

A Critical Evaluation of Climate-Related Risks Associated With Oil and Gas Industry in Libya

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Abstract

Risk is something found almost everywhere, and not managing risks can be extremely costly. This study focuses on climate-based risks associated with the oil and gas industry in Libya. The primary data was acquired through a survey study, where a total of one hundred and fifty questionnaires were distributed to a targeted population. Seventy one of the questionnaires returned indicating 47.3% involvement of the survey population. The water related issues are common climate risks in Libya, and most of the companies spread climate risks among insurance companies, while others retain and manage these risks. Based on the ranked results, this study illustrates various critical climate risk factors. The top ten of these factors are extremely critical. These top factors include high temperatures, lack of water availability and droughts, loss of access to water, loss of peak cooling capacity, air pollution, gas leaks or pipeline explosions, burning of fossil fuels, early season delays, damage to coastal facilities, and changes in land use. Conversely, the majority of firms adopt a risk transfer strategy followed by risk response and risk acceptance strategies for treating climate risks. Therefore, there is an urgent need to adopt possible ways to avoid the harmful impacts of climate risks for the improvement of the efficiency of projects.

Keywords

Climate Risks, Oil and Gas Management, Risk Management, Lack of Water, Gas Leaks

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Biography

Tawfik R. Elmehdi Pragmatic, action-oriented, and result-focused, senior telecommunications engineer and a project manager, specialized in microwave transmission and wireless access networks, with bachelor degree in telecommunications engineering from the faculty of Electrical and Electronic Engineering, Baniwalid, Libya. He has 18 years of solid international experience in telecommunication industry. His research interests include wireless access, green construction, risk management, cost management, and modeling. Currently, he works on developing a services cost model for a leading mobile operator in Libya through his engineering management master's thesis at the Engineering Project Management Department, School of Applied Science and Engineering, The Libyan Academy, Tripoli, Libya.

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