

## Ranking Environmental Risks for Promoting HSE Management, Case Study: Oil and Gas Projects

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**Abstract-** Today, all countries have concluded that health, safety and the environment must be in priority for achieving the sustainable development. Fortunately, allocating the fifth and seventh chapters of Iran's fourth five-year development plan to protect the environment and promote health and improve the quality of life are also indicative of the country's approach to the HSE. In the present study, a model has been presented to identify and prioritize the environmental risks of oil and gas projects. The statistical population of the study consists of all executives active in the oil and gas fields that the statistical sample is selected randomly. In the framework of the proposed method, environmental risks of oil and gas projects were first extracted, then a questionnaire based on these indices was designed based on Likert scale and distributed among the statistical sample. After assessing the validity and reliability of the questionnaire, the effect of each factor was evaluated using the correlation test. Then, the environmental risks of oil and gas projects were ranked using the VIKOR method of multiple-criteria decision-making. The results showed that all 10 identified risks are effective on promoting HSE management. It was concluded from the VIKOR technique that the most important options that caused the reduction of probability of occurring risks and personal injuries and casualties was the entering of dye to the environment when painting the generator pond and the presence of the rigger near the crane. Other cases were placed in the next ranks.

**Keywords:** Oil and Gas Projects, HSE Management, Environmental Risks