

The application of Analytical Hierocracy Processes in combination with PESTEL-SWOT analysis to assess the hydrocarbons sectors in Cyprus

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ABSTRACT

Natural gas reserves have been recently found offshore Cyprus and a new energy sector is under development on the island. This creates a welfare raise potential for the small insular EU member state. But it must be considered that although natural gas is a hydrocarbon with environmental advantages comparing to other fossil fuels and its extraction and use may bring social and economic benefits to the country, non renewable energy sources use has been proved not sustainable as they are connected not only with major environmental issues like climate change and pollution but with social and economic concerns in all their life cycle as well.

This paper evaluates the sustainability of the new Cyprus hydrocarbons sector by using a set of indicators which are developed with a PESTEL – SWOT analyses combination. The Political, Economic, Social, Economic and Legal context of the natural gas extraction and exploitation is reviewed and the data obtained are used to form a set of sustainability indicators expressing the Strengths, Weakness, Opportunities and Threats of the sector. The indicators are quantitatively assessed by using the Analytical Hierarchy Process weighting method concept as they are evaluated pairwise compared resulting to a size for each one.

This evaluation of the PESTEL – SWOT formed sustainability indicators features the issues need to be either improved, exploited, mitigated or eliminated in order the Cyprus hydrocarbons sector to be developed in a sustainable way giving the ability to the present Cyprus inhabitants to harvest the potential benefits and improve their life by not jeopardizing the future generations right for clean environment, social coherence and economic prosperity though. The paper conclusions place a base for decision making and policies formulation in sustainability direction but also features a method can be used for this task.

Keywords: PESTEL; SWOT; indicators; AHP; hydrocarbons