



State of Israel
State Comptroller and Ombudsman
Audit Reports on Municipalities 2020

Government Authorities Handling of the Coastal Cliff Erosion Processes

Abstract

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Background

Along the coast of Israel, there is a 45-km-long unstable cliff. Because of natural processes and human activities, the cliff is collapsing and retreating eastward. During the twenty-first century, an acceleration in the processes destroying the cliff is anticipated – it and the beaches adjacent to it are expected to recede tens of meters. Solutions for this phenomenon must be found in order to ensure public safety and protect property and natural assets.

In the past few years, the State has taken some steps to deal with the problem of the cliff collapsing, with its associated dangers, and decided that the responsibility for funding, planning and executing the maritime preservation actions will be given to the government and those to be done on the shore will be given to the local authorities.

Key figures

Up to 22 meters

The cliff at Ashkelon has receded in the last 20 years. The width of the beach strip has also diminished due to sand loss and erosion

Around 13 kilometers

The length of the cliff in nine local authorities. Behind the cliffs are built-up areas and unique sites, which were included in the government decision as a protectable area

NIS 250–800 million¹

The initial assessment of the damage due to the cliff collapse, as presented to the government in 2010, not including the cost of damages as a result of injuries to people

NIS 878-1,378 million

Assessment of the cost of setting up marine and land protection measures for the cliff and their maintenance over a 20-year period, as of 2011

NIS 500 million


The budget approved by the government in 2011 as Stage A for implementing preservation measures for the cliff, of which NIS 360 million is maritime protection

NIS 26 million

The cost of executing the actions by the cliff preservation company for the years 2015 – 2018, from a cumulative action budget for these years totaling NIS 303 million


1 As of December 31, 2019 1 US dollar = 3.45 NIS.


Audit Actions


 In 2019, the Office of the State Comptroller examined the performance of the central and local governments in dealing with the processes eroding the cliff, promoting planning and implementation of the cliff preservation activities and government activities to protect the public. The audit was conducted in the Ministry of Environmental Protection and the Ministry of Interior, in the Mediterranean Coastal Cliffs Preservation Government Company Ltd. (the Cliff Preservation Company), in the municipalities of Ashkelon, Herzliya, and Netanya, and in the Emek Hefer Regional Council. Supplementary audit activities were performed in the Office of the Prime Minister and the Ministry of Justice, the Planning Administration and the Israel Nature and Parks Authority.



Key findings



 **The status of implementation of the preservation activities:** Even though it has been nine years since the government decision to preserve the cliff, in most of the cliff sections – in Hadera, Emek Hefer, Netanya, Herzliya, Tel Aviv-Yafo, Bat Yam, Gan Rave and Ashkelon; maritime preservation activities, for which the Ministry of Environmental Protection and the Cliff Preservation Company were responsible, have yet to be implemented. Only urgent preservation work in the sea was performed, in one area, in Ashkelon. The on-shore preservation work for which the local authorities are responsible has not been performed.

 **The actions of the Cliff Preservation Company:** The budget execution of the actions of the Cliff Preservation Company from the time of its establishment in the latter part of 2013 until the end of 2018 came to a total of about NIS 26 million, only 8.6% of the budget allocated in its plans. The company's board of directors and the inter-ministerial steering committee that stewarded the company did not examine the reasons for this and the implications on the work plans for the coming years. The Company has yet to advance the planning of the maritime preservation work in different areas, including those with high urgency.

 **Differences in the estimates for implementation of the preservation work:** The updated estimates for performing the preservation work, based on data from the Cliff Preservation Company and the local authorities, NIS 1,476 million for some areas, differed substantially from the estimates presented to the government in 2011, for the entire cliff preservation enterprise, which came to a total of NIS 878 – 1,386 million. Despite the significant differences between the estimates, the cost-benefit considerations versus the cost of the damage were not re-examined and none of the agencies involved in the area have complete and verified information about the scope of the budget required to implement the preservation work in its entirety.

-  **Disagreement on the issue of funding the on-shore preservation work:** Nine years after the government's decision to institute protective measures for the cliff, there is no solution for the disagreement between the local authorities and the government ministries and among the government ministries themselves regarding the issue of funding the on-shore protection work. The disagreement is delaying implementation.
-  **Handling protection of the public:** The Emek Hefer, Herzlyia and Ashkelon local authorities have not conducted a risk assessment of the cliff to check its condition and identify areas endangering the public and property. These local authorities have not yet been implemented the required safety measures to ensure that the public keeps a safe distance from the deteriorating cliff. Among others, these areas include places where part of the cliff has already broken off, which is a danger to the public.



Establishing a policy on the subject of preserving the shoreline cliff and promoting it:

In 2010 the government established a policy to deal with the erosion of the shoreline cliff. Following this, it implemented several actions for handling this issue, authorized two master plans to execute urgent protective and permanent measures and even established a government company to deal with the cliff.

Oversight of the Cliff Preservation Company: As of October 2016, the Ministry of Environmental Protection has been employing an audit company to audit the activities of the Cliff Preservation Company. At the beginning of 2019, the Cliff Preservation Company approved the "audit of project planning and implementation" regulation, in accordance with instructions and guidelines established by the Ministry of Environmental Protection, the audit company and the Cliff Preservation Company.

Measures to preserve the cliff and protect the public: The city of Netanya acted to advance the planning and implementation of protective measures for the cliff in several areas within its jurisdiction and to monitor the cliff's condition in order to protect the public. The city of Herzliya set up safety barriers along some of the beaches in its jurisdiction to keep the public away from the cliff.

Key recommendations

-  It is appropriate for the Ministries of Interior, Environmental Protection, and Finance and the Office of the Prime Minister, in cooperation with the Cliff Preservation Company and the local authorities, to perform a comprehensive examination of the estimated requirements for implementing the cliff preservation measures. This can serve as a basis for establishing a multiyear program for continued funding of the protective measures, according to priorities to be determined and taking into consideration budget limitations and the condition of the cliff in each area. Within this framework, It is recommended to examine the possibility of raising funds from additional sources, for example, by integrating the cliff preservation enterprise in other infrastructure or development projects adjacent to the beach.

- 💡 It is appropriate for the government entities and the local authorities to identify the impediments to advancing the cliff preservation in the different areas and their implications for continuing the work of preserving the cliff in areas that have yet to be dealt with, and act to remove these impediments in order to prevent delay in advancing urgent projects to protect the cliff.
- 💡 The local authorities should act to promote planning and implementation of the necessary on-shore measures along the length of the cliff, in the face of the immediate need to prevent damage to it and avert risk to human life. The Cliff Preservation Company must advance the planning and implementation of the necessary maritime protective measures, especially in the areas where it has been determined that this work is urgent.
- 💡 Local authorities should monitor the cliff's condition and act to identify places that are dangerous to the public and property, and deal with these dangers to ensure the safety of the public.

Summary

Nine years after the government approved a policy to deal with the cliff, a significant part of this policy has not been implemented. The bodies involved in this project, government ministries, the Cliff Preservation Company and the local authorities, must conduct a comprehensive examination of the policy and the obstructions delaying its implementation and make operative decisions on the subject, in order to streamline the protection and preservation of the cliff and prevent additional delays.

Examples of the cliff's retreat



Source: The report of the Cliff Preservation Company of the "Ashkelon Land Unit 38 Monitoring Report 2017 – 2018" (May 2019).



Status of the implementation of protective measures in line with the master plans for preservation of the cliff



On shore protections



Maritime Protections

Local authority / site	Required		Status	
	Land	Sea	Land	Sea
Hadera	✓	Adding boulders in the sea	Not implemented	Option of adding boulders in the sea ruled out. No other protective maritime measures have been established
Emek Hefer	✓	Replacing sand where needed	Not implemented. On-shore protection is being planned for part of the cliff	The need to replace sand has yet to be examined.
North Netanya	✓	✓	Not implemented	Maritime protection – not implemented. Planning has yet to start
South Netanya	✓	✓	Plan has been approved. Protective measures have yet to be implemented	Plan has been approved. Protective measures have yet to be implemented
North Herzliya	✓	✓	Not implemented.	Not implemented. The overall plan for establishing maritime protective measures is in the planning stage
South Herzliya	✓		Not implemented	
Tel Aviv	✓	✓	Not implemented. Some of the work is in the planning stage	Not implemented. Some of the work is in the planning stage
Bat Yam	✓	✓	Not implemented. The protective measures are in the planning stage	Not implemented
Gan Rave	✓	Adding boulders in the sea	Not implemented	Option of adding boulders in the sea ruled out. No other protective maritime measures have been established
North Ashkelon	✓	✓	Not implemented Being planned	Urgent protective measures have been implemented. Permanent protective measures are in the planning stage
South Ashkelon	✓		Not implemented	Not implemented.

