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**BETWEEN EVERYTHING AND NOTHING:
ORGANIZING RISKS AND OIL PRODUCTION IN THE ARCTIC**

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Abstract

The presence of a developed and visible risk management¹ (RM) and/or risk governance (RG) has become a symbol or an indicator of “good” management in all kinds of modern activities. Based on the case of an oil-producing company operating in the Russian Arctic, the purpose of this paper is to study organizing capabilities of risk concept for various practices within the company. If to follow the mainstream of the research on risk, in the extreme conditions of the Arctic context one would expect the ‘risk’ concept to be thoroughly penetrated in all and every practices/all over the company. However, the findings indicate that except for the practices aimed to build the public arena of the company, the majority of practices exposed to Arctic context challenges on daily basis do not even allow ‘risk’ into their vocabulary. Instead, due deeply inherited tacit knowledge of the context and intense entwinement of practices, their uncertainties are seasonally predictable and expected. As a result, risk governance within the company includes a range of various risk-substituting practices instead of an all-encompassing RM system.

Key words: *risk management, risk governance, oil industry, Russia*

INTRODUCTION

In modern society risk is considered “an inevitable element in a system that depends on human decision making and domination over nature” (Giddens, 1991 in Rosa et al., 2014, p. 86). As a part of broader risk governance framework (RG) (Rosa et al., 2014), risk management (RM) has diffused into almost any sphere of humans’ activity and has received much attention in various types of literature. Despite existing differences in the definitions of risk (Aven, 2012) and sound contingencies at the operational level (Woods, 2009), it has been highly institutionalized and discoursed (Collier, 2009). *RM of everything* (Power, 2004) has been considered a new band-wagon in the management field and its quality indicator (Beck, 1992), e.a. “the audit of everything” (Power, 2004, p. 60). It has become an

organizing activity itself (Adam, Beck, & Loon, 2000; Beck, 1992; Collier, 2009; Mikes, 2009; Power, 2004). Similarly, RG provides “a conceptual as well as normative basis» and “pertains to the various ways in which many actors, individuals, and institutions, public and private, deal with risks surrounded by uncertainty, complexity, and/or ambiguity” (van Asselt and Renn, 2011, p. 431-432). At the same time, RM is suspected to manage, in fact, rather *nothing* instead of *everything* as *thin simplifications* are “inadequate to reproduce domain-specific complexity” (Power, 2009, p. 850). Similarly, decontextualized RG frameworks (IRGC, 2005, 2008) are criticized for being “fragmented, path dependent, and sometimes incoherent” (Boholm *et al.*, 2012, p. 8).

In the era of new Arctic development, it is especially crucial to search for a framework which does not allow an option for mistake. Even without taking into account its international disputes, Arctic represents a complex critical mass of interests and risks (Aven and Renn, 2012). Oil-production industry in the Arctic can be compared with marine operations referred to as “the combination of system components that promotes error inducement, such that improving or changing any one component will either be impossible because some others will not cooperate, or inconsequential because some others will be allowed more vigorous expression” (Perrow, 1984, p. 173). Hence, depending on how successfully RG is arranged in the Arctic, *risk society* (Beck, 1992) may get a second chance.

Aven and Renn claim that “by applying a consistent and comprehensive framework, decision-makers will gain a more accurate representation of the sensitive issues, which in turn facilitates the understanding of the underlying concerns and conflicts as well as the selection of management options». (2012, p. 1562). Sidortsov (2014) emphasizes the importance of development of legal framework the RG should be built on, not least, to reconcile experts’ and lay-people’s views, that all possible risk-related decisions and micro-processes are performed under the umbrella of approved legal settings. However, Boholm *et al.* suggest that RG is “not necessarily an activity in its own right, but rather a component of organizational governance in general, and, even more generally, something that is embedded in the intricacies of organizational practices» (2012, p. 8). Instead, RG is claimed to be “a complex social activity historically, spatially, socially and institutionally situated” (*ibid.*, p. 14). and While being influenced by macro settings, «it is at the micro level that risk is actually managed”, e.a. “actual risk decisions are made by actual people at the micro level of the here and now, involving all possible micro- and macro-contextual influences” (Boholm *et al.*, 2012, p. 15).

Supporting the contextual situatedness of risk, it is unclear how exactly context influences the way people manage risks. So far the ability of RG to grasp contextual challenges has been questioned in terms of established institutional, practical, cultural or legal arrangements (Aven and Renn, 2012; Sidortsov, 2014; Boholm, 2003; Boholm *et al.*, 2012; Rosa *et al.*, 2014). Badri (1999) emphasizes that decision-makers can no longer ignore the influence of context specific factors (such as infrastructural and political conditions, government regulations and policy), especially when the present nature and

context of operations demand for structurally complex organizations and environmentally complex environments (international or global). The role of nature/natural context in framing organizational risk governance interwoven in various organizational practices has been neglected. At the same time, it is where nature still has its strongest influence on how humans organize their activities, the existing RG frameworks can be challenged and should be studied.

This paper advocates the relevance of a contextual and practice-based approach to organizational risk governance. The paper presents empirical findings from the case study of risk governance in a Russian oil-producing company operating in the extreme Arctic context. The case does not cover all possible RG situations and practices in oil production. However, due to complex climate conditions and infrastructural limitations, a range of company's activities has to be arranged in accordance with seasonal rhythms of nature. Hence, the case provides opportunity to study how specific natural conditions frame various organizational practices and, as a result, shape specific approaches to organizational RG. In particular, the research question is how the concepts of risk is used (or not used) in handling hazardous activities among different groups of professionals? Data collection was based on formal and informal interviews, document analysis, on-site and participant observation as well as the author's personal knowledge and experience of the study context. Surprisingly, where one would expect a sophisticated RM of everything, everything is turned out to be organized without an established RM system. The paper contributes to the discussion on the organizing capabilities of risk and shows that RM and/or RG may exist between the *everything-nothing* extremums. Allowing that a single case may be biased with cultural issues, Arctic is a global concept and therefore, findings may be especially relevant for the research focusing on various practical and institutional issues of RG in extreme environments.

In the paper that follows, the first section provides some reflections on the development of the concept of risk from previous research as an organizing activity. That is followed by the methodological chapter introducing the case and the context of the study. Section three demonstrates the main empirical findings. The final part is devoted to concluding discussion and suggestions for further research.

THE BACKGROUND OF THE RESEARCH: RISK AS AN ORGANIZING ACTIVITY

Risk Management of Everything and Nothing

In the 'new era of catastrophes' (Kunreuther, Michel-Kerjan, & Doherty, 2009) RM has become a part of operating philosophy with an extensive set of tools (Holton, 2004), powerful regulations (Collier, 2009) and a wide network of promoters (Adam et al., 2000). Exactly due to risk concept's ambition to combine all uncertainties in one super intelligent system, it is always subject to interpretations and

discourse of ‘selected risks’ (Power, 2004). The category of risk reflects “the response to uncertainty, which nowadays often cannot be overcome by more knowledge but is instead a result of more knowledge”; it “amalgamates knowledge with non-knowing within the semantic horizon of probability” (Beck, 2009, p. 5). Hence, probability empowers risk concept or *voices* it (Knight, 1921), while is itself subject to elasticity of time and space under consideration (Kunreuther et al., 2009). RM hysteria turns organizations inside out making internal control “a kind of organizational common sense” (Power, 2004, p. 25).

Mikes (2009) introduces the notion of calculative cultures that “serve as important constituents of the fit between risk control systems and organizational contexts” (p. 20) through the ‘risk management mix’. Namely, she suggests two contrasting models of corporate governance, e.a. ERM by numbers (quantitative enthusiasm) and holistic ERM (quantitative scepticism). Importantly, holistic ERM “requires risk officers to possess considerable knowledge of the businesses whose risk-taking they monitor” (p. 36). Apparently, the more sophisticated that knowledge, the more challenging the task for risk managers is depending on how well they intend to do their job seeing into details. Holton referring to Bridgman’s ideas of ‘operationalism’ reminds that if all knowledge of the world stems from our experiences, then any concept “is synonymous with the corresponding set of operations” (Holton, 2004, p. 23). In particular, operational risks referred to as “a collective name for different types of risks that could trigger failures [in banks]” (Wahlström, 2006, p. 502) are “able to capture as many events as possible” (p. 499). In this respect, the events that actually trigger risk should be emphasized.

Power (2009) points that the RM of “nearly everything” is “less about managing risk as it is formally understood and more about managing organizational rhythms of accountability, and auditable representations of due process” (p. 854). In tune with that, he encourages the need to shift from mechanical approach to ERM towards its “dynamic construction involving values and the situational experience” (ibid.). He argues that the ambition of the ERM model “to represent the organization as an integrated whole” fails because of “smothering normativity of the accounting and auditing logic” which is “a huge barrier to a richer and more meaningful ecology of values within the RM process” (p. 851).

In this respect, the concept of RG represents a paradigm shift in the *everything-nothing* dilemma. According to van Asselt and Renn (2011), RG addresses the importance of uncertain, complex, and/or ambiguous risks which are usually represented as simple ones. While extending the scope of stakeholders, RG is built on rational communication and inclusion, integration and reflection principles, e.a. not ‘*everything*’ but in terms of needs and requirements. RG aims at dealing with systemic risks which “require a more holistic approach to hazard identification, risk assessment, and risk management because investigating systemic risks goes beyond the usual agent-consequence analysis” (van Asselt and Renn, 2011, p. 436).

Beck (2009) emphasizes “how limited the claim to control of modern societies remains in the face of natural forces” (p. 50); we can take preventive measures but we cannot master the power of nature once and forever. Beck talks about ‘big business’, ‘modernization risks’ which are ‘a bottomless barrel of demands, unsatisfiable, infinite, self-producible’ (p. 23). Beck (1992) does not address the delegation issues of risks as they “outpace conventional attempts to manage them” (Rosa et al., 2012, p. 5). Instead he wants such risks to be discoursed and reflected. In case we cannot or do not intend to move away from a nature-governed area, the consciousness of the *risk society* should justify the implementation of RM and/or RG system. According to Sidortsov (2014, p. 178), “the governance of operational risks related to day-to-day oil and gas activities is better left predominately to more conventional phases because the principal decision to proceed with the risk-laden activity has been made». However, how such a RG system in the nature-exposed context should look like is unclear.

Risk Management of Some Thing(s)

Smith and Fischbacher (2009) look at risk as a borderless phenomenon and point to the lack of academic attention to travel of risks across the various borders, while “in practical terms, the interplay between elements of ‘risk’ at the various intersects generates some interesting issues for ‘organizations’ to deal with” (p. 3). In other words, due to trans-disciplinary nature of problems the manner in which risks are generated, escalated and transmitted across the organizational and other boundaries has changed. Embedded in all kinds of organizational routines, the governance of risk is blamed for not standing out as an organizing activity. As Boholm *et al.* (2012, p. 15) put it themselves:

“...people in organizations relate to and manage specific risks. They do not relate to risk in a general or generic way. Officials, experts, managers, and other practitioners do not engage with risk in itself or with abstract versions of risk. They engage with particular risk issues that are embedded in the practical, everyday, and interpersonal world of their tasks and responsibilities.”

Miller, Kurunmäki, and O'Leary (2008) argue that “management of organizations is rapidly being transformed into and formalised around the management of risk, while much of the management of uncertainty occurs through a variety of ii of RM” (p. 942). They argue that “management of uncertainties happens in large part at the boundaries or margins or conventional entities and practices” (p. 962) and must include hybrid practices, processes and expertises as “it is through them that uncertainty is actually managed rather than formally represented as manageable” (p. 963). Investigating the hybridization processes in accounting, they emphasize the mechanisms through which accounting can interact with other types of expertise to better handle uncertainties and risks as “the hybridising of the calculative practices of accounting remains one of the most influential ways of rendering uncertainty and risk visible” (p. 962). However, Miller *et al.* look at hybrids as “a challenge to RM, for they typically reside beyond the boundaries of existing entities, and do not lend themselves

readily to traditional ways of sorting the world”; they reside where there is ‘much of the action’. This corresponds to the intertwining of practices shaping organizational risk governance according to Boholm *et al.* (2012). As they put it themselves, RG “appears to be interwoven with the full scope of organizational activities from budgeting or managing operations, through strategizing or branding the organization, to individual and organizational learning” (Boholm *et al.*, 2012, p. 16).

Similarly, operational risks are reported to absorb a hidden competence value within the company; “low levels of operational risk mean that error propensity is low, which is itself a consequence of people doing things right” (Wahlström, 2006, p. 512). Disregarding that common risk understanding is problematic, Weick and Roberts (1993) show that people can agree on action. It is specific time and space that builds prerequisites for a heedful action. So, in a high-risk context like oil-and-gas projects, if one cannot predict the future, there must be a room for adaptability improvement, e.a. experiment (Hedberg & Jönsson, 1978).

Building the Case: Risk Management in the Nature-exposed Context

The existing literature on risk has been addressing the issue from the two different ends. For organizational researchers the RM covers all possible events on the daily basis and therefore is the subject for delegation (Mikes, 2009). At the same time, the danger of ‘not-yet-events’ associated with catastrophic events has also been on the agenda for last several decades (Beck, 1992, 1999). At the same time, due to their destructive ability they are subject to discourse and reflection of every human. The supporters of ‘small managerial stuff’ approach can see the consequences via institutionalized forms of RM but have no access to the sources of risks. In contrast, we can easily point to most of potential disaster sources and never face the disaster itself. Each of the approaches to some extent admires the ‘everything’ aspect of RM. To complete the picture, to incorporate *all* possibilities, one would need to bridge the two streams of literature. For the study of risk as an organizing concept the best research context is the one where the nature has its most power to influence daily routine practices. In this respect, the case of an oil-producing company in a fragile and severe context of the Arctic can be considered as critical (Flyvbjerg, 2006), e.a. “if this is (not) valid for this case, then it applies to all (no)” (p, 230).

CASE STUDY: APPROACH AND ANALYSIS

Presentation of the Case and the Context for this Study/The NMNG² case and the Arctic context

Based on the intentions of the paper to emphasize contextual specifics of organizational risk governance, the selection of the case was arranged in three steps: geographical context, industry, a company. First, the Arctic context is characterized by various kinds of challenges and therefore is a

fruitful ground to study the *hard work* of risk governance. Beside known environmental issues, the Arctic context still has a weak infrastructure. This makes logistics in this area, as in terms of supply so delivery to the market, extremely challenging and risky. Second, relatively stable demand for oil allows focusing more on contextual challenges. Hence, an oil-producing company with significant (everyday) logistics challenges was desired. Third, while selecting a particular company, a *critical case* (Flyvbjerg, 2006) was preferred; the one which allows “to achieve information that permits logical deductions of the type”, e.a. “if this is (not) valid for this case, then it applies to all (no)” (p. 230). In this respect, the NMNG as a rather young private-owned company in the Russian oil-and-gas industry, can be referred to as a successfully functioning enterprise on the basis of its unique approach, unaffected by big political games and not overloaded by the Soviet past. At the same time the company has over 15 years in business demonstrating ambition and real results from its risk management policy. It has been several times the NMNG was rewarded the “Best Russian company” with regard to “industrial security, work safety and environmental control”³. Hence, if this company does not do this properly, well then nobody else [in Russian Arctic] does.

The NMNG company was set up in 2001 for the purpose of installing infrastructure and bringing into development oil fields within the territory of The Nenets Autonomous Area⁴. The headquarters of the company is located in Naryan-Mar, a small port city located 110 kms from The Barents Sea, e.a. in the cold desert (tundra) natural and climatic zone called Nenets and the very heart of the Timan-Pechora Oil and Gas Basin⁵. It is the northernmost company of the group. Today the company holds the licenses to sub-surface usage for the purposes of exploration, field work, and the production of hydrocarbons in this area. Several oil fields are strewn across 50 km² tundra area. To control the oil quality and to ensure market flexibility, sea transportation of oil from the offshore terminal was the preferred option as opposed to a state-monopolized pipeline system. The oil production process is based on the oil production plans delivered by geologists, e.a. how much oil they will be able to extract in a certain period. Based on the production plans, other departments have to plan their work – supply and logistics, maintenance, transportation, sales, HR, and others.

The area is characterized by plenty of water basins, lakes, rivers, and marshland. Sea transportation cannot be widely used for supply purposes, as in summer there are no roads. Neither is winter naturally the best time for navigation due to storms and drifting ice masses. For onshore logistics the construction of a fixed road is risky and complex due to very unstable ground conditions. Moreover, this also requires a huge financial investment. A logistics solution involving the construction of ice-roads in winter to connect the warehouse with every field is considered a more reliable solution with regard to distribution of the financial burden on an annual basis and the rather unstable political and market situation.

Supply management is based on a 3-year sliding plan. During winter-spring all necessary supply materials must be ordered in order to be delivered to the company’s warehouse by railway during the

summer period, transported to the production sites by trucks in wintertime and to be actually used during next winter. However, in spite of the rather long winter season from October-November until April-May, the construction of the road cannot be started with the first snow as well as a built ice-road may collapse with the first signs of spring. Consequently, the ice-road to the oil-fields is built and used for only 3-4 months every winter. Importantly, the challenges arise not when ice-road is there (though it needs constant maintenance and has a range of significant limitations), but when it is not. All activities which has something to do with physical context (maintenance of pipelines, materials and people delivery to the oil fields, etc) *suffer* from seasonal dependence and have to plan their work accordingly.

The oil is stored on the offshore tank farm which is connected by an underwater pipeline with a fixed offshore ice-resistant off-loading terminal. When the amount of oil is sufficient to make up sellable cargo load, a leased tanker docks alongside the offshore terminal to be loaded. The ships can then sail to a floating storage and offloading terminal for larger oil loads or sail directly to Europe. While offshore part of logistics is also subject to weather conditions and would be interesting to study as well, this paper does not focus on the sea part of oil transportation. After oil offloading to the tanker it is sub-contractors' responsibility to deliver it to the customer, and therefore is not formally part of the NMNG's risk governance system.

The research approach and the role of the researcher

While case-based studies are often regarded as “the most interesting research” (Eisenhardt and Graebner, 2007, p. 25), it is crucial for researcher to actually gain access to the experience of those in the research setting (Fielding & Fielding, 1986). In this respect, following Boholm *et al.* (2012) approach to study situated experiences, the intention was to study what people actually do when they manage their daily routines. Arctic region is a special area to live in, and it is hard for an outsider to grab and understand all aspects in a short time. The contextual knowledge of the author and the author's personal experience of living in Naryan-Mar for 14 years (1983-1997) facilitated and gaining official access to the company and, not least, employee's willingness to talk and share and framing of the research approach (“I am one of you”). The trip to the company's site in 2012 provided an opportunity to interview people directly in context. Hence, the discussion of findings is based upon authenticity with regard to the interpretation of data and observations.

Data collection and analysis

Primary data collection was planned based on several interviews with external experts about the company and the projects as well as telephone conversations with several employees. External experts' opinions were helpful to select the NMNG as a *critical case* (Flyvbjerg, 2006) and to get general overview of the company's activities in the region and how it deals with risks (outside

perspective). Informal telephone conversations with employees prior main data collection were necessary to outline approximate list of activities to study and key departments to talk to. Some specialists were contacted based on the recommendations of their colleagues, while others were just approached by chance and interviewed on their agreement. Hence, it was a partially random sampling. As a result, seventeen in-depth semi-structured interviews with managers and different specialists from NMNG were carried out during 2012-2013; twelve in the main office in Naryan-Mar and five in the Moscow office, including two group interviews.

The sample included risk professionals (those officially directed towards administering the risk frameworks) and risk decision-makers (line managers and people working with operational budgets). Preliminary work was done to distribute possible problems amongst specialists from different areas. Part of the method was to find preoccupations that people put in the practices the literature calls 'risk management'. Based on the interview data several practices were identified.

Tape-recorder was allowed to be used once when interviewing the HSE manager. Alternatively, hand-written notes were used, and the summarized main points checked through by each interviewee right after data collection. Direct observation of differences in the daily routine of various divisions. Due to openness and trust between the researcher and the interviewees, the ability to inspect off-hand such things as risk report cards, oil balance, risk register, road maps, etc. sufficiently simplified understanding. Table 1 presents an overview of the fieldwork undertaken for the case study.

Table 1. Summary of the fieldwork.

<i>Study period</i>	2011-2013
<i>Textual analysis</i>	<ul style="list-style-type: none"> • Websites • Internal documents • Media (specialized journals, newspapers, etc.) • Handbooks and standards (Risk Register, Risk Matrix, etc.) • Budget
<i>Interviews</i>	<ul style="list-style-type: none"> • 17 semi-structured, including 2 group interviews • Informal discussions with external experts • Preparatory telephone interviews with employees • Informal conversations with locals
<i>Observation</i>	<ul style="list-style-type: none"> • Two weeks on-site observations, during (telephone calls and interruptions due to urgent issues) and between interviews (informal

	<p>talks between employees)</p> <ul style="list-style-type: none"> • Participation in conferences for practitioners • 15 years of personal experience of living in the study context
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EMPIRICAL FINDINGS

The purpose of the data collection process was to identify risk management rootlets in various divisions and to understand the whole RM system. The general impression from the interviews is that as is the case in most of oil and gas companies nowadays⁶, a sound RM system is in place in the company even though it only covers a limited set of practices. The sampling based on the concept of risk revealed distortion between the practices. There are distinctions in the frameworking and naming of practices in the company. A set of practices can be induced which are risk-focused or even risk-obsessed including risks as integrated parts of their procedures. As a result, the distinction can also easily be made based on the use of RM tools. However, the majority of other non-risk-grounded practices do not actually even use the word ‘risk’ as an organic part of their vocabulary. Surprisingly, the majority of interviewees even felt confused by the word “risk” saying that “We do not have any risks here. You should talk to HSE or maybe finance. Risks are their patrimony”. In order to construct a dialogue, the word ‘risk’ had to be displaced by such related terms as ‘uncertainty at work’, ‘dangers’, ‘accountability’, etc. As a result, they describe practices based on the ‘risk’ concept. So, while risk is not a part of their vocabulary, instead, it is a part of their activity, though implicitly. Remarkably, the set of non-risk-framed practices may be extended due to additional interviewees, while the share of practices referred to as risk-framed does not have the opportunity to grow so much. The identified everyday practices of all groups with regard to context influences are further described in this section and summarized in Table 1 prior to the discussion.

Risk-emplaced practices: Health, Safety and Environment, Insurance, Finance.

Health, Safety and Environment (HSE) is the only group in the company officially devoted to working with risks. It consists of several divisions: the division working with staff conditions and industrial safety, the risks and assets insurance team and the division working with ecological risks. For all these divisions risk is the main concern, the key word and the object of management. Remarkably, the model originally adopted from the company’s foreign shareholder based on their oil production experience in Alaska flourishes in Russia. As published on the official NMNG website, the company has twice been rewarded - as leader in production safety (2010) and as laureate in the contest “Top 100 companies of Russia, Ecology and ecological management” (2012), while the General Director of the Company was given the “Ecologist of the Year 2012” trophy.

Plenty of norms and standards are imposed by Russian legislature concerning the field of industrial and environmental safety. Following the Russian Federation Government's Resolution from 08.01.2009 "On incentives to reduce air pollution with associated gas flaring", NMNG has implemented a "programme to increase the level of associated petroleum gas utilization". This programme includes activities enabling the Company's average level of associated gas utilization to increase from 19.67% in 2010, up to 95%, in 2014.

They have in place a whole arsenal of tools and procedures associated with traditional risk management, in addition to a well-functioning extensive information system through the observation cards available for all cases. Every employee is obliged to inform his or her manager or the HSE team about any detected potential or factual damages; or just place a card in any of the observation card boxes which are checked twice a day. All reported risks are then analyzed and the more significant ones are placed in the Risk Register and the List of Dangers with strong support and contributions from other departments. However, the information from below is not the only source of information for the group. In addition, once a year, every division is obliged to send in their updated list of risks to inform about new risks and also those risks which are no longer relevant and can be deleted from the main Risk Register. Moreover, the company is certified according to international standards of industrial and environmental safety with a recertification audit every three years. However, every year they initiate the compliance audit "to evaluate the efficiency of management control". There is also an internal commission on analyzing and identification of risks consisting of managers and representatives of different divisions. In case a conflict of interests arises between divisions (when HSE requirements, for instance, slow down the production process), the priority of safety goes first as stated in the Policy of NMNG:

"Any other company could have been audited once and forever. But we do not want just to buy a certificate and forget about this all. So, doing this regularly we force ourselves to work with internal documentation and re-evaluate our management control system. Employees' health, equipment safety and reputation of the company are crucial for us" (Interviewee 11).

80% of division budget is devoted to fire protection and emergency response procedures. In addition, the team also executes evaluation of risks of the company's sub-contractors.

"The sources of risks are written down in the Risk Register. Of course, the register can never be fully complete. Some risks are always left out. The work is considered completed when all reported risks get registered while the most dangerous are insured against" (Interviewee 11).

The insurance of risks and the property division do not themselves identify the risks needing insurance. Based on the list of risks received from HSE, an external adjuster is invited to evaluate the maximum possible loss based on the official statistics for the region and for the company. Remarkably, the older the object, the higher the risk is. What is more, only 'probable' events are considered:

“Of course, we can imagine even an iron-fall, but it is rather unlikely, isn’t it? So, it is enough to consider storms, winds and explosions. More than enough (laughing)” (Interviewee 7).

The finance group (The economic-planning and accounting departments amongst others) does not get assessed by HSE. However, as the finance sector has acted as the cradle for risk management, their set of instruments to manage financial and reputational risks is in place. Evaluation of the financial result is oriented towards the production plan and is regularly reported to the shareholders; the plan is reported quarterly, while the actual itself is sent out on a monthly basis. Based on the plan, scenarios are built to evaluate the net profit based on what is known and what is not:

“When we do factor analysis, the tax on natural resources production and export fee are considered to be uncontrollable factors, while the production level is taken as controllable, one with which we can do something. Our shareholders should see that we are able to control at least something and we do this.” (Interviewee 16)

The idea of management control through the RM format has been induced into other departments. The commercial department responsible for sea transportation of produced oil was in 2011 forced to elaborate its own risk register for the three stages related to sea transportation, namely and orderly - mooring and cargo operations of the shuttle-tankers at the Varandey terminal, sea voyage, and mooring and cargo operations at the floating storage unit Belokamenka. As a result, the three stages were assigned by 14 different types of risks handled by 12 preventive or operative actions. Remarkably, 12 of 14 identified risks for the offshore part are triggered by the same source of risk – “complex ice conditions”. What is more, the set of preventive or operative practices for different risks repeats itself. For example, engaging more powerful ice-breakers is suggested as a solution for 9 different risks; the three-party agreement with shipping company and the Scientific Research Institute of The Arctic and The Antarctic is mentioned for 7 risk situations, while conformation with “Safety recommendation” deals with 5. Combined exercises with the partners are expected to help in three known cases.

Hence, for the departments dealing with calendar time, risks are perceived rather as static things, as objects, which can be controlled over time. In simple words, they are there to satisfy formal purposes via visible and controllable RM system. The risk observation cards initiated by the HSE group are a good illustration of their willingness *to fix risk* in order to make it manageable over time. Of course, some of risks they detect require an immediate response. But most of the risk situations are in fact rather static, e.a. once kept under control they do not bother the management so much anymore and later on can even be removed from the Risk Register. At the same time, many of them simply pass the time in the Risk Register demonstrating a job well done by the team; the more the better. On the other hand, the well-functioning risk observation cards system can be considered as an attempt to pass responsibility over to other divisions and equipment. The latter are obliged to report about any fact containing potential risk and deserving attention. These groups of professionals are armed with different kinds of RM tools for which ‘risk’ is the buzzword. These groups are not exposed to

contextual challenges, but their work is organized around RM practices while the world consists of risky objects which have to be identified and controlled in order ‘not to happen’. HSE and the amount of money a company is ready to spend on this field has become a trademark of the oil and gas industry, an internal arena for building an image of a good company in the public eye. This explains why the voice-recorder was allowed during the interview with HSE and supported by rather polished speech based on neatly-elaborated documents and registers.

Risk-displaced practices

In general, this group unites all divisions not related to the previous sets of practices. These services can be placed *between the production and calculation of profit*. Following the same *do no harm* [performance] principle, these services are mostly exposed to the context specifics and unpredictably changing weather as well as deviations in production levels.

Logistics and supply practices are determined by the implemented logistics solutions. Such unique solutions as ice-roads and an offshore terminal pose significant challenges for the practitioners. If the winter road collapses earlier than planned due to early snow and ice melting, all connection with the fields over land stops until next year. In this case, all necessary unsupplied deliveries of materials and resources, as well as people transferring to and from the field will be arranged by helicopters. It is worth noting that helicopter transportation is approximately 15 times more expensive than truck deliveries. Hence, for the logistics and supply specialists this is definitely a situation to be avoided through better planning.

Seasonal deliveries caused by lack of infrastructure due to landscape complexity imply the construction of ice roads. Due to the time for winter deliveries being extremely limited, from January until the middle of April, in order to secure the duration time of the ice roads 8 fast bridges have been constructed. The configuration of ice roads is determined every year before construction, and an alternative bridge can be used in case spring starts earlier than planned. In addition, those responsible for transportation contact the supply managers in the middle of March to speed up the required deliveries in order to be ready before the *natural deadline*. Probably, this necessity to always keep their eyes on the ball encouraged retaining the supply function within the company instead of outsourcing which has otherwise gained popularity in the oil and gas industry.

Surprisingly, there is no *budget for risks* (losses) within any of the divisions in this group. In order to secure themselves from unexpected costs and budget overspending, they implicitly account potential risks. This is done to *fix* the time:

«In the budget time is a constant measure, while in transportation it is not. So, in order not to interrupt production, we have to deliver at whatever cost – this is sorted out later on. However, we can increase the delivery time or reduce costs. What is extremely important is the compliance with

National State Standards about packaging to grant the extension of materials' service life" (Interviewee 5).

Remarkably, in spite of the logistics people having to deal with multiple subcontractors and suppliers, it is forced to change suppliers regularly in order to clear themselves of suspicion of corruption. In accordance with cost minimization strategy the list of suppliers with the minimum price is usually selected. The list is regularly reviewed and modified to impede illicit payoffs. However, the two main suppliers providing unique equipment are kept from year to year. This allows saving time on purchasing and deliveries, as well as reducing the risk of equipment failure.

The *offshore* part of the *logistics* has its own challenges which are facilitated by *contractual agreements*. Two weeks before vessel delivery to the loading terminal, a person responsible for sea transportation consults the Institute of Arctic and Antarctic about expected ice conditions. Based on this prognosis they extend the planned transportation time by 3-4 days to avoid delay in loading and transportation times due to weather and other conditions. This helps to avoid demurrage having to be paid to a buyer in case of late oil delivery to the transshipment floating terminal. At the same time, the causes of demurrage do not need explanation:

"There are contextual challenges in any area. Somewhere this may be capacity, here we have ice" (Interviewee 1)

Remarkably, a potential source of some stability, the relations, is also not used properly. The interactions with sub-contractors are built differently within the group. The commercial department responsible for sea transportation of the oil relies on their risk management system. Based on the agreement with the Varandey terminal, ice-breakers have been a requirement for any loading operation at sea even if there is no ice:

"Everybody is smart enough to understand that drifting ice in case it occurs represents a huge danger. Nobody wants to sink or damage a ship or the terminal or least of all harm people. Therefore, disruption of oil loading processes is a normal thing. If a captain sees ice (on the ice map), he can take a decision to unmoor, move to the other side of the terminal or just to wait for a way out" (Interviewee 2).

Remarkably, the risk matrix for the commercial department responsible for sea transportation of oil was only first developed in 2011. However, it does not seem to be of much use to the employees:

"There are established processes in the company which have worked well so far. As for the risk matrix and risk register... We are doing the same things we have done before. But now they are just written down on the paper". (Interviewee 2)

"There is no formal accounting of risks in our work. The risks are negotiated during the discussion round or otherwise handled during the work process [transportation]. If we do not know how much to insert into the budget, it is better not to insert anything so then we can better see our performance". (Interviewee 1)

"Cargo loss at sea value is important for our sales contracts. We insure the loss and responsibility. That's it. We mainly rely on our subcontractors' risk management systems. They don't share so much

in fact. In the High North... anything can change every day, but the system still remains unchanged. [...] If production volumes grow, we are ready. But not the company as a whole” (Interviewee 13).

Even though some groups start their work after oil is produced, they can still hinder production if the produced oil is not loaded onto the ships in time due to drifting ice, for example. It is shared by everybody that if the weather is bad today, it will probably not improve tomorrow. In this case the role of the monitoring service [located in Naryan-Mar] for *capacity planning* is illustrative:

“Our controllers located in the fields evaluate the situation every two hours. In case of bad weather, when ships cannot discharge from the terminal, there is a danger of oil overflow from the reservoirs at the terminal. To avoid this, there are additional reservoirs at the fields’ location. We just take a calculator and solve the problem “How much extra time is there in the reservoir?” Based on this we can ask the operators to twist the valve a little bit and give the transport people more time to wait”. (Interviewee 15)

It is worth noting that a lot of the numbers counting here are taken from the state standards developed by the Ministry of Oil in Soviet times. The monitoring services base their calculations entirely on those standards:

“Initial calculations make such a valuable gift in terms of time. For example, the onshore reservoir park has an initial capacity of 1000 cubic metres. Reasoning from the production plan and known technological characteristics such as the pipe range, I myself calculate the approximate time needed to avoid emergency situations. Let’s say, a couple of hours will be enough. Therefore, I fill in the operational procedure with 800 cubic metres, and not 1000. It is crucial that such a person is present here from the very beginning and knows all the characteristics to correctly identify the space necessary for maneuver”.

“The oil temperature must not exceed 60 degrees according to the common technical regulation. However, we internally set it for 50 in order to be able handle the problem before the oil is damaged. Why 50 and not 52? Well, 50 looks better (laughing). [...] But sometimes you really have to know the whole chain of equipment and allow for capacity based on their common arrangements and not their individual capacities. You dare to know”. (Interviewee 17)

The low winter temperatures require that all pipelines are heated during cold periods. This results in 50% of electricity being spent on heating. Remarkably, there is no exact date for turning the heating on and off:

“We just see when the winter is really over, when the temperature outside has been at an acceptable level for a while. Then we can turn off the heating of the pipelines. In autumn one should be more careful as a temperature jump is more probable. But anyway, if the system is ready, we have enough time to push the button”. (Interviewee 10).

Disruption in electricity supply may result in shutoff of the production process. Backup power can provide only some time for reparation in case of an accident. To avoid serious disruptions responsibility is conferred on *maintenance* and *monitoring* services. Hence, reports from controllers are received every day according to the regulation. Examination of electrical lines is held twice a year in addition to planned examinations in compliance with the “Provision of technical maintenance system and electrical installations repair in oil production and drilling” elaborated by the Ministry of oil industry in 1988. What is more, an energy audit is executed every 5 years. To meet the logistical

challenges, the necessary equipment is maintained and prepared in the summer period to be used in the winter, while the maintenance and repair of the lines take place in winter when ice roads can be utilized. Remarkably, the company has introduced measures to increase the reliability of power supply at the suggestion of the main Company; special attention is paid to high-water periods.

However, what is common for all sets of practices is that the fulfillment of the production plan is the main parameter for performance evaluation also providing the basis for the incentives system. Interestingly, the bonus system is common to all divisions and is subject to realization of the production plan. The List of Incentives allows for a 20% bonus in salary for the fulfillment of production plan on time and without quality complaints; execution of an additional or complex task or mastering new technologies provides a 25% bonus. The amount of the minimum penalty is 25%, while non-compliance with a plan costs employees 50%. Therefore, even in the case of geological mistakes when less oil is extracted than planned according to geological calculations, the bonus is reduced for all divisions in accordance with the scale:

“In case the variance in oil balance is negative, we lose 5%. But the production people will be charged with much more” (Interviewee 4).

As a result, for those divisions for which risks are clearly defined and announced, the disruption of production is seen as the main evil which can happen. So, the main task then becomes working to follow the production process rather the ‘do no harm’ principle.

The empirical findings with regard to how various groups of professionals within the company utilize the risk concept are summarized in Table 2. Therefore, for the majority of practices within the company, ‘risk’ is not an organizing concept; other things organize their activities. The organizing task is already incorporated in other terms such as ‘maintenance’, ‘logistics’, ‘monitoring’, ‘performance’, ‘timeliness’, ‘capacity’, etc.; in other word in much more positive concepts rather than the potential things which can happen and be associated with the notion of ‘risk’. To put it simply, the word ‘reservoir capacity’ is a more combined term than ‘risk’; everybody knows what ‘capacity’ means and therefore can be referred to by many different actors who can easily define their role in ‘reservoir capacity’. ‘Complex ice conditions’ is simply an *all-inclusive* phenomenon for the commercial department, while various dragged in kinds of risks do not suggest any new method for their management. The process is so dynamic that it is easier to follow and play it by ear than to take a snap shot at fixing the risk concerned and putting an effort into holding it. It is more operative and more reliable to take a calculator and make a call in order immediately to know how much time is left and what should be done. In other words, it is about other things, actual things that themselves can be managed without any other additional concepts and registers. Practice is easier to describe with familiar terms instead of an abstract concept such as risk which always needs clarification. But there are also unintended effects from the bonus system or the production plan and therefore no need for the

special system to address the uncertainties being faced. In this respect, performance according to the production plan proves a much more uniting concept as opposed to risk which will vary greatly for different people in so many ways. Remarkably, the specialists from this group use concrete examples of recent events or current dangers; many of the interviews were interrupted by telephone calls needing urgent response, while the interview with the HSE manager was interrupted by the lunch break.

Table 2. Risk-related practices at NMNG.

	Risk-emplaced practices	Risk-displaced practices
Departments	Health, Safety and Environment; Finance, Insurance	Logistics, Material-technical Supply, Transportation, Maintenance, Energy supply, Production (geologists), Monitoring (of pipelines and reservoirs), Declaration (sales),
Practices	Governance of risks related to health, safety and environment, Assessment and management of financial and insurance risks	Planning and delivery of materials and equipment and people transportation to the oil-fields Work with sub-contractors and 3PL Transport maintenance and management Equipment and materials quality control Calculation of carrying capacity of pipelines and reservoirs Temperature and chemical control of oil Market analysis and sales planning Customer service Production and off-loading planning
Vocabulary	'Risk' as an explaining concept Extensive use of various RM terms (risk assessment, risk analysis, risk registration, risk reports, risk situation, accident, etc.)	'Risk' as a confusing concept, not used Extensive use of more activity-laden terms (capacity planning, transport routes, transport plans, high/low temperature, additional heating of pipelines, urgent delivery, ice-road bridges construction, allowance calculations, etc.)
Vision	Risk as an object to avoid (calendar time) Risk is emplaced	Risk/danger as an event to accept/expect (event-based time) Risk is displaced
Type of coordination	Reporting system Audit Panels	Mutual adjustment (telephone, meetings, e-mail correspondence, observation)
Management tools	Extensive risk management tools (risk evaluation, expert panel, risk register, risk matrix, risk cards, scenario planning, factorial analysis, etc.)	Contingency planning (capacity planning, safety stock, supply plans, bonus system, budget)

CONCLUDING DISCUSSION

So what is the management of risks in the nature-exposed context is about? Naturally, the more unstable the context, the more sophisticated a RM system would be expected. Oil and gas development is a high-risk industry which, given the conditions of the Arctic context is attributed to all possible kinds of risks - natural, ecological, planning, financial, etc. Surprisingly, the empirical part demonstrates an interesting case: the discourse battlefield is very limited. Located in the same complex context, the word 'risk' has very little place in this context. According to Rosa *et al.*, "we can

construct scenarios that serve as tools for us to anticipate consequences and to adjust, within the constraints of nature and culture our course of actions accordingly” (2014, p. 2).

RM in a nature-exposed context is the management of observables. In banks you cannot see risks with your own eyes; you can only see them on paper. Therefore, conventional RM happens in places far away from the real world, inside offices: nothing [bad] happens while numbers are not considered as bad. However, these formal tools of RM neither find their place in most real practices, nor in the vocabulary. Due to physical access to their expected dangers, the risk-free employees do not have to look at the graphical image of their work as they “see when ice is coming”, “know when ice roads start to melt”, “feel when the winter is over”, etc. As a result, there is an evident futility of the risk concept in the extensive set of practices; the word ‘risk’ is a confusing concept for them. It does not mean it is not there - it is displaced by other things. For them the time can be considered as event-based (seasonal operations with unclear time limits) while risk is a part of practicing doing things; a practice they know will happen one day. They may be many other things instead. They draw a distinction between risk and uncertainty by accepting uncertainty while not accepting risk. They cannot get rid of the operational risks in the studied case – the ice will come, the spring will come and destroy the roads – until we change the technology, the solution itself. However, technological development may well not result in total elimination or even reduction of risks (Perrow, 1984). In a sense, the things they talk about are quite predictable based on a lot of tacit knowledge. This constant requirement for preparedness demands for a more flexible management system, constantly ready for mobilization. Nature functions as the ‘trigger for risks’. Due to the severity of the conditions, managers are prepared for those *bad* things to happen – drifting ice, snow storms, and breakage of ice-roads – which are considered normal or, simply, just considered. These ‘normal bad things’, or ‘latent side effects’ according to Beck, cannot just “be limited and distributed away so that they neither hamper the modernization process nor exceed the limits of that which is ‘tolerable’” (Beck, 1992, p. 19).

The findings support the idea of risk as an immaterial, intangible type of thing which therefore needs an object. It is not a positive thing. It is a potential thing. However, in a situation where all the potentialities in the researched context are known, an object does not necessarily have to be coupled with risk. Instead, objects are transformed into more sensible things everybody can understand, such as performance. These findings go against the idea of risk management power and even necessity. Having looked at RM by numbers and RM by values, attention needs to be turned to the third type of system – RM by practices, or simply good old management. This it is about being a unique organizing core for practices, dismissed from the need to have a formal system of RM per se. With regard to practical implications, it may be considered as a release of funds and their redirection to competence building, for example. For management science, it is an issue of what type of managers to invest in – into universal types able to function within *registers* and *matrixes* and able to be shifted between

various units, or tacit knowledge holders capable of acting over the limits of registers and matrixes and rather consisting of long-term investments?

This paper supports the idea that the palette of practices governed by ERM is much richer than mainstream literature has represented so far (Mikes, 2009; Power, 2009). However, the findings show that when ‘situational experience’ deeply grounded in tacit knowledge of the context is large, there is no need to speak the risk management language. The word risk itself has little place when things are present, observable and meaningful. Instead, ‘risk’ is for things that are not there. In other words, if [a good] RM of everything represents utopia, while risk management of *nothing* is not legitimate anymore in some industries, there is only one option left – *risk management of something*. In this respect formal RM can be considered rather a side-effect of other sets of practices, and should therefore be opened up for further debates within a broader RG scope.

Hence, RM in the nature-exposed context is not about “the ability to design different futures” and mastering nature. Instead, it is about experiencing future by following natural cycles and harmonizing business processes with natural rhythms of life. The spring will come and the roads will melt - the *risk objects* are known (Boholm and Corvellec, 2011) but the time of “dangerousness” is not, e.a. when exactly the road will melt and managers will have to manage. Surprisingly, but even complex things tend to be sometimes explained “through nothing more extraordinary than the arrival of summer” (Scott, 2000 in Adam et al., 2000, p. 33).

As a suggestion for further research, it would be interesting to make a comparative case study. Comparative research of oil-and-gas producing companies located in different countries allows taking new theoretical perspectives into consideration. For example, cultural theory of risk.

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¹ Here and further “risk management” is referred to the term used by practitioners and in practice-oriented literature. “Risk governance” is considered as rather academic term so far.

² Naryanmarneftegaz LLC. After the Russian company LUKoil has taken a 100 per cent stake in the joint venture with ConocoPhillips in 2012, the company was renamed to Lukoil-Severneftegaz.

³ Source: www.nmng.ru.

⁴ Source: nmng.ru

⁵ A region in the Komi ASSR and the Nenets Autonomous Okrug (formerly Nenets National Okrug), Arkhangel'sk Oblast. Total area, 376,000 sq km; by the year 1987 there were found more than 75 oil deposits and more than 230 natural-gas deposits. The types of petroleum found in the region are usually of good quality.

⁶ Based on the discussions with experts from several oil and gas companies.