

Kazakhstan experience in adopting NEBA within its legal framework

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ABSTRACT

Kazakhstan's legal framework concerning oil spill issues has been reviewed and updated during 2015-2019, driven by the adoption of good international practice. Ensuring the full response toolkit is available and options are chosen to mitigate the overall impact of an incident were critical principles. The Oil Spill Preparedness Regional Initiative (OSPRI), in conjunction with national industry (North Caspian Operating Company - NCOC and KazMunaiGaz - KMG), shared the net Environmental Benefit Analysis (NEBA) approach and later the Spill Impact Mitigation Assessment (SIMA) with key agencies and authorities as part of this effort.

As the first step, workshops and seminars on NEBA were organized at local and national levels. These were facilitated by international experts and national consultants to build awareness and understanding.

The second step was to embed NEBA within the legal framework. The legal system has a strong hierarchy including Codes, Laws and Orders. The National Contingency Plan (2015), approved by Order, acknowledged NEBA and gave impetus to develop additional legislation on the NEBA process. To ensure proper legal force, it was suggested to embed NEBA higher up the hierarchy, in the Subsoil Use Code (2017).

Practical implementation of NEBA (during simulation exercises) and review by authorities of a draft NEBA report prepared by NCOC, revealed that the process required further clarification. It was not clear how NEBA should be presented in contingency plans, for authorities' review and approval i.e. whether it should be a separate report or incorporated within the plan. It was mooted that proposed amendments to the Environmental Code would aid clarification.

In order to support a coherent process of contingency plans' approval, NEBA should be supported by a suitable and recognized implementation methodology. The SIMA methodology has been proposed as an option in Kazakhstan. Work on the Environmental Code's amendments, incorporating suitable clarifications, is expected to be completed in 2020.

Based on the experience of NEBA adoption in Kazakhstan, cooperation between industry and authorities, exercises and workshops leads to positive results. The process has taken some years, as capacity building and legislative developments were required, but is reaching a successful conclusion. This will inform the choice of response options for any future incidents, to achieve least overall ecological and socio-economic impacts.

INTRODUCTION

The Republic of Kazakhstan emerged as an independent country in 1991. It is the ninth largest country in the world, covering 2.7 million km² (>1 million miles²).

Its territory is comprised of 14 oblasts (territorial regions) plus three cities of republican importance, which together represent the country's administrative system. Atyrau and Mangystau oblasts border the Kazakhstan Sector of Caspian Sea. Atyrau oblast is known for the oil industry, mainly due to NCOC's Kashagan project, but also for sturgeon fisheries in the river Ural and Caspian Sea. Mangystau region is known for large deposits of oil onshore and marine shipping (Figure 1).



Figure 1: Administrative and territorial map of the Republic of Kazakhstan

Each oblast is governed by Akim (regional governor) appointed by the President and accountable to him. Each oblast has its own system of management and is managed through an Akimat representing the local authority. Almost all central Ministries maintain branches at the territorial level to implement control, supervision and guiding functions of the Ministry, integrated with the oblasts (Figure 2).

Kazakhstan's oil spill response system is also segregated into national and territorial levels, i.e. a National Contingency Plan and Territorial contingency plans; each of the plans triggers its level of management in case of oil spill. Central versus territorial management is an issue of responsibility and command (decision-making) distribution. It ultimately involves implementation of the law and regulations, which can be complicated by interpretation at the territorial level. Law and policy makers at the central level outline issues that should be covered by central and territorial levels. When it comes to practical realization, territorial level face implementation challenges. This is because they are less engaged in law-making processes or have different understanding when laws are passed in the central system. That was the main driver to develop a National Contingency Plan as an umbrella to the Territorial Contingency plans, i.e. to have a national umbrella that allowed development of an applicable framework for a specific territory.

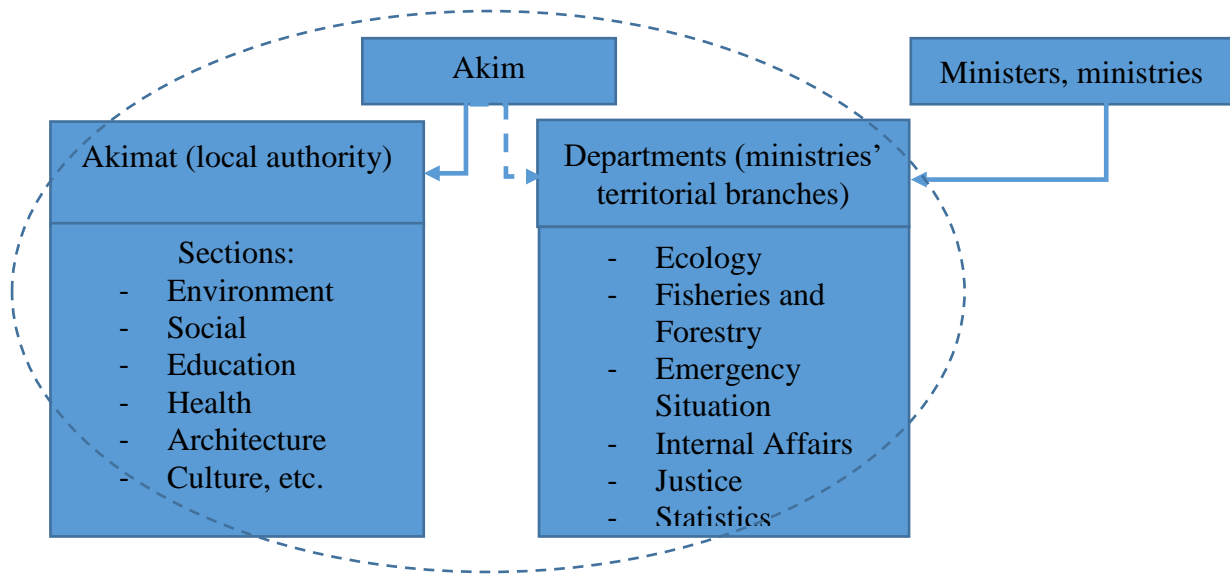


Figure 2: Territorial level of management

INTERNATIONAL PRACTICE

“Good practice” is the term mostly used by the oil spill response community for the proven and widely used international practice. Kazakhstan’s legislation widely uses notion of “best available international practice” or “global experience” and it is used in relation to techniques and approaches, as well as procedures. The Subsoil Use Code (Ministry of Justice, 2017) declares that subsoil users (e.g. oil exploration and production companies) should follow best practice for environment protection on the sea (Article 154, Clause 5). The Environmental Code (Ministry of Justice, 2007) outlines that for drilling purposes, proven good international practice should be applied in terms of environment protection (Article 264, Clause 1).

Regarding oil spill preparedness and response, Kazakhstan applied the Good Practice Guidance (hereafter - GPG) developed and published jointly by IPIECA (the global oil and gas industry association for advancing environmental and social performance) and the International Association of Oil & Gas Producers (IOGP). KMG and NCOC, having a solid understanding of oil spill preparedness and response and a widespread use of GPGs in their operations, shared GPG materials with the authorities. This socializing of international publications was undertaken in partnership with OSPRI. OSPRI is group of oil companies promoting improved oil spill preparedness in the Caspian Sea and Black Sea (Taylor et al, 2014). Thus, GPGs were widely shared with ministries and civil servants as proven, widely applicable, credible practice. IPIECA and IOGP have made these key publications available in a number of languages, including Russian, which was invaluable in Kazakhstan (IPIECA, 2019).

First steps in recognizing and drawing on the content of the GPGs was made in 2016 in the Ministerial Order ‘Rules on Oil Spill Response Methods Use on Sea and Internal Waters’, which was further expanded in 2018 via a new edition of the Rules and a revised national contingency plan. These references focused on oil spill response methods use, risk assessment and the NEBA process.

The NEBA GPG (IPIECA-IOGP, 2015) was presented to authorities as a possible approach that will consider the impact of an incident and identify preferred clean-up methods. The national contingency plan acknowledged the full oil spill response toolkit but legislation and guidelines did not clearly specify how and when controlled burning and dispersants could be approved as oil spill combating measures. Neither authorities nor industry could apply them, as there were no recognized procedures to follow. In order to address this, the SIMA (IPIECA-

IOGP-API, 2018) approach was introduced, using the SIMA matrix as a relatively simple and understandable mechanism to make strategy decisions. Industry and government had a common point of view that international experience like NEBA and SIMA should be utilized. This allows industry to develop oil spill response strategy within its contingency plans in a transparent and logical manner, to serve a ground for decision making by authorities to agree and approve appropriate oil spill response methods.

APPROACHES TO COMMUNICATE WITH AUTHORITIES

Workshops and seminars were organized at local and national levels to share international experience and exchange information. The concept and principles of NEBA were introduced at workshops devoted to response in general and including information about the oil spill toolkit. Latterly, the workshops provided specific NEBA-related details.

Constructing a bridge from industry to authorities is a delicate process as the authorities are supervisory bodies and may question the motives and information presented by industry. Initial engagements need to be aware of this and possible doubts in the minds of the participants. Technically sound, complete and clear information sharing was essential to create an environment of constructive open dialogue, understanding and support. Respected international experts and national consultants played a vital role to build awareness, understanding and deliver credible messages. This included inputs from Mr. Alun Lewis, Ms. Victoria Broje, Mr. Zhaxybek Kulekeyev and Ms. Gulnara Nurtayeva.

Year	Title	Locations
November 2019	Operational use and decision making on oil spill response tools based on NEBA	Nur-Sultan, Atyrau and Aktau
April 2018	Practical Issues of Making Decision Based on NEBA: Evaluation of relative risk to natural resources from an oil spill and response options based on NEBA	Nur-Sultan, Atyrau and Aktau
July 2017	SIMA and NEBA workshop for NCOC company	Atyrau
November 2016	Oil Spill Response Strategy Development Based on NEBA	Nur-Sultan, Atyrau and Aktau
November 2015	Oil Spill Preparedness and Response Workshop	Nur-Sultan

Table 1: NEBA activities in the Republic of Kazakhstan

Each year 2016-19, NEBA-related workshops were organized in conjunction with industry support (Table 1). The presence of the industry, as a key user of NEBA, underlined interest to have a tool in place to enable appropriate use of the response toolkit. The first iteration of the National Contingency Plan had been approved in 2000. This Plan outlined oil spill response measures, but lacked guidance on NEBA implementation. The toolkit comprised:

- Taking samples and monitoring/evaluation of oil spill source and drifting;
- Source control measures;
- Containment of slicks using physical or mechanical booms and recovery devices;
- Controlled (in-situ) burning;
- Use of dispersants and other chemicals.

Potential users of the NEBA approach, i.e. both companies and the authorities, attended the NEBA workshops. This built increasing knowledge and understanding of how the

available response methods have benefits and limitations. In the early stages, some industry personnel shared viewpoints with the authorities, with negative perceptions of dispersants and burning. It was essential for local operators such as NCO to have internal consensus about the approach and results of NEBA for scenarios relating to their spills risks. The workshops helped all participants understand that NEBA followed the principle of “the maximum protection of life and health of the population and environment”, which is enshrined in the national legislation. The authorities could take reassurance i.e. that if a tool helps to avoid or minimize contamination and recognizes the priority of life and health of the population and the environment, it is an effective tool. There has been a gradual changing of perceptions, through the clear presentation of evidence and a sharing of research results and international experience.

PUZZLE “LEGAL FRAMEWORK”

Any country requires laws or regulations to give a mandate to actions, including decision-making in relation to pollution preparedness and response. The legal system of the Republic of Kazakhstan has a strong hierarchy, which includes Codes, Laws and Orders. Orders have less power and only a Code or Law can grant the rights and responsibilities, as well as to set up general but basic principles (Figure 3).

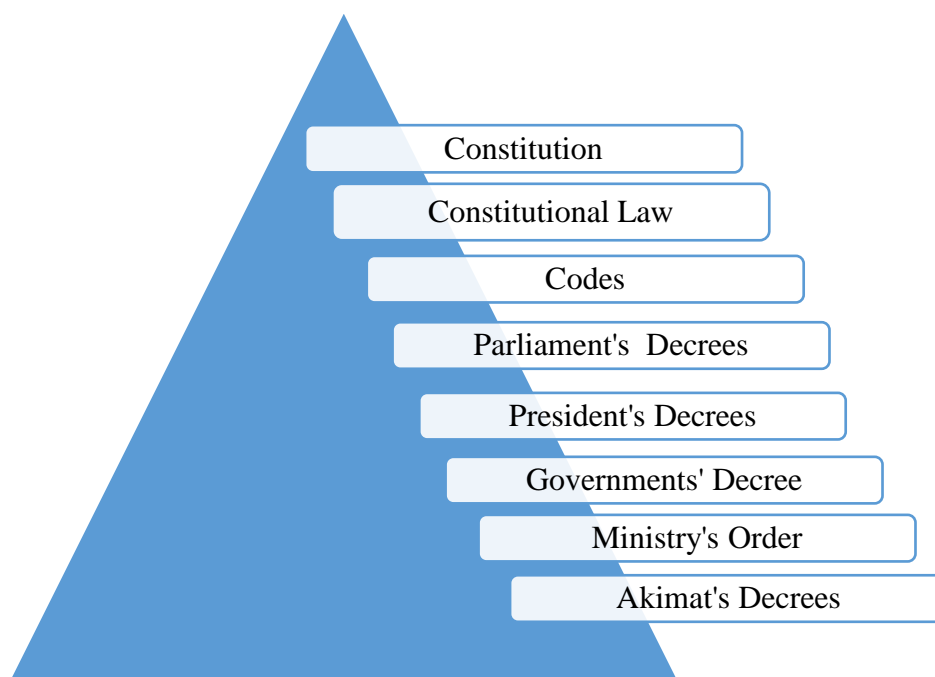


Figure 3: Hierarchy of Legal Acts in Kazakhstan

The National Contingency Plan of the Republic of Kazakhstan was developed initially in 2000, amended in 2012, with a new edition approved in 2015 and then reapproved in 2018. In regard to NEBA, the Plan in 2012 had a reference to the principle “the maximum protection of life and health of the population and environment” when considering response methods. The Plan in 2015 accepted NEBA as an instrument and required approvals from the environment authority to use dispersant or controlled burning. This 2015 Plan was more proactive and gave impetus to develop additional legislation on the NEBA process.

To ensure proper legal force, it was recommended to embed NEBA higher up the hierarchy. In 2016 the Environmental Code was amended to give a responsibility to develop ‘Rules on oil spill response method use’ and also made a clear statement that emissions (e.g. air pollution or use of chemicals) associated with authorized oil spill combat methods would

be exempt from prosecution or fines (Amanzholova et al, 2017). In 2018, the Subsoil Use Code was revised with reference to the NEBA approach, when considering oil spill response measures. Reference was also made that NEBA should be outlined in the ‘Rules on oil spill response method use’. In 2019 a new draft edition of the Environmental Code has been developed, which contains fundamental regulations related to NEBA, i.e. NEBA definition, NEBA approval, requirements for NEBA approval, authorities engaged in NEBA approval, responsibility to develop Rules on making decision on oil spill response methods and approval and Methodology for NEBA (e.g. SIMA). This brings the Environmental Code and Subsoil Use Code into full alignment.

NEBA is now embedded within the Environmental Code; it is a responsibility of the environment authority to develop and approve Rules on oil spill response method use (Figure 5). Escalation of NEBA up the legal hierarchy provides the necessary mandate for decision-making and application of the full response toolkit. When making decision and approving response strategy, relevant authorities should understand and share information with wider government and the community, demonstrating that the strategy will lead to a maximum protection of life and health of the population and environment. This incorporates stakeholder engagement in the NEBA process.

Under the previous status quo, dispersant and controlled burning could be used only in deep waters and away from reeds. This ruled out their use in shallow waters or closer to shorelines, irrespective of whether or not a NEBA case could be compiled to support such a consideration. There was a competency in the order Rules on oil spill response method use approved by order but there was no associated competency in the Environment Code. Having responsibility to review NEBA and approve its results with recommendation to use dispersants or ISB close to sensitive resources in the Environment Code grants an eligible power to authority to make such decision.

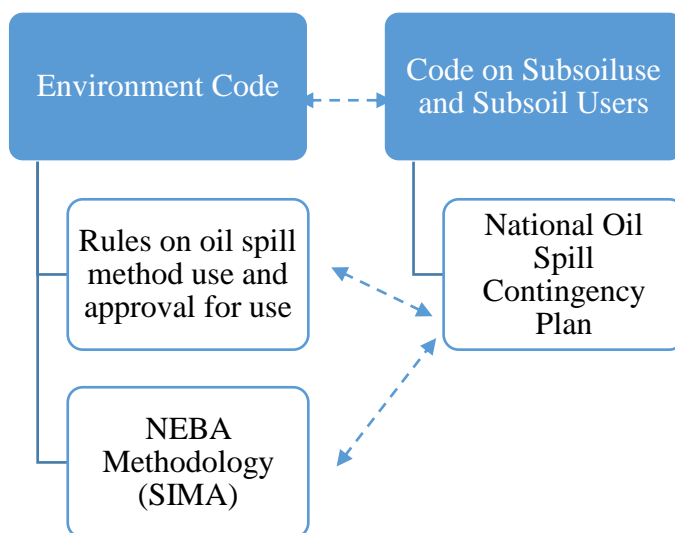


Figure 5 NEBA related legal framework

One of the new aspects in the 2019 draft Environmental Code is developing and approval of a Methodology for NEBA, i.e. SIMA. It was clear that the rules on oil spill response methods were not enough, as the authorities required a structured approach for NEBA based decision-making and subsequent approval of response strategy. Therefore, the SIMA matrix will be used as a tool for NEBA by industry and authorities.

FINDING PRACTICAL USE

Once all regulations were in place there arose the need to check their practical function. Case studies were part of workshops' agendas, to gain feedback on practical use of the regulations. The most useful testing of workability and applicability is exercises. In 2018 NCOC held simulation exercises to check its response system and practical implementation of NEBA. All interested authorities were invited, in order to form the government command center. Within the context of a simulated oil spill scenario NCOC's incident management team presented a NEBA-based response strategy, which defined optimal tools including dispersants and controlled burning. The environmental representative from government command center, which was in fact a part of Environment authority at the regional level, made a resolution. This stated that within outlined conditions, in the current legislation, it was impossible to grant approval for dispersant and controlled burning. This was despite agreement that within the scenario, the NEBA justification for dispersant and controlled burning was fulfilled. It was simulated that the issue escalated to Prime-Minister's level, having the role of Tier 3 Incident Commander, as nobody at more junior level could take a decision without the legislative authority. Eventually the Prime-Minister granted permission within the scenario, although window of opportunity was missed. This reinforced to the authorities that they faced challenges that could only be resolved by amending legislations (i.e. the mentioned amendments to the Environmental Code).

Another option was developing a pilot NEBA report, again prepared by NCOC for Kashagan Project. It was prepared thoroughly by attracting national and international consultants, environment and response departments of the company engaged to the process. The NEBA report was prepared in accordance with current legislation and good practice on NEBA and SIMA. As the process of NEBA approval was unclear it was decided to present the NEBA report during meetings with interested ministries along with proposals to amend legislation derived from the simulation exercise.

These comments and proposals to amend legislation comprised practical items how to get a NEBA report reviewed and approved. For example, it was unclear if NEBA report should be a separate report or incorporated within the contingency plan; when the report should be approved before incorporating to the plan or after; should a company go to each authority for approval or it should be a meeting to discuss NEBA results and approve jointly; if NEBA is not approved should the results be adjusted as authorities require etc?

CONCLUSION

Based on experience of NEBA adoption in Kazakhstan it is vital to have cooperation between industry and relevant authorities. This joint work should be supported by national and international experts, to give credibility and share experiences. This activity goes beyond simply presenting the NEBA concept. It requires detailed engagement on the NEBA process, results and possible compromises between interested parties; society, industry and different authorities within a series of workshops and exercises. This can take some years, as capacity-building and developing the legislative framework is likely to be needed. Authorities and industry should work together to develop a common view of regulation comprising responsibilities, powers, process and requirements. In Kazakhstan, this framework was amended through time to reach a workable process of NEBA implementation. This incorporated simulation exercises and sharing feedback, including from the territorial regions. Eventually this is driving clarity and success. During any future incidents, authorities and industry will be able to make NEBA based response decisions that will achieve least overall ecological and socio-economic impacts.

REFERENCES

Amanzholova, D., Taylor, P.M., Kulekeyev, Z, Nurtayeva, G. and Dospayeva, G. (2017). A JOURNEY TO EFFECTIVE RESPONSE: EXPERIENCE FROM KAZAKHSTAN. International Oil Spill Conference Proceedings: May 2017, Vol. 2017, No. 1, pp. 863-878 <https://doi.org/10.7901/2169-3358-2017.1.863>

IPIECA (2019). Good Practice Guidance translations available on the IPIECA website: <http://www.ipieca.org/our-work/oil-spill/oil-spill-response-resources/translations/>

IPIECA-IOGP (2015). RESPONSE STRATEGY DEVELOPMENT USING NET ENVIRONMENTAL BENEFIT ANALYSIS (NEBA). Good practice guidelines for incident management and emergency response personnel. <http://www.ipieca.org/resources/good-practice/response-strategy-development-using-net-environmental-benefit-analysis-neba/>

IPIECA-IOGP-API (2018). GUIDELINES ON IMPLEMENTING SPILL IMPACT MITIGATION ASSESSMENT (SIMA). <http://www.ipieca.org/resources/awareness-briefing/guidelines-on-implementing-spill-impact-mitigation-assessment-sima/>

Ministry of Justice (2017). Code of the Republic of Kazakhstan dated 27 December 2017 No. 125-VI. ON SUBSOIL AND SUBSOIL USE. <http://adilet.zan.kz/eng/docs/K1700000125>

Ministry of Justice (2007). Code of the Republic of Kazakhstan dated 9 January 2007 No.212. ENVIRONMENTAL CODE OF THE REPUBLIC OF KAZAKHSTAN. <http://adilet.zan.kz/eng/docs/K070000212>

Taylor, P.M., Schneider, N., Huntzinger, E., and Charlebois, P. (2014). DEVELOPMENTS IN INTERNATIONAL COOPERATION AND NATIONAL PLANNING IN THE CASPIAN SEA AND BLACK SEA. International Oil Spill Conference Proceedings: May 2014, Vol. 2014, No. 1, pp. 1329-1341. <https://doi.org/10.7901/2169-3358-2014.1.1329>