

**State Audit Bureau  
Kuwait**

The environmental Audit to evaluate the potential  
effects on Kuwait marine environment

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## **Abstract**

### **Introduction:**

The State Audit Bureau of Kuwait "SAB" implemented a plan to investigate sources of pollution and how to deal with them. The examination included the pollution caused by sewage water, oil, and random landfills. Also, the examination dealt with the strategic plan importance to achieve ecological survival to marine environment. The examination focused on the most hazardous aspects on marine life. Hence sewage water pollution lead to reduction in the percentage of dissolved oxygen in water due to sewage organisms consumption of biological liquefied organics. There is also the untreated sewage which is considered one of the main causes of several diseases to creatures. Oil pollution is the most dangerous kind of marine pollution, since the oil contains hydro carbonic materials and toxic cancerous compounds like benzol, all of which cause massive killing to marine life and threaten coral reef.

Oil pollution could also affect the desalination plants efficiency. These pollutions lead to heavy metals in marine environment with percentages higher than applied standards and that has harmful and toxic impacts on human health. For example, mercury has effect on the brain and lead nervous system destruction and muscular spasm.

### **Audit Findings:**

The examination of the first pivot that relates to sewage water revealed the timeworn of pump and uplift plants and that their assumed life time expired. Furthermore, those plants have limited capacity, with many discontinuity and breakdowns resulting in draining excess amounts into the sea, or seeping inside ground. There is also a noticeable increase in seeping amounted to nearly 50.3% of the overall flow of pump plants during the period from January 1<sup>st</sup> – to the end of June, 2001.

The consequences were an increase in mathematical average of some bacteria kinds in certain seashores above standardized values of suggested bacteriological indexes. Another thing was the increase of some kinds of insignificant materials and changes in natural and chemical specifications of sea water in terms of main nutritive, insignificant minerals and hydro carbonic petroleum materials .The increase of these polluters in marine environment constituted a great danger on human health, for sea water is the main source for water desalination. Also, it was found out that there were no certain standards related to seabed precipitate that may be used to measure analysis results to acknowledge the degree of pollution in seabed precipitate.

Although the danger and increase in the first pivot polluters related to sewage bacteria water, the financial allocations did not match the objectives stated in government budget regarding the quality of sewage facilities, and improving their performance to eliminate the problems caused by the bad

condition of the expired networks. The problem may lead to an intensive marine life pollution issue, resulting in environmental and hygienic damages that require vast expenses to rectify.

The second pivot focused on examining oil pollution effects on marine life. One of the main concerns was Kuwait fight plan against sea oil pollution in emergencies. There are great dangers threatening Kuwait marine life as an oil productive country. Essential shortage cases were found in the plan, especially in the vague of some member bodies role regarding the tasks assigned to them, the weakness of communication among them and the non activation of the plan objectives related to personnel qualifications efficiency by training on fighting tasks.

It was also noticed the absence of an internal bylaw to define and allocate tasks among members. Moreover, there were shortage beyond the minimum in equipments and devices allotted to participated members and a deficiency in equipments data related to some members which greatly affect the efficiency of plan implementation during emergencies and the quick response to accidents especially in northern and southern areas.

The analysis and examination of the accident that took place in August, 1998 in the southern area, proved the plan failure to achieve its objectives due directly to the inactivated plan provisions in many of procedures rules. The examination also showed the absence of a headquarters and operations room to manage the fighting process, and the neglect ion of negatives aspects assessment to find the suitable solutions to avoid recurrence of the same.

The importance of the third pivot is related to pollution resulted from random landfills appeared in the direct and indirect negative effects on seashores generally, and on the strategic fish supply of the country. The examination revealed a weakness in the procedures followed by the Municipality regarding random landfills in seashore areas. This represents a direct threat for seashore and causes imbalance in water currents, in food chain and sediments movement. There was also a delay from the Municipality in taking the required procedures to treat the negative environmental damages caused by random landfills to retrieval the natural state of fish supply, sea life and provide permanent and suitable conditions for the environment.

The examination also covered the Kuwait strategic plan for marine life. The Public Authority for Environment was to prepare the environmental strategy for the State of Kuwait. A number of elements were defined to be included in the plan to achieve the desired purposes that were fully described in the report.

The State Audit Bureau of Kuwait views the vital importance to continue projects in relation to pumping and uplifting plants to improve their efficiency and capacity in order to minimize the drainage of untreated sewage water into the sea, or seeping into the ground. Furthermore, a quick treatment for the increased kinds of bacteria in sea shore water is required, and also required a treatment for the change in natural and chemical

specifications of sea water in essential nutritive levels, insignificant materials, or hydro carbonic petroleum materials.

Moreover, shortages in Kuwait plan to overcome sea water pollution should be considered. All participating members in the plan should be provided with equipments and special tools for this operation. The participating members qualifications and efficiency should be developed to deal with emergencies. Kuwait Municipality should take the required procedures to treat environmental damages caused by random landfills. All concerned bodies should comply with the strategic objectives while implementing the plan to achieve ecological survival of marine life and maintain biological diversity, the ecological systems and sea resources. It is also important to provide an effective mechanism to apply the plan. The mechanism should focus on projects and programs priorities and determine implementation timetables.