Question 3: Are there significant differences in the levels of environmental responsibility between oil companies depending on the degree of their internationalization (Russian ownership and capital vs. international/foreign ownership and investors)?

The 3-year results confirmed the validity of our 2014 rating conclusions (E. A. Shvarts et al., 2016) that international listings and—to a lesser extent—financing by international institutions positively influences environmental responsibility and transparency of O&G companies. At the same time, a close relationship between the management and local community sometimes plays a positive role in ensuring environmental responsibility of traditional Russian companies (e.g., Surgutneftegaz and Tatneft).

It is still impossible to come to a reliable conclusion about significant disparities in the environmental responsibility between Russian companies on the one hand and subsidiaries of international companies (and companies with foreign stakes) on the other. The need for more detailed information disclosure dictated by both contemporary GRI standards for integrated and nonfinancial reporting, and the rating methodology, encourages and will continue to encourage international companies to apply their corporate policies in countries with lower environmental standards, as well as in countries with “weaker” government institutions.

As with the first year of rating (E. A. Shvarts et al., 2016), subsidiaries of Russian state-owned giants continue to be much less transparent than their parent holdings. In particular, Tomskneft VNK and Slavneft are among most opaque companies in terms of publicly available information: these companies' websites had very little information needed to compile the rating. Establishing uniform requirements for environmental policy and standards of nonfinancial reporting in parent and subsidiary companies could provide a solution to this problem. Such requirements and standards will require greater transparency and environmental policy rigor among subsidiaries (including Gazprom Neft). As an interim solution, parent companies' reports should disclose quantitative and qualitative information about their subsidiary companies (as with Zarubezhneft).

Finally, regarding checking and testing of our two research hypotheses:

Hypothesis 1: *Environmental ratings could be effectively used to increase transparency and improve environmental performance in a wider range of contexts and sectors, including sectors not widely exposed to consumer pressure (soft commodities and FMCGs), than previously believed.*

Results from the 3-year implementation of environmental rating of O&G companies, acting in Russia, confirm this hypothesis, at least regarding environment transparency and to a degree environmental performance.

Hypothesis 2: *Wider proliferation and application of international voluntary environmental standards and ratings in emerging economies could potentially create disincentives for those FDIs which seek to invest in “pollution havens” (Copeland & Taylor, 1994, 2004).*

The initial assessment allows us to come to a preliminary positive conclusion. This is based on significant progress achieved specifically by the subsidiaries of international companies in 2015–16 (Exxon Neftegaz Limited and Total E&P). In particular, as predicted in our previous article (E. A. Shvarts et al., 2016), Exxon Neftegaz Limited (operator of the Sakhalin-1 project) climbed from 16th to 6th place in the overall environmental rating after the 2-year period following almost full disclosure of information on its Russian operations. In many respects, this was because in 2015 the company's environmental management staff succeeded in convincing its senior management of the importance of ensuring transparency in Russia by disclosing environmental information on its local operations required for the rating.

A further example is provided by the Sakhalin Energy Investment Company Ltd (SEIC, operator of the Sakhalin-2 project). In 2003–6 SEIC came into strong conflict with environmental NGOs, including WWF, on many environmental issues, including protection of western Pacific grey whales, seismic testing, absence of baseline environmental data and access to existing environmental information, quality of EIA and crossing of salmon rivers. More than 146 organizations from 22 countries were involved in the campaign.⁷ In 2005 the NGO coalition took Sakhalin Energy to court, and the court upheld the NGOs' complaint that the company's EIA of its new development plans was inadequate (Douma, 2010; Martin-Mehers, 2016). As a result, the population of grey whales has steadily increased, growing from an estimated 115 animals in 2004 to 174 in 2015. Also, SEIC is now among the Top-3 companies according to the environmental rating of O&G companies in Russia.

From the above, it is therefore possible to suggest that wider proliferation and application of international voluntary environmental standards and ratings in emerging economies could potentially create disincentives for those FDIs which seek to invest in “pollution havens,” and obviously it should be a topic for future research.

The environmental rating of O&G companies in Russia created a new mechanism for raising public awareness and dialogue between

⁷The conflict started much earlier than the Russian Government decided to use environmental reasons and arguments to change the ownership of the SEIC (December 21 2006).

the industry and stakeholders implemented in terms of both developing the rating methodology, discussing the results and further collaboration on the disclosures. The rating initiated calculation of industry-average quantitative impact indicators which, as the sample grows, will transform into an important benchmark for corporate self-assessment and comparing Russian practices with those of the majors—the largest international and foreign state-owned O&G companies across the globe.

ACKNOWLEDGMENTS

This work was supported by the GEF/UNDP/Russian Ministry of Nature Resources and Ecology Project “Mainstreaming biodiversity conservation into Russia's energy sector policies and operations” (activity “Application of energy industry environmental rating for assessment of companies biodiversity conservation effectiveness”—RU013208); WWF Netherlands through Grant NL - 9Z1428 and by advisory CREON Group (RU013105). The authors are grateful to the editor and two anonymous reviewers for their constructive and insightful comments on an earlier version of this article.

ORCID

E. Shvarts  <http://orcid.org/0000-0002-6828-4367>

REFERENCES

- Ali, W., Frynas, J. G., & Mahmood, Z. (2017). Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: A literature review. *Corporate Social Responsibility and Environmental Management*, 24(4), 273–294. <https://doi.org/10.1002/csr.1410>
- Avetisyan, E., & Hockerts, K. (2017). The consolidation of the ESG rating industry as an enactment of institutional retrogression. *Business Strategy and the Environment*, 26(3), 316–330. <https://doi.org/10.1002/bse.1919>
- Barata, J. F. F., Quelhas, O. L. G., Costa, H. G., Gutierrez, R. H., de Jesus Lameira, V., & Meiriño, M. J. (2014). Multi-criteria indicator for sustainability rating in suppliers of the oil and gas industries in Brazil. *Sustainability*, 6(12), 1107–1128. <https://doi.org/10.3390/su6031107>
- Berliner, D., & Prakash, A. (2012). From norms to programs: The United Nations Global Compact and global governance. *Regulation and Governance*, 6(2), 149–166. <https://doi.org/10.1111/j.1748-5991.2012.01130.x>
- Berliner, D., & Prakash, A. (2015). “Bluewashing” the firm? Voluntary regulations, program design, and member compliance with the United Nations Global Compact? *Policy Studies Journal*, 43(1), 115–138. <https://doi.org/10.1111/psj.12085>
- Blackman, A. (2010). Alternative pollution control policies in developing countries. *Review of Environmental Economics and Policy*, 4(2), 234–253. <https://doi.org/10.1093/reqp/req005>
- Copeland, B. R., & Taylor, M. S. (1994). North–South trade and the environment. *Quarterly Journal of Economics*, 109(3), 755–787. <https://doi.org/10.2307/2118421>
- Copeland, B. R., & Taylor, M. S. (2004). Trade, growth and the environment. *Journal of Economic Literature*, 42(1), 7–71. <https://doi.org/10.1257/.42.1.7>
- Delgado-Márquez, B. L., & Pedauga, L. E. (2017). Environmental behavior and MNEs: A strategy pulled by stakeholder engagement. *Business Strategy and the Environment*, 26(7), 927–939. <https://doi.org/10.1002/bse.1955>
- Delmas, M., & Blass, V. D. (2010). Measuring corporate environmental performance: The trade-offs of sustainability ratings. *Business Strategy and the Environment*, 19(4), 245–260. <https://doi.org/10.1002/bse.676>
- Douma, W. T. (2010). The EBRD and Russia: Stimulating European principles for the environment. In W. T. Douma, & F. M. Mucklow (Eds.), *Environmental finance and responsible business in Russia: Legal and practical trends* (pp. 169–188). The Hague, the Netherlands: T M C Asser Press.
- Environmental Standards for Operations of Oil and Gas Companies Acting in Russia. (2005). on its Continental Shelf, and within its Exclusive Economic Zone developed by Russian Non-governmental Nature Conservation Organizations. Retrieved from <http://www.wwf.ru/resources/publ/book/eng/109>
- Federal Custom Service (2017). Export of Commodities. Retrieved from http://www.customs.ru/index.php?option=com_content&view=article&id=13858&Itemid=2095.
- García, J. H., Sterner, T., & Afsah, S. (2007). Public disclosure of industrial pollution: The PROPER approach for Indonesia? *Environment and Development Economics*, 12(06), 739–756. <https://doi.org/10.1017/S1355770X07003920>
- Guenther, E., Hoppe, H., & Poser, C. (2006). Environmental corporate social responsibility of firms in the mining and oil and gas industries. *Greener Management International*, 53, 6–25.
- Gupta, S., & Golder, B. (2005). Do stock markets penalize environment-unfriendly behaviour? Evidence from India. *Ecological Economics*, 52(1), 81–95. <https://doi.org/10.1016/j.ecolecon.2004.06.011>
- Henry, L. A., Nysten-Haarala, S., Tulaeva, S., & Tysiachniouk, M. (2016). Corporate social responsibility and the oil industry in the Russian Arctic: Global norms and neo-paternalism. *Europe-Asia Studies*, 68(8), 1340–1368. <https://doi.org/10.1080/09668136.2016.1233523>
- Hilson, G. (2012). Corporate social responsibility in the extractive industries: Experiences from developing countries. *Resources Policy*, 37(2), 131–137. <https://doi.org/10.1016/j.resourpol.2012.01.002>
- Kelley, J. G., & Simmons, B. A. (2015). Politics by number: Indicators as social pressure in international relations. *American Journal of Political Science*, 59(1), 55–70. <https://doi.org/10.1111/ajps.12119>
- Koellner, T., Weber, O., Fenchel, M., & Scholz, R. (2005). Principles for sustainability rating of investment funds. *Business Strategy and the Environment*, 14(1), 54–70. <https://doi.org/10.1002/bse.423>
- Lodhia, S., & Hess, N. (2014). Sustainability accounting and reporting in the mining industry: Current literature and directions for future research. *Journal of Cleaner Production*, 84, 43–50. <https://doi.org/10.1016/j.jclepro.2014.08.094>
- Mahmood, M., & Orszalin, N. (2017). Green governance and sustainability reporting in Kazakhstan's oil, gas, and mining sector: Evidence from a former USSR emerging economy. *Journal of Cleaner Production*, 164, 389–397. <https://doi.org/10.1016/j.jclepro.2017.06.203>
- Martin-Mehers, G. (2016). Western Grey Whales Advisory Panel. Stories of Influence. IUCN, WWF, IFAW.
- Matejek, S., & Gössling, T. (2014). Beyond legitimacy: A case study in BP's “green lashing”. *Journal of Business Ethics*, 120(4), 571–584. <https://doi.org/10.1007/s10551-013-2006-6>
- Moran, C. J., Lodhia, S., Kunz, N. C., & Huisingh, D. (2014). Sustainability in mining, minerals and energy: New processes, pathways and human interactions for a cautiously optimistic future. *Journal of Cleaner Production*, 84(1), 1–15. <https://doi.org/10.1016/j.jclepro.2014.09.016>
- Odera, O., Scott, A., & Gow, J. (2016). An examination of the quality of social and environmental disclosures by Nigerian oil companies. *Corporate Governance: the International Journal of Business in Society*, 16(2), 400–419. <https://doi.org/10.1108/CG-05-2015-0065>
- Öge, K. (2017). Transparent autocracies: The Extractive Industries Transparency Initiative (EITI) and civil society in authoritarian states. *Extractive Industries and Society*, 4(4), 816–824. <https://doi.org/10.1016/j.exis.2016.12.010>
- Øverland, I. (2016). Åljuokta/Drage, Norway: Árran Lule Sami Centre.

- Paillard, C.-A. (2010). Russia and Europe's mutual energy dependence. *Journal of International Affairs*, 63, 65–84.
- Pegg, S. (2012). Social responsibility and resource extraction: Are Chinese oil companies different? *Resources Policy*, 37(2), 160–167. <https://doi.org/10.1016/j.resourpol.2011.01.002>
- Powers, N., Blackman, A., Lyon, T. P., & Narain, U. (2011). Does disclosure reduce pollution? Evidence from India's green rating project. *Environmental and Resource Economics*, 50(1), 131–155. <https://doi.org/10.1007/s10640-011-9465-y>
- Prakash, A. (2001). Why do firms adopt 'beyond-compliance' environmental policies? *Business Strategy and the Environment*, 10(5), 286–299. <https://doi.org/10.1002/bse.305>
- Prakash, A., & Kollman, K. (2004). Policy modes, firms and the natural environment. *Business Strategy and the Environment*, 13(2), 107–128. <https://doi.org/10.1002/bse.394>
- Prakash, A., & Potoski, M. (2012). Voluntary environmental programs: A comparative perspective. *Journal of Policy Analysis and Management*, 31(1), 123–138. <https://doi.org/10.1002/pam.20617>
- Ranängen, H., & Zobel, T. (2014). Revisiting the “how” of corporate social responsibility in extractive industries and forestry. Special Volume: The sustainability agenda of the minerals and energy supply and demand network: An integrative analysis of ecological, ethical, economic, and technological dimensions. *Journal of Cleaner Production*, 84(1), 299–312.
- Raufflet, E., Barin Cruz, L. B., & Bres, L. (2014). An assessment of corporate social responsibility practices in the mining and oil and gas industries. *Journal of Cleaner Production*, 84(1), 256–270. <https://doi.org/10.1016/j.jclepro.2014.01.077>
- Searcy, C., & Elkhawas, D. (2012). Corporate sustainability ratings: An investigation into how corporations use the Dow Jones Sustainability Index. *Journal of Cleaner Production*, 35, 79–92. <https://doi.org/10.1016/j.jclepro.2012.05.022>
- Sharkey, A. J., & Bromley, P. (2015). Can ratings have indirect effects? Evidence from the organizational response to peers' environmental ratings. *American Sociological Review*, 80(1), 63–91. <https://doi.org/10.1177/0003122414559043>
- Shvarts, E., Bunina, J., & Knizhnikov, A. (2015). Voluntary environmental standards in key Russian industries: A comparative analysis. *International Journal of Sustainable Development and Planning*, 10(3), 331–346. <https://doi.org/10.2495/SDP-V10-N3-331-346>
- Shvarts, E. A., Knizhnikov, A. Y., Pakhalov, A. M., & Kilzie, F. N. (2015). Dynamics of environmental responsibility rating of oil and gas companies, operating in Russia, in 2013–2014. *Use and protection of natural resources of Russia (Ispol'zovanie i okhrana prirodnykh resursov v Rossii)*, 6(144), 7–16 (in Russian, English summary).
- Shvarts, E. A., Pakhalov, A. M., & Knizhnikov, A. Y. (2016). Assessment of environmental responsibility of oil and gas companies in Russia: The rating method. *Journal of Cleaner Production*, 127, 143–151. <https://doi.org/10.1016/j.jclepro.2016.04.021>
- Trumpp, C., & Guenther, T. (2017). Too little or too much? Exploring U-shaped relationships between Corporate Environmental Performance and Corporate Financial Performance. *Business Strategy and the Environment*, 26(1), 49–68. <https://doi.org/10.1002/bse.1900>
- US Energy Information Administration. (2017). Retrieved from <http://www.eia.gov/countries/country-data.cfm?fips=RS>.
- Vakulchuk, R., & Overland, I. (2018). Kazakhstan: Civil society and natural resource policy in Kazakhstan. In I. Overland (Ed.), *Public brainpower* (pp. 143–162). Retrieved from https://doi.org/10.1007/978-3-319-60627-9_9
- Van Alstine, J. (2017). Critical reflections on 15 years of the Extractive Industries Transparency Initiative (EITI). *Extractive Industries and Society*, 4(4), 766–770. <https://doi.org/10.1016/j.exis.2017.10.010>
- van Beurden, P., & Gössling, T. (2008). The worth of values—A literature review on the relation between corporate social and financial performance. *Journal of Business Ethics*, 82(2), 407–424. <https://doi.org/10.1007/s10551-008-9894-x>
- Walker, N. F., Patel, S. A., & Kalif, K. A. B. (2013). From Amazon pasture to the high street: Deforestation and the Brazilian cattle product supply chain. *Tropical Conservation Science*, 6(3), 446–467. <https://doi.org/10.1177/194008291300600309>
- Wang, H., Bi, J., Wheeler, D., Wang, J., Cao, D., Lu, G., & Wang, Y. (2004). Environmental performance rating and disclosure: China's Green Watch program. *Journal of Environmental Management*, 71(2), 123–133. DOI: 10.1016/j.jenvman.2004.01.007. nMed: 15135947
- Wilson, E., & Van Alstine, J. (2014). *Localising transparency: Exploring EITI's contribution to sustainable development*. London: International Institute for Environment and Development.
- WWF Russia. (2016). Environmental Responsibility Rating of Oil & Gas Companies in Russia. Retrieved from http://zs-rating.ru/wp-content/uploads/2016/12/00_ZS_broch_eng_SMALL_correct.pdf

How to cite this article: Shvarts E, Pakhalov A, Knizhnikov A, Ametistova L. Environmental rating of oil and gas companies in Russia: How assessment affects environmental transparency and performance. *Bus Strat Env*. 2018;1–16. <https://doi.org/10.1002/bse.2049>

APPENDIX A

List of the criteria of the Environmental Rating of Oil and Gas Companies in Russia

A.1 | Environmental Management

Criteria	Reflection in the rating
1 Presence of quantitative efficiency indicators in the environmental management system (EMS) (as per the standard 14001/GOST R ISO and others)	Environmental management system is in place in the company's main production subsidiaries and its quantitative indicators are included in the company's public documents—Green. Environmental management system is in place in the company's main production subsidiaries or its quantitative indicators are included in the company's public documents—Yellow. Environmental management system is not in place in the company's main production subsidiaries—Red.

(Continued)

Criteria	Reflection in the rating
<p>2</p> <p>Company's environmental policy (or other formalized corporate documents) includes:</p> <p>Requirements for additional risk assessment in environmentally sensitive areas.</p> <p>Commitments to reduce landscape fragmentation and disturbed land area.</p> <p>Commitments to protect animal migration routes.</p> <p>Requirements to make strategic environmental assessment (SEA) for major infrastructure projects.</p> <p>Prohibited hunting and fishing by personnel, including contractors, in the company's areas of operations.</p> <p>Requirement to perform a comprehensive assessment of environmental impact (EIA) beginning from the phase of construction and up to the phase of abandonment and clean-up within the bounds of the project and its related projects.</p> <p>Willingness to avoid work in specially protected natural areas (SPNAs), their buffer zones and world natural heritage (WNH) sites.</p> <p>Commitments in respect to pipeline integrity.</p> <p>Commitments and/or practices of promoting/introducing "green office" principles in the company offices.</p> <p>Requirements of enhanced environmental standards of the company's transportation (including transportation operated by its contractors).</p> <p>Requirements to extend the company's environmental standards onto its contractors.</p>	<p>More than 7 positive answers—Green.</p> <p>4–7 positive answers—Yellow.</p> <p>Fewer than 4 positive answers—Red.</p>
<p>3</p> <p>A policy, or any other document approved by the company, on relations with indigenous small-numbered peoples of the north.</p>	<p>Yes—Green.</p> <p>No separate document in place, but care for ethnic minorities mentioned—Yellow.</p> <p>No mention—Red.</p>
<p>4</p> <p>Energy efficiency program</p>	<p>Quantitative indicators of energy efficiency show positive dynamics compared to the previous year's figures—Green.</p> <p>Quantitative indicators showing the implementation of an energy efficiency program are available—Yellow.</p> <p>No quantitative indicators are available to show results of implementation of energy efficiency program—Red.</p>
<p>5</p> <p>Presence of the following components in the programs of biodiversity conservation in the company's areas of operation:</p> <p>Fund allocations for biodiversity conservation measures.</p> <p>Presence of an approved list of indicative species in the areas of company's activities.</p> <p>Public availability of research results exercised in the area of biodiversity conservation.</p> <p>Presence of study and/or monitoring programs for indicative species.</p> <p>Mechanisms of involvement of interested parties in discussing programs targeted at biodiversity conservation (discussing methods, approaches, results, etc.).</p>	<p>More than 3 positive answers—Green.</p> <p>2–3 positive answers—Yellow.</p> <p>Fewer than 2 positive answers—Red.</p>
<p>6</p> <p>Wildlife rescue section in oil spill contingency plans (OSCPs) and/or oil spill emergency response plan (OSERP).</p>	<p>Yes—Green.</p> <p>Partially (limited to specific projects or subsidiaries)—Yellow.</p> <p>Not present at all—Red.</p>
<p>7</p> <p>Voluntary insurance of environmental risks.</p>	<p>Presence of a corporate system of voluntary insurance of environmental risks—Green.</p> <p>Voluntary insurance of environmental risks in respect to individual projects or individual subsidiaries—Yellow.</p> <p>Absence of voluntary insurance of environmental risks—Red.</p>

A.2 | Environmental impact.

	Criteria	Reflection in the rating
1	Specific emissions of pollutants into the atmosphere.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
2	Specific emissions of greenhouse gases into the atmosphere.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
3	Associated petroleum gas utilization (APG)	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
4	Specific discharge of wastewater into surface water bodies.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
5	Specific water consumption for the company's own needs.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
6	Ratio of the volume of utilized and disposed (including by third parties) wastes to the total volume of wastes being handled (volume of wastes as of the beginning of the year + volume of wastes generated during the year + volume of wastes received from other enterprises)	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
7	Ratio of polluted areas as of the year's end to the year's beginning.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
8	Rate of pipeline accidents leading to spills of oil, condensate and oil products.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
9	Specific volume of oil, condensate and oil products spilled because of accidents and leaks.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
10	The proportion of excess charges in the total payments for adverse environmental impact (ratio of charges for excess emissions, discharges, and waste disposal to the total environmental charges for the reporting year).	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.
11	Power generation from renewable energy sources (RES), including for the company's own needs.	Value is equal or better than the industry average—Green. Value is worse than the industry average—Yellow. Value is absent in the public domain—Red.

A.3 | Disclosure and Transparency.

	Criteria	Reflection in the rating
1	Nonfinancial reporting in compliance with the international requirements (such as GRI or IPIECA).	Yes, GRI application level A ("comprehensive")—Green. Yes, either GRI application level B or C ("core")—Yellow. Not present at all—Red.
2	Third-party verification of nonfinancial reporting.	Professional verification (based on professional standards ISAE 3000, AA1000AS) and verification based on the opinion of interested parties (including public opinion)—Green. Professional verification (based on professional standards ISAE 3000, AA1000AS) or verification based on the opinion of interested parties (including public opinion)—Yellow. No third-party verification is available or no reporting is available in accordance with GRI requirements—Red.
3	Public access to environmental impact assessment (EIA) via the internet throughout the project's life cycle for those active projects, which are required to pass the state environmental export review.	Yes, with feedback mechanism—Green Yes, without feedback mechanism—Yellow. Not present at all—Red.
4		Yes, with feedback mechanism—Green



(Continued)

	Criteria	Reflection in the rating
	Public access to OSCPs and OSERP (in part of environmental impact) including mandatory publication on the internet.	Yes, without feedback mechanism—Yellow. Not present at all—Red.
5	Informing the public about emergencies/accidents and mitigation measures thereof in respect of accidents having significant environmental impact, causing major damage and arousing strong public discussions, including those caused by contractor activities.	Reliable data available or no major accidents during the reporting period—Green. Fragmentary data—Yellow. Data missing or unreliable—Red.
6	Informing the public of environment-related conflicts and measures taken to resolve them within the areas of the company's operation, including subcontractors' activities.	Reliable data available or no environment-related conflicts during the reporting period—Green. Fragmentary data—Yellow. Data missing or unreliable—Red.
7	Established procedure in place for processing public complaints.	Yes, with feedback mechanism and procedure—Green. Yes, with either a feedback mechanism or a procedure—Yellow. Not present at all—Red.
8	Public availability of information regarding criteria 1–7 of section 1 for the reporting period in publicly accessible information sources.	More than 80% positive answers—Green. 50–80% positive answers—Yellow. Less than 50% positive answers—Red.
9	Public availability of information regarding criteria 1–11 of section 2 for the reporting period in the publicly accessible information sources.	More than 80% positive answers—Green. 50–80% positive answers—Yellow. Less than 50% positive answers—Red.