



Climate Change Audit Case for the INTOSAI WGEA 21ST meeting

Summary of the Environmental Audit Report

“Evaluating the Efficiency and Effectiveness of Related Entities in Dealing with Climate Change Impacts in the State of Kuwait”

**Performance Audit Department
State Audit Bureau of Kuwait**

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Climate Change Audit Case:

Evaluating the Efficiency and Effectiveness of Related Entities in Dealing with Climate Change Impacts

State Audit Bureau of Kuwait

In 2021, The State Audit Bureau of Kuwait (SAB) conducted a performance audit report on the role of government entities in dealing with climate change impacts. As part of the audit, SAB examined the risks of climate change across several sectors including public health, transport, infrastructure, energy, and water production. Moreover, SAB has evaluated government efforts towards achieving the United Nations Sustainable Development Goal (SDG 13) indicators. The audit data was based on the period (2017 – 2019).

Kuwait is a dry and hot climate country. Sand storms often occur during the summer season and temperatures could reach above 50 °C. As for winter, rainfalls are irregular and vary in quantity from one year to another. Making Kuwait a harsh environment with the lack of freshwater resources. Therefore, climate change has a significant impact on Kuwait's environment and wellbeing.

The audit started with Kuwait's Meteorological Department where historical data on temperatures, rainfall amounts, frequency of sand storms and dust were collected for the last 10 years. SAB has found out that Kuwait is affected by Climate change such as high temperatures, drought, sand and dust storms with the possibility of intensity increasing in the future. This leads to increase risks of drought and food insecurity due to the depletion of soil fertility, water evaporation in crops, the disappearance of vegetation cover, and the exacerbation of the desertification. In addition, vital facilities activities were negatively affected for example (oil wells - oil collection centers - air bases - highways), which threatens the infrastructure and burdens the state's budget which heavily relies on oil production revenue. SAB recommended the Meteorological Department to improve its systems and human resource capacity to closely monitor climate changes and coordinate with relevant authorities to take preventive measures to deal with current and future climate change risks.

For the public health risks, SAB has discovered an annual increase in the number of patients with respiratory disease being admitted in public hospitals. Although, SAB could not investigate the root cause behind the rise in those patients due to lack of data. However, it gives an indication that respiratory disease patients are at risk of unstable weather conditions such as sand storms, dust, and heatwaves. SAB recommended the Ministry of Health to prepare an emergency healthcare plan related to climate impacts to safeguard the health and wellbeing of the community.

On the other hand, negative effects of climate change on the infrastructure and transport sector observed mostly in the raining season. There is a change in the amount and days of rainfall in the examination period notably in 2018 that led to floods in many residential areas, streets, highways, and tunnels. This event had damaged the asphalt surface of streets, structure of buildings, heavy traffic, and car accidents. Responsible entities had implemented an emergency plan to deal with the floods. However, SAB has found that those emergency plans are not effective as the same

problem persists in every raining season during the examination period with varying degrees. Moreover, SAB has discovered that the current infrastructure design does not have the sufficient capacity to handle the large amount of rainfall in those seasons. In other words, the current infrastructure and responsible entities are not resilient enough to adapt with climate changes. SAB recommended government entities to improve the rainwater drain system in order to adapt to climate change effects and prevent future floods and damages to the infrastructure that greatly costs public and private funds.

As for climate change risks on the production of energy and water, SAB has analyzed 10-year historical data for average annual temperatures and its effects on the energy and water sector. SAB has found that there is an average annual increase in the maximum electrical load until it reached 14,420 megawatts at 50 C° in 2019. Private homes and the government sector consume most of the electrical power by 44%, 29% respectively in 2019. As for water, the average annual increase in production and consumption was at 3.3%. In addition, there's a rise in the number of blackouts because of weather conditions by 69.3% in 2019 compared to 2017; most of which caused by unusual heavy rainfalls. Therefore, SAB has recommended the Ministry of Electricity and Water to pace its development projects for power and water distillation plants by using the best environmental approaches to operate them including renewable/clean energy in order to mitigate climate change risks to the sector.

The last part of the report focused on Kuwait's greenhouse gas (GHG) emissions and efforts towards achieving SDG 13. Based on the Environment Public Authority (EPA), SAB has found that Kuwait's total greenhouse gas emissions constitutes only 0.246% of the global GHG emissions in 2018. Therefore, Kuwait's activities do not contribute to climate change risks, but rather affected by it. Since Kuwait is a crude oil producer, most of its GHG emissions come from the energy sector at 96% of its total GHG emissions in 2016. However, efforts to mitigate climate change risks were not sufficient due several factors notably not having a unified strategic plan between responsible entities to implement risk mitigation projects nor meet SDG 13 requirements. Therefore, SAB recommended that EPA and related entities should work on finding and implementing effective methods to follow-up GHG emissions reduction projects based on SDG 13 requirements within a specific timeframe in order to mitigate environmental, economical, and health risks caused by climate change.