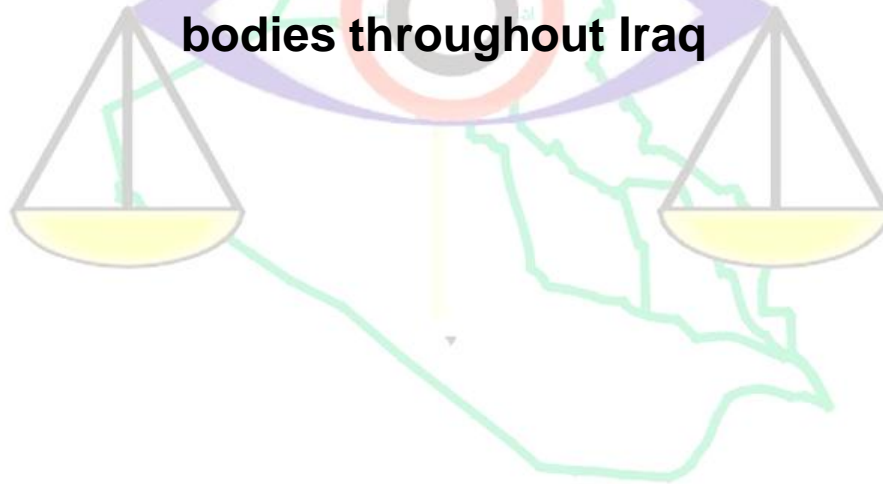


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Summary

Performance audit of Ministry of Health and environment policy to construct and follow up the remote sensing projects for monitoring water bodies throughout Iraq



جمهورية العراق

ديوان الرقابة المالية الاتحادي

Federal Board of Supreme Audit

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Board of Supreme Audit

Iraq

Summary

Performance audit of Ministry of Health and environment policy to construct and follow up the remote sensing projects for monitoring water bodies throughout Iraq

1. **SAI:** Iraqi Federal Board of Supreme Audit.
2. **Audit subject:** Performance evaluation of Ministry of Health and Environment policy to construct and follow-up the remote sensing projects for monitoring water bodies throughout Iraq.
3. **Audit aims:** Evaluating the procedures taken by Ministry of Health and Environment to improve the environmental reality of water bodies through implementing the remote sensing projects and the early detection of pollution given their importance in monitoring and detecting various pollution sources including chemical, physical, heavy and toxic elements, sewage and the pollution caused to water resources by oil and promptly recording readings of pollutants by modern systems and highly sophisticated stations to enable taking the appropriate and rapid procedures to address pollution in coordination with the parties concerned to maintain a healthy environment and water suitable for human consumption.
4. **Audit scope and period:** The audit includes the following ministries and directorates for the period 2011- 2018:
 - Ministry of Health and Environment/ planning and follow up office, technical office and offices of environmental protection and improvement in the midland I, southern, northern and middle Euphrates regions.

- Baghdad municipality/ Baghdad water office and Baghdad sewages office.
- Ministry of Reconstruction, Housing, Municipalities and Public Works/ the general directorate of water

5. Audit methods:

- Incorporation of an innovative practice by using policies topic (in cooperation with NCA) by using the main and subsidiary risks matrix to identify risks priorities during applying the implementation process.
- Testing commitment procedures of applying related laws, regulations and instructions.
- Evaluation of environmental projects.
- Environmental audit by using the laboratory technical testing.

6. Audit results:

- During field visits, interviews with officials, reviewing documents and requiring and collecting information, the main social problem "spread of pollution and deterioration of water quality in water bodies in Iraq" has been identified .The following are the most important undesired events and situations:
 - a. The waste of many service, industrial and oil activities is being discharged into water bodies without treatment.
 - b. Failure to achieve the main aims for which pollution remote sensing and early detection station are established.
 - c. Low level of water resources due to lack of water releases and rain.
 - d. Not all governorates are covered by remote sensing and early detection stations.
- The risks and negative phenomena were analyzed according to its relevance to the main problem. The main sub-problems related to the said problem were identified

,namely failure to achieve the main objectives for which the remote sensing and early detection stations are established. The following are the problems affecting them as per their evaluation priority :

- Lack of coordination between Ministry of Health and Environment and ministries concerned.
- Suspension of the service of prompt data transfer leading to wasting the importance of the projects
- Lack of accuracy in the selection of sites for some environmental monitoring stations.
- Non inclusion of all necessary tests that give a complete picture of the pollutants amount.
- Expiry of the sensor lifespan in the remote sensing stations.

7. Conclusions:

- a. The establishment of remote sensing projects for monitoring water resources, sewages and oil pollution in some governorates was not discussed, thus leading to the lack of knowledge of the results of the chemical and physical substances , likely to be found in the water ,discharged due to service and oil activities, industrial plants and the like for the purpose of comparison with national determinants.
- b. There is no previous accurate subjective study to select remote sensing stations for monitoring water resources in Baghdad.
- c. Non inclusion of all chemical, physical and bacteriological tests in remote sensing stations for water resources and sewages despite their importance in the diagnosis of pollutants that are hazardous to the environment, especially those that are discharged by service entities, industrial plants or power plants for the purpose of identify entity responsible for those discharged waste.

- d. The sensors of all stations that monitor water resources and sewages in Baghdad and governorates are not changed despite the expiry of their lifespan. In addition , titration solutions have not been added since 2011.thus leading to lack of accurate results and non maintaining of their sound functioning.
- e. There is no total statistics for pollutants numbers that are detected by remote sensing projects for monitoring water resources and sewages and early detection projects for oil pollution.
- f. The suspension of readings transfer from most remote sensing stations for monitoring water resources, sewages and oil pollution to central stations in Baghdad and governorates is due to the interruption of the Internet and communications service.
- g. Non establishing of remote sensing stations for monitoring water resources in marshes to determine the water quality that could negatively affect aquatic life and biological diversity.
- h. Non achievement of part of the technical aims of remote sensing projects for monitoring water resources and sewages and early detection projects for oil pollution. The Ministry of Health and Environment did not notify the entities concerned (Baghdad municipality / Baghdad water office and Baghdad sewages office, Ministry of Construction, Housing, Municipalities and Public Works/ the general directorate of water) of the existing of pollutants. No monitoring of chemical or oil pollution or disposing of sewage water outside environmental determinants by remote sensing stations is conducted by the remote sensing stations despite the detection of pollutants outside the environmental determinants through laboratory testing in the laboratories of the Ministry of Environment and the entities concerned.

8. Recommendations

- a. All governorates should have remote sensing projects for monitoring water resources, sewages and oil pollution for check water quality.
- b. pre and accurate study to select sites for remote sensing projects for monitoring water resources should be conducted .
- c. Stations for monitoring water resources should be upgraded to include all the necessary tests which in turn give a complete picture of water quality.
- d. Expired sensors of the remote sensing stations for monitoring water resources and sewages should be replaced so that these sensors can give correct readings.
- e. A database and archives should be maintained for test results of remote sensing projects for monitoring water resources and sewages and the early detection of oil pollution.
- f. The communication service between substations and the central station in Baghdad and governorates should be activated so that the readings can be transferred in time which is the main aim of the project.
- g. Marshes should be covered by the remote sensing projects for monitoring water resources and oil pollution because they are among the most important water bodies in the country and non detection of pollutants threatens their biodiversity.
- h. All remote sensing stations should be totally functioning and the entities concerned should be notified of the existing pollutants whenever detected so that they can take the appropriate procedures to avoid pollution.

9. Lessons learned

Through studying the Ministry of Health and Environment`s policy to construct and follow-up the remote sensing projects for monitoring water bodies throughout Iraq and according to the criteria and indicators adopted in this field , the data and information provided to

us and through the field audit, we noticed the poor policy of the ministry to construct and follow-up these projects due to the suspension of some of them and lack of their periodic maintenance as well as lack of the prompt and timely transferring of their data to central stations concerning the ongoing projects. In addition, the poor coordination between the Ministry of Health and Environment and related ministries for, no pollutants were detected by the remote sensing stations, despite the fact that pollutants, in violation of the environmental determinants, were detected through regular laboratory testing. Hence, the projects did not achieve their aims.

10. Challenges and constrains:

- a. Lack of specialized environmental legislations for each activity.
- b. Workers lacks the experience in environmental activities in the auditees.
- c. No integrated database concerning the activity of each entity is found .
- d. Multiple offices are responsible for following-up environmental activities.
- e. Lack of financial allocations.