



State Comptroller of Israel – Special Report | March 2025

# **Management and Supervision of the Dead Sea Concession – Environmental and Land Use Aspects**





# Management and Supervision of the Dead Sea Concession – Environmental and Land Use Aspects

## Background

The Dead Sea is acknowledged as the lowest landmass globally and is regarded as a national asset of significant importance. It is perceived as a distinctive natural phenomenon, possessing medicinal properties and important ecological values. The region is characterized by sensitive habitats that host a diverse array of flora and fauna, as well as unique heritage sites. The natural resources inherent in the Dead Sea and its surroundings are publicly owned and held in trust by the state for public benefit. In 1961, the state conferred exclusive rights to the Dead Sea Works Company (DSW), established as a governmental entity, to produce and exploit the mineral resources of the Dead Sea, in exchange for royalties to the state, as stipulated in a concession deed codified by the Dead Sea Concession Law, 1961 (the Concession Law). This law applies to a substantial area of approximately 652 square kilometers within the Dead Sea and its environs, representing 3% of the territory of the State of Israel. The Concession Law has undergone several amendments, one of which extended the concession's validity until March 31, 2030<sup>1</sup>. In 1992, the privatization process of DSW commenced, and by 1995, the controlling interest in the company was divested, resulting in the concession being held by a privately owned entity. The ministers in charge of the enforcement of the Concession Law are the Minister of Finance and the Minister of Economy and Industry.

Three facilities for the extraction of minerals from the Dead Sea operate within the concession area: a potash facility<sup>2</sup>, a bromine facility, and a magnesium facility. The extraction process of these materials relies on the evaporation of Dead Sea water through a series of artificial evaporation and collection ponds, involving the construction and operation of extensive infrastructure within the concession area, including pumping stations, seawater, mineral and salt transmission lines, wastewater treatment plants, fuel stations, fuel storage facilities, waste disposal sites, among others.

The Concession Law categorizes the areas within the concession into three classifications: leased lands, which are further subdivided into factory-type leased lands, regular leased lands, and water facility-type leased lands, for which the Water Authority must pay lease fees to the Israel Lands Authority (ILA); reserved lands, where the state cannot grant possession to any

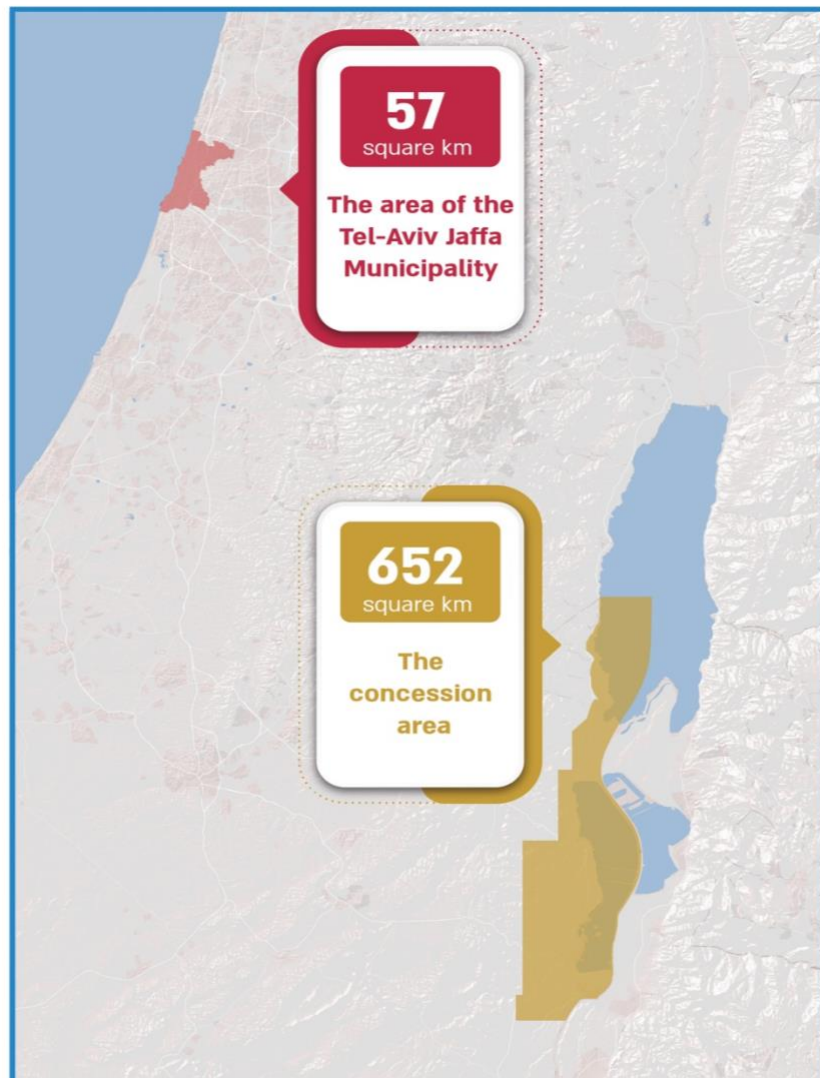
1 The Dead Sea Concession Law (Amendment No. 2), 1986.

2 It should be noted that the name of the enterprise is Dead Sea Works Ltd. In this report, the term Dead Sea Works or DSW refers to the three facilities in the concession area, each of which is a separate legal entity that holds specific environmental permits and licenses tailored to its activities.



other entity without the approval of DSW; and the Dead Sea area, which encompasses the waters of the Dead Sea within the borders of the State of Israel, as well as the defined evaporation area and coastal strip as specified by law.

### Concession Area and Municipal Area of the Tel Aviv-Jaffa Municipality



Source: Office of the State Comptroller.



Dead Sea Works constitutes a significant global entity in the production of potash, bromine, and magnesium minerals, attributable to the distinctive conditions present in the Dead Sea region. In addition to its fiscal contributions to state revenues through legally mandated royalties, which totaled approximately NIS 580 million<sup>3</sup> for the year 2023, Dead Sea Works is also obligated to remit taxes designated for natural resources, such as the excess profits levy in accordance with the Natural Resources Profits Taxation Law, 2011, along with general state taxes. Furthermore, the operations of Dead Sea Works directly employ over 1,800 individuals in the Negev area, while also engaging numerous contractors, service providers, and suppliers, thus bolstering the settlement initiatives in the southern region of the country. Additionally, one of the evaporation ponds utilized for industrial purposes preserves a "sea-like" area in the southern basin of the Dead Sea, enabling the development of associated hotel infrastructure and the promotion of tourism in this locale. However, the economic advantages derived by the state from the activities of Dead Sea Works are accompanied by adverse environmental repercussions that may impact both current and future generations. Specifically, Dead Sea Works' operations in the southern basin necessitate substantial water consumption, accounting for approximately 22% of the total water allocated to industrial endeavors in Israel, which is extracted from groundwater wells. This extraction diminishes the drainage capacity of streams and floodwaters; incurs environmental degradation due to the mining and extraction of materials for the construction and maintenance of large-scale infrastructure projects, such as embankments for evaporation ponds; has historically resulted in the diversion of streams to mitigate flood risks to these ponds; disrupts extensive stretches of open space and induces landscape deterioration; and contributes to the salinization of habitats and groundwater due to increased water extraction from groundwater reservoirs<sup>4</sup>, thereby damaging ecosystems.

The intersection of a unique geographical region, endowed with diverse natural values, cultural heritage sites, and spectacular landscapes, with intensive industrial operations predicated on the extraction and mining of natural resources, necessitates diligent oversight by all pertinent government ministries. This includes the Minister of Finance and the Minister of Economy and Industry, who bear responsibility for the Concession Law, to safeguard these natural resources and to ensure that the environmental impact of the industrial activities conducted under the concession remains minimal and compliant with legal stipulations.

This audit aims to scrutinize the management of the Dead Sea concession as well as the oversight related to environmental and land use aspects, assessing how regulatory bodies have exercised their powers over the years in relation to the Dead Sea enterprises, with the objective of protecting these interests. The findings of this report hold significant value for learning and deriving lessons at this juncture, as the state prepares to devise a new concession arrangement in anticipation of the concession renewal in the forthcoming years.

3 \$158 million, according to the dollar exchange rate as of August 18, 2024 of 3.67 NIS per 1 dollar, according to data provided by DSW.

4 Apart from the water DSW pumps from the Dead Sea.



## Key Figures

### March 2030

The date on which the current concession held by Dead Sea Works, for which the Minister of Finance and the Minister of Economy and Industry are responsible according to the Concession Law, will end.

### 652 sq. km

The current concession area held by Dead Sea Works is an area more than 11 times the size of the municipal area of the Tel Aviv-Jaffa Municipality.

### Only in 2023

The Ministry of Environmental Protection (MEP) has begun mapping all existing industrial infrastructures in the concession area that have the potential to create environmental hazards. The mapping revealed that there are 230 industrial infrastructures and that some of them operate without environmental regulation in the business license or within another regulatory framework that is appropriate to their characteristics. Among the infrastructures mapped are 63 evaporation and collection ponds and 55 conduits for transporting brine and Dead Sea water.

### Over NIS 120 million

The estimated amount that the Ministry of Energy and the Israel Land Authority did not collect from Dead Sea Works for the mining activity it carried out over the past decade, without examining the justification for the lack of collection (of which approximately NIS 112 million to ILA and approximately NIS 8.5 million to the Quarry Rehabilitation Fund).



<b>About 250 sq. km</b>	<b>Between NIS 90 and 135 million</b>	<b>8</b>	<b>About 25%</b>
Of the surface of the Dead Sea has dried up since the enactment of the Concession Law, when evaporation ponds and additional facilities have been built on parts of it; ILA has not examined their status and the possibility and justification for collecting payment for these uses.	Estimated amount of the landfill levy for 2023 for industrial waste from Dead Sea Works (salt sludge and salt waste) that the Ministry of Environmental Protection has not collected and has not examined the possibility of collecting. This is an important environmental levy intended, among other things, to serve as an incentive to reduce the waste produced. It should be noted that the levy has not been collected since 2007 (the year in which the amendment to the Maintenance of Cleanliness Law requiring a landfill levy came into effect).	The number of incidents of pollutants leaking from transmission lines in the concession area into the Judean Desert Nature Reserve that occurred from October 2020 to January 2024. These leaks caused ecological damage to animals and vegetation. The leaks occurred by infrastructure for which the Ministry of Environmental Protection did not set specific environmental conditions in the business license.	Of the annual amount of water that Dead Sea Works pumps from the Dead Sea, leaks from its evaporation ponds. Therefor to maintain production capacity and ensure that the amount of water in the ponds at any given time is unaffected, Dead Sea Works pumps water from the Dead Sea on a larger scale.

## Audit Actions

From January to June 2024, the Office of the State Comptroller conducted an examination of the activities of the audited entities concerning the management of the Dead Sea concession and their supervision regarding environmental and land use aspects. This examination focused on several key issues: the regulation of Dead Sea Works through the establishment of environmental conditions in business licenses; the governance of mining and quarrying activities conducted by these enterprises; the regulation and oversight exercised by the Israel Land Authority regarding the usage by



Dead Sea Works within the concession area; the management of waste hazards produced by Dead Sea Works in the concession area; and the inter-agency collaboration and information transfer between regulators concerning the activities undertaken by Dead Sea Works in the concession area. It is imperative to note that this audit did not encompass the regulation of water extraction from the Dead Sea or the groundwater drilling activities executed by Dead Sea Works. This omission is partly attributable to an ongoing petition regarding the absence of water fee charges for the groundwater drilling conducted by Dead Sea Works, which is currently under judicial review in the High Court of Justice<sup>5</sup>.

The audit was performed at the Ministry of Finance, the Ministry of Environmental Protection, the Ministry of Energy and Infrastructure (the Ministry of Energy), the Israel Land Authority, the Tamar Regional Council, the Eastern Negev Environmental Unit, and the Nature and Parks Authority. Supplementary inspections were performed at the Ministry of Justice, the Ministry of Economy and Industry, the Government Water and Sewage Authority, the Dead Sea Drainage Authority, the National Committee for Planning and Construction of National Infrastructures, and the Quarry Rehabilitation Fund.

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## Key Findings



### Regulating the Activities of Dead Sea Works by Setting Environmental Conditions in the Business License



#### Partial Regulation of Environmental Conditions in Business Licenses within Factory Premises

- **Environmental Conditions for Operating the Bromine and Potash Facilities**
  - The Ministry of Environmental Protection has not updated the environmental conditions in the business license of the bromine facility for approximately 25 years, nor in the business license of the potash facility, for about 15 years, with the exception of a specific update following the implementation of the Clean Air Law. The conditions currently in place are outdated, incomplete, and limited compared to those established for other comparable facilities, failing to address numerous environmental aspects. For instance, the Ministry of Environmental Protection has not included a reference to the treatment of the bromine facility's wastewater and asbestos hazards within its business license conditions.


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<sup>5</sup> High Court of Justice 5784/22 **Lobby 99 (CC) v. the Government Water and Sewage Authority, the Attorney General, and Dead Sea Works Ltd.**





- **Environmental Conditions for Operating the New Power Plant at the Potash Facility** – The Ministry of Environmental Protection has not stipulated specific environmental conditions concerning the new power plant associated with the potash facility's business license. This omission is notable given that in the conditions outlined in the potash facility's business license from 2009, the Ministry stated that "additional conditions will be issued separately for the planned [new] power plant". The Tamar Regional Council subsequently relied on an opinion from Dead Sea Works, asserting that the business license of the old power plant, which has been operational for years, remains applicable to the new power plant, without evidence suggesting that the Council conducted an examination of this matter on its behalf.

 **Deficiencies in Environmental Regulation Through Business Licenses Regarding the Industrial Activities of Dead Sea Works Outside the Factory Premises** – It was discovered that since 1995, when a unique arrangement was established for Dead Sea Works in the Business Licensing Law delineating the authority of both the local authority and the Ministry of Environmental Protection to impose conditions in its business license, the Ministry of Environmental Protection, responsible for setting environmental conditions in business licenses, has not exercised its authority regarding activities conducted by Dead Sea Works in the franchise area outside the facilities' premises. Consequently, all of the Dead Sea Works activities outside the facilities' premises have proceeded without specific environmental conditions in the business license.

 **Environmental Damage in the Concession Area Resulting from the Absence of Specific Environmental Conditions for the Dead Sea Works' Industrial Infrastructure in the Business License** – It was determined that the industrial activities conducted by Dead Sea Works have produced environmental hazards over the years that could have potentially been mitigated, at least in part, had specific environmental conditions been established in the business license and if the Ministry of Environmental Protection had monitored and verified compliance on DSW's part. The absence of specific environmental conditions in the business license has also resulted in challenges in enforcement with respect to these hazards under the Business Licensing Law, underscoring the gravity of the lack of supervision and enforcement in this matter:

- **Continuous Leakage of Potash from the Tzefa Conveyor<sup>6</sup> into the Judean Desert Nature Reserve** – The audit found that significant quantities of potash have leaked over the years from the conveyor into the surrounding open areas. These leaks have resulted in salinization, contamination, and damage to the ecosystem. Although Dead Sea Works has undertaken measures to cover the conveyor belt and collected the leaked potash, according to the Nature and Parks

<sup>6</sup> In order to transport and export the potash, Dead Sea Works built in the 1980's an 18-kilometer-long conveyor belt that moves the potash, produced in the confines of the factories, to the Tzefa transportation hub in Mishor Rotem. From there, the product is sent to the Ashdod port and shipped globally.



Authority, as of the audit date, occasional breakdowns continue to occur, causing the dispersion of potash in the Judean Desert Nature Reserve. In the absence of specific environmental conditions in the Dead Sea Works business license, the company is not required to report this pollution to any regulatory body, thereby inhibiting any enforcement actions regarding violations of the business license conditions.

- **Leaks of Pollutants from the Transmission Lines to the Judean Desert Nature Reserve** – The audit found that from October 2020 to January 2024, eight incidents of pollutant leaks from the transmission lines into the reserve area have occurred, resulting in ecological harm to local flora and fauna. Documentation from the Eastern Negev Water and Sewage Authority indicates that the handling of some of these leaks and their preventive measures include actions that should have been regulated under the environmental conditions of the business license.
- **Leakage Incident from a Feed Canal Transmitting Seawater Solution from the Northern Basin of the Dead Sea to the Evaporation Ponds of Dead Sea Works, Crossing the Alluvial Fan of the Tze'elim Stream** – In 2022, a leak occurred in the feed canal, causing significant ecological damage to the alluvial fan of the Tze'elim Stream, including extensive damage and mortality of various plant species, some of which represent protected natural values. Only after this incident did the Ministry of Environmental Protection initiate efforts to incorporate specific environmental requirements in the Dead Sea Works business license pertaining to the feed canal. The Ministry gave the Dead Sea Works these requirements after the audit's completion. These operating requirements could have significantly mitigated the damage resulting from the leak. Moreover, had the Ministry of Environmental Protection established the requirements in the business license regarding the feed canal, and violations detected, it could have been undertaken enforcement actions in accordance with the Business Licensing Law.

These represent significant regulatory failures by the Ministry of Environmental Protection in an ecologically and environmentally sensitive area.

- 🗨️ **The Tamar Regional Council's Responsibility for Ensuring Adequate Environmental Regulation of the Industrial Activities of Dead Sea Works** – As the licensing authority under whose jurisdiction Dead Sea Works operates, the Tamar Regional Council has failed to take necessary measures to guarantee that Dead Sea Works operates in accordance with appropriate environmental regulations stipulated within its business license. This expectation is heightened due to the scale of the enterprise and its substantial environmental impacts at the national level. Consequently, it is anticipated that the Council would engage with the Ministry of Environmental Protection to ensure compliance with updated and comprehensive environmental regulations across the various facilities.



## Regulating the Mining and Quarrying Activities of Dead Sea Works

Audit findings indicate that subsequent to the transfer of regulatory responsibility for the mining and quarrying sector to the Ministry of Energy in 1996, the Ministry has not adequately fulfilled its public duty regarding the oversight of large-scale mining operations (hundreds of thousands of cubic meters) by Dead Sea Works within the concession area. This represents a persistent and concerning regulatory failure, resulting in significant environmental and economic repercussions.

**🔴 Lack of Monitoring, Control, and Supervision** – The audit determined that prior to 2009, the Ministry of Energy did not oversee the quarrying and mining activities conducted by Dead Sea Works in the concession area and did not gather information pertaining to the quantities and types of mined materials, despite such oversight being within its authority and obligation. Although a supervision outline was agreed upon with Dead Sea Works in 2009, the Ministry failed to ensure its complete implementation. From 2011 until the audit completion, the Ministry did not receive reports from Dead Sea Works regarding the quantities of materials extracted within the concession area, did not conduct thorough inspection tours akin to those at other mining sites, and lacked data or estimates concerning the types of materials mined, the methods of extraction, and the extent of material utilization. Due to the absence of such oversight and information, there is no guarantee that the natural resources have been efficiently used. This issue has significant economic and environmental implications.

**🔴 Failure to Regulate the Mining Activity of Dead Sea Works in a Quarrying License** – The audit revealed that, as of the audit's completion (June 2024), The Ministry of Energy did not exercise regulatory oversight, through a quarrying license for the mining activities of the Dead Sea Works where as it did so for numerous entities engaged in quarrying activities nationwide. Despite the Ministry expressing its position in 2018 that the mining activities of Dead Sea Works in the concession area should be subjected to regulation via a quarrying license, it failed to take appropriate action to enforce this regulation. When the issue of a quarrying license was reviewed in 2023, the Ministry contented itself with a legal opinion asserting that "a license is apparently not required under the ordinance", without conducting a thorough examination of the assumptions underlying this opinion. It became evident that it was only following the current audit by the Office of the State Comptroller and the questions it raised, that the Ministry initiated a reexamination of its stance on the matter.

**🔴 Failure to Collect Payment from Dead Sea Works for its Mining Activities** – The Ministry of Energy and ILA did not demand compensation from Dead Sea Works for materials it has mined over many years in the concession area, nor did they investigate the justifications for failing to demand payment. According to a calculation performed by the Office of the State Comptroller, assuming that the data provided by Dead Sea Works to the Ministry of Energy regarding mining scope in 2010 is representative, the potential amount owed could exceed NIS 120 million over the past decade after



adjustments (approximately NIS 112 million to the Israel Land Authority and over NIS 8.5 million to the Quarry Rehabilitation Fund). It should be noted that financial remuneration for mining is a critical mechanism for the sustainable management of quarry materials, as stipulated in the Mines Ordinance and the Israel Land Authority procedures. This despite that the ILA implements the mechanism at numerous other mining sites across the nation.



**Lack of Rehabilitation of Abandoned Mining Sites** – The Ministry of Energy and the Ministry of Environmental Protection have not demanded complete rehabilitation of mining sites in the concession area where Dead Sea Works has concluded its mining operations. The deficiency in rehabilitating these sites is becoming increasingly pronounced, particularly as the Ministry of Energy has failed to require Dead Sea Works to contribute to the Quarry Rehabilitation Fund, which could have served as a funding source for rehabilitation efforts. Unrehabilitated abandoned mining sites represent a significant environmental and landscape hazard, constituting an "open wound" within the natural terrain of the Dead Sea's unique landscape.



**Deficiencies in the Implementation of Planning Regulations for the Mining Sites of Dead Sea Works** – Notwithstanding the statutory plans applicable to mining sites operated by Dead Sea Works, the Dead Sea Drainage Authority has not compelled Dead Sea Works to provide it with an updated measurement plan concerning mining activities at the Hemer Stream and Zin Stream sites, nor did it conduct monitoring and supervision on this matter. Additionally, the Nature and Parks Authority did not require Dead Sea Works to monitor the ecosystem and flow regime at the mining site located in the Hemer Stream. These provisions are designed to mitigate the environmental impacts of mining activities, prevent invasive species proliferating, ecosystem damage, and alterations to the surface runoff flow regime, alluvium, and stream dynamics.

## **The Israel Land Authority's Regulation and Supervision of the Dead Sea Works Use of the Concession Area**

The audit findings indicate significant deficiencies in the conduct of the Israel Land Authority over several decades concerning the management of the area included in the Dead Sea concession and the use thereof by DSW. Consequently, governmental oversight of activities within the concession area has been compromised, resulting in a loss to the public purse.




### **Failure to Regulate Uses Within the Concession Area and a Lack of Supervision and Collection of Associated Payments**


- The reserved lands encompass approximately 240,000 dunams; Under the Concession Law, any utilization of these lands necessitates a change in their status to leased lands, accompanied by corresponding lease fee payments. It was determined that, despite the construction of facilities utilized by Dead Sea Works (such as the feed canal) on these reserved lands, the Israel Land Authority has



failed to change the status of the land to leased as mandated by law and does not require Dead Sea Works to remit payment for their use. Additionally, despite the inherent natural, landscape, and heritage value of the land, ILA has not conducted inspections of the reserved lands and remains uninformed regarding their use by Dead Sea Works within this area. The absence of information concerning the utilization of the land by Dead Sea Works and the corresponding collection of lease fees is indicative of inadequate supervision.

- It was observed that despite significant portions of the Dead Sea having dried up since the implementation of the Concession Law, resulting in approximately 250 square kilometers of land being created by 2024, as well as the establishment of industrial facilities on certain areas, ILA did not assess the status of this newly formed land or determine the appropriateness of collecting lease fees for its existing uses.
- It was found that although ILA was aware that a portion of the electricity generated by the new power plant established by Dead Sea Works, which commenced operations in 2018 at the potash facility, was not designated for the exclusive use of Dead Sea Works, contrary to the representations made by DSW as a condition for ILA's approval of the construction permit, it did not take action to regulate or terminate this unauthorized use and did not impose a fee in respect thereof. The continuation of this unauthorized use for approximately six years, without ILA even issuing a draft assessment on the matter to Dead Sea Works, exacerbates the failure in regulatory oversight and ILA's responsibility in managing Israeli lands within the concession area.

 **The Size of the Concession Area** – The extended concession area was originally granted over 60 years ago to Dead Sea Works to facilitate its operations. It has since become evident that portions of the concession area are unnecessary for the activities of Dead Sea Works, as evidenced by land developed for hotels and residential buildings. The Tamar Regional Council has noted that the requirement for Israel Land Authority to secure approval from Dead Sea Works for each building permit application, even for designated residential and hotel areas, has imposed an unwarranted bureaucratic burden on residents and developers and has resulted in unnecessary delays in construction and development. Except for a singular attempt in the 1970s, ILA – charged with the responsibility of managing Israel's land as a public trustee – has not pursued the possibility of reducing the concession area.

 **Payment for the Lands Within the Concession Area** – The payment established in 1975 for the lands allocated to Dead Sea Works is ostensibly minimal, as it continues to rely on historical land valuations determined decades ago in the former Israeli currency (IL). Lease fees for factory land are calculated based on the lowest values established at that time for industrial purposes – specifically, 75 IL per dunam. The mechanism instituted by ILA for updating lease fees was based on previously mentioned criteria and reduced lease amounts alongside the base value assigned in 1975. As reported by ILA,



the annual lease fees paid by Dead Sea Works as of 2024 are approximately 2.7 NIS million. It has been established that ILA, as the managing entity for Israeli lands, and the Ministry of Finance, as the authority responsible for the Concession Law, have not, over the years, examined the potential for amending the lease fee amounts or for collecting payments for the reserved lands, which encompass approximately 240,000 dunams, despite the passage of time and the possible fluctuations in land value.

## **The Management of Hazardous Waste Generated by Dead Sea Works**

The Dead Sea Works' industrial processes result in the production of substantial quantities of waste, which are accumulated at designated waste sites within the concession area. The analysis presented in this chapter reveals a significant regulatory inadequacy on the part of the Ministry of Environmental Protection, indicating insufficient oversight of activities within the concession area and highlighting the Ministry's ineffectiveness in addressing the associated waste hazards.



### **The Lack of Treatment of Industrial Waste Generated by the Dead Sea Works**

– Annually, DSW generates considerable amounts of salt sludge waste (15,000 tons), salt waste (2,000,000 tons), and harvested salt. It has been found that for several decades, up to the audit end date, the Ministry of Environmental Protection has failed to establish any requirements or guidelines concerning the management of the various streams of industrial waste produced by Dead Sea Works, as part of the terms of its business licenses. In 2023, the Ministry of Environmental Protection mandated the submission of a regulatory plan for the salt sludge waste associated with the magnesium facility within a 12-month timeframe, with a requirement to finalize the regulation of the salt sludge site by the end of 2028. However, over two years after the establishment of these requirements, the Ministry has not insisted on the submission of a regulatory plan by Dead Sea Works, casting doubt on the feasibility of adhering to the proposed timeline for site regulation. Furthermore, it was observed that shortly after the designation of the material by the Ministry as waste in 2023, Dead Sea Works commenced utilizing the salt sludge waste as infrastructure material within various projects in the concession areas, scattering it at multiple locations within the concession area, and stopped transferring the sludge waste to the salt sludge site. This action was undertaken without the requisite approvals from the relevant professional bodies within the Ministry, including those responsible for classifying the material as waste, and without the Ministry demanding it receive accounts of the quantities of waste repurposed by Dead Sea Works.

The accumulation of waste at these sites presents a significant aesthetic hazard and is associated with adverse environmental consequences, including ecological degradation and soil contamination. In the case of the Salt Mountain, where the salt waste is deposited, it has been determined that approximately 300,000 cubic meters of contaminated soil results from the large-scale disposal of fuel oil in the area.






### The Salt Mountain, June 2024



Source: Office of the State Comptroller


-  **Failure to Collect a Landfill Levy Concerning the Industrial Waste Generated by Dead Sea Works by the Ministry of Environmental Protection –** Notwithstanding the enactment of an amendment to the Maintenance of Cleanliness Law mandating a landfill levy in effect from 2007, the Ministry of Environmental Protection has not enforced this requirement in respect of Dead Sea Works, specifically in relation to the disposal of salt waste and salt sludge waste. Furthermore, the Ministry has not explored the feasibility of imposing such a levy, even though the quantities of waste landfilled each year are substantial, estimated at 2 million tons of salt waste and 15,000 tons of salt sludge waste. Consequently, significant waste accumulations remain within the concession area without the payment of a landfill levy, which is designed to internalize external costs, promote the utilization of alternative waste treatment methods



that are less land-intensive and environmentally detrimental, and serve as a motivation for waste reduction.

For the sake of illustration, calculations conducted by the Office of the State Comptroller indicate that should the Ministry of Environmental Protection impose a landfill levy on these waste types, the amount payable by Dead Sea Works to the Cleanliness Fund in 2023 would range from NIS 90 million to NIS 135 million. Specifically, this comprises approximately NIS 90 million to NIS 134 million for salt waste<sup>7</sup> and approximately NIS 1 million<sup>8</sup> for salt sludge waste.

### **Labor Interfaces and the Transfer of Information Between Regulatory Bodies Concerning the Activities of Dead Sea Works Within the Concession Area**

 Audit findings reveal notable deficiencies in information exchange among several regulatory authorities involved, including the Ministry of Environmental Protection, the Ministry of Energy, the Tamar Regional Council, and ILA, regarding the operations of Dead Sea Works in the concession area, as well as a lack of coordination on common or related issues that necessitate collaborative engagement and comprehensive oversight by multiple regulators. These deficiencies have led to the failure to exercise numerous powers that should have been implemented within the concession area. For example:

- While the Tamar Regional Council mapped the concession area and compiled crucial information pertaining to the facilities and operations of Dead Sea Works, subsequently uploading this data to an advanced computerized database, ILA and the Ministry of Environmental Protection did not possess adequate information on the matter. Consequently, the Ministry of Environmental Protection refrained from exercising its regulatory authority within the concession area, neglecting to establish specific environmental conditions within the business licenses of various facilities cataloged in the database. Additionally, ILA did not take action to regulate the diverse uses of the concession area by the Dead Sea Works, despite the fact that the Regional Council possessed relevant information.
- A considerable volume of water, approximately one-quarter of the quantity extracted by Dead Sea Works from the Dead Sea, is leaking from its largest industrial evaporation pond. This leakage presents environmental ramifications and may also alter the surface and jeopardize the engineering stability of the pond. Remarkably, such issues have not been scrutinized in detail by the pertinent regulatory bodies, and the Ministry of Environmental Protection did not intervene

7 NIS 89,489,412 according to the classification of industrial sludge or NIS 134,234,118 according to the classification of dry waste based on a working assumption of landfilling 2 million tons in 2023.

8 NIS 781,500 according to the classification of industrial sludge and NIS 1,172,250 according to the classification of dry waste, in accordance with the amounts specified in the appendix to the Maintenance of Cleanliness Law, and based on a working assumption of landfilling 15,000 tons per year.





by imposing requirements within the business license to mitigate or eliminate this leakage, while the Water Authority posits that it bears no responsibility to address the matter.

- Critical information provided by Dead Sea Works to ILA, regarding an arrangement established with the Tamar Regional Council concerning a new power plant, has not undergone thorough examination: The Dead Sea Works conveyed to the ILA that the Tamar Regional Council interprets the sale of electricity generated by the new power plant to other facilities within the ICL concern as internal consumption for property tax purposes. This material information, which the Tamar Regional Council disputes, remains unverified, despite its potential impact on the classification that ILA may assign to the electricity generated at the new power plant and sold by Dead Sea Works to other facilities within the concern, as well as the associated financial obligations for Dead Sea Works.

As a result, governance within the concession area has been compromised, and various regulatory authorities have failed to implement measures that would ensure the activities of Dead Sea Works do not infringe upon essential public interests, including the preservation of land and environmental integrity.









In 2023, the Ministry of Environmental Protection established supplementary environmental conditions within the business license of the magnesium facility, encompassing comprehensive environmental requirements. This action, along with the rationale provided by the Ministry for its decision, as well as the Ministry's assertion that the purpose of the additional conditions is to mitigate potential harm to environmental quality, underscores notable regulatory deficiencies concerning the operations of Dead Sea Works.








## Key Recommendations

- 💡 The Ministry of Environmental Protection must expeditiously implement regulations concerning specific environmental conditions within the business license of Dead Sea Works, applicable to all activities conducted both within and outside the facilities' grounds located in the concession area. Additionally, it is appropriate for the Tamar Regional Council to be involved in the process of updating the regulations governing Dead Sea Works, thereby ensuring that extensive industrial activities within its jurisdiction adhere to appropriate regulatory frameworks.



-  The Ministry of Energy must oversee the mining activities conducted in the concession area, similar to its supervision of other mining sites throughout the country. This includes mandating reports on the volume of mining materials produced, data pertaining to the production processes, and the degree of utilization of these materials, as well as conducting field inspections. Furthermore, the Ministry should reassess its stance concerning the issuance of quarrying licenses for mining sites situated within the concession area and develop a comprehensive and systematic position on this matter.
-  The Ministry of Energy and ILA are urged to conduct a thorough assessment regarding the collection of payments owed by Dead Sea Works for its mining operations performed in the past and currently taking place within the confines of the concession, and to take appropriate actions based on the findings of this assessment.
-  The Ministry of Finance, as the authority responsible for the Concession Law, and the Ministries of Energy and Environmental Protection and ILA, must ensure the rehabilitation of abandoned mining sites that the Dead Sea Works has utilized over the years, thus preventing them from posing environmental hazards, in accordance with the "polluter pays" principle. Considering that the concession period concludes in 2030, and in anticipation of a tender for the subsequent concessionaire, the involved ministries must guarantee that the rehabilitation of these abandoned mining sites is completed prior to the end of the concession period and examine the possibility of procuring a guarantee or other security to ensure that Dead Sea Works fulfills the requisite rehabilitation.
-  The Dead Sea Drainage Authority must adhere rigorously to the provisions outlined in the statutory plans for Zin Stream and Hemar Stream, obtain annual measurement plans for the mining pits from Dead Sea Works, and ensure that mining operations comply with these plans. The Nature and Parks Authority is required to exercise its authority under the Hemar Stream plan and mandate that Dead Sea Works engage in ecosystem and flow regime monitoring to mitigate and minimize the environmental impacts of mining activities.
-  The Israel Land Authority is obligated to implement substantial reforms regarding the monitoring, supervision, and enforcement mechanisms it employs in the concession area of Dead Sea Works, ensuring alignment with its statutory role of protecting and overseeing land as a public resource.
-  The Israel Land Authority must assert its authority to supervise reserved lands, encompassing approximately 240,000 dunams. It is essential for ILA to regulate the leasing of reserved lands utilized by Dead Sea Works, collect applicable levies for land usage for the state treasury, and collaboratively assess with the Ministry of Finance whether it is justifiable to impose lease fees on Dead Sea Works for its use of previously submerged lands that have since dried up. Prospectively, it is advisable for the aforementioned entities to devise a payment mechanism that reflects the emergence of a substantial area of land due to the receding levels of the Dead Sea and to provide recommendations regarding this matter within the context of future concessions.



-  The Israel Land Authority is urged to promptly rectify deficiencies concerning the regulation of the new power plant at the potash facility and to take actions necessary to collect payments owed for its use.
-  It is recommended that ILA and the Ministry of Finance periodically examine together with Dead Sea Works the reduction of the concession area, and as needed propose to exclude non-essential areas from the concession. Additionally, ILA should contemplate waiving the requirement for obtaining Dead Sea Works' approval for building permits concerning leased lands with pre-approved statutory plans designating land for specific uses, such as residential development. Prospectively in anticipation of the next concession renewal, it is proposed that legal frameworks for future concessions incorporate mechanisms for deduction of areas, should portions of the land be determined unnecessary for concession purposes.
-  The Israel Land Authority and the Ministry of Finance should work towards updating lease fees to reflect current land use values, including the consideration of separate payments for reserved lands, as the existing situation offers no incentives for the concession holder to relinquish excess land, a valuable public resource, even if deemed non-essential for operations. Furthermore, despite a scheduled update mechanism every seven years, current payments for leased lands and the factory area are based on outdated and depreciated land values, thereby contravening principles of equality and distributive justice. Immediate corrective actions are necessary to address this issue.
-  The Ministry of Environmental Protection must promptly stipulate regulations governing the management of various waste streams generated by Dead Sea Works, ensure compliance with said regulations, and employ its enforcement mechanisms in instances of non-compliance.
-  Until the Ministry of Environmental Protection has made a decision based on professional and legal opinions regarding the classification of waste transferred to the salt sludge site and the Salt Mountain, it is obligated to impose a landfill levy on this waste, which is fundamentally industrial in nature. The implementation of a landfill levy may serve to advance the public interest by facilitating waste reduction and internalizing the external costs associated with its disposal.
-  The Ministry of Environmental Protection must ascertain that the practice of spreading waste within the concession area for the purpose of filling sinkholes or use by Dead Sea Works is deemed acceptable by professional entities within the Ministry. This practice should not replace the requisite treatment of waste and subsequent transfer to an appropriate disposal site along with the payment of a landfill levy. Additionally, the Ministry should establish robust control and monitoring measures to mitigate any potential environmental hazards arising from such practices.
-  It is proposed that all pertinent entities, including the Ministry of Environmental Protection and the Water Authority, convene promptly in a "round table" format to formulate solutions addressing the issue of significant leaks from the industrial ponds managed by DSW.



It is recommended that the Minister of Finance and the Minister of Economy and Industry, as the ministers responsible for the Concession Law, in conjunction with the Minister of Environmental Protection, establish a comprehensive governmental entity. This entity should incorporate representatives from various governmental ministries and the Regional Council, with the purpose of consolidating all data relating to the activities within the concession area, thereby coordinating and enhancing the operations of the various regulatory bodies. The establishment of such a coordinating entity will not only prevent redundancy in regulatory requirements but also streamline operations, facilitate the transfer of critical information, and encourage inter-agency collaboration. The necessity for a dedicated coordinating body is increasingly pressing, particularly in anticipation of future developments regarding the Concession Law.



## The Main Deficiencies in the Management and Supervision of the Dead Sea Concession – Environmental and Land Use Aspects

### 1 Deficiencies in the Regulation of Environmental Conditions in Business Licenses

- Non-implementation of the Business Licensing Law and its regulations promulgated in 1968-1995
- 1995 onwards -
  1. Partial regulation of environmental conditions within the premises of the facilities
  2. Deficiencies in environmental regulation, regarding industrial activities outside the premises of the facilities

The Ministry of Environmental Protection did not set dedicated environmental conditions in DSW's business licenses with respect to many industrial infrastructures. In some of the infrastructure there were malfunctions and leaks causing extensive environmental damage.

### 2 Deficiencies in the Regulation of the Mining and Quarrying Activities

- Absence of monitoring, control and supervision
- Failure to regulate mining activities in the quarrying license
- Failure to collect fees from DSW
- Abandoned mining sites were not rehabilitated
- Deficiencies in implementing planning regulation

The Ministry of Energy's failures have resulted in thousands of cubic meters being produced within the concession area without supervision and monitoring and without a quarrying license. The Ministry of Energy and ILA did not examine the possibility of demanding payment for the quarrying produced by DSW, estimated at millions of NIS a year.

### 3 Deficiencies in Regulating and Monitoring Use of the Concession Area

- Non-regulation of the use of the concession area
- Absence of oversight and fee collection
- Failure to consider reducing the concession area size
- Reduced payment for areas included within the concession

The ILA's operating failures have allowed numerous unregulated and unmonitored uses of the concession area. The ILA has not collected levies for these activities.

### 4 Deficiencies in Handling Contaminated Waste

- Dead Sea Works' industrial waste wasn't treated
- Landfill fees were not collected
- Industrial waste sites were not rehabilitated

The Ministry of Environmental Protection's oversight failures have allowed a significant accumulation of untreated industrial hazards in the concession area. The Ministry has not collected the relevant land fill levies estimated at tens of millions of NIS annually.



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## Summary

The Dead Sea represents the lowest landmass on Earth and is recognized as a distinctive natural phenomenon with healing properties, essential natural values, striking landscapes, and diverse heritage sites. Historically and currently, the Dead Sea serves as a crucial natural resource for the State of Israel. Consequently, any industrial activities within the region must incorporate considerations related to protecting the land and environment.

The multitude of audit findings highlights a systemic regulatory and enforcement failure by the relevant authorities, predominantly the Ministry of Environmental Protection, the Ministry of Energy, the Israel Land Authority, and the Ministry of Finance. This failure is evident in four principal domains associated with the core operations of Dead Sea Works in the concession area: (a) Regulation of environmental aspects within the context of Dead Sea Works' business license; (b) Regulation of the mining activities undertaken by Dead Sea Works; (c) Regulation of the various uses conducted by Dead Sea Works in the concession area; and (d) Regulation of waste treatment generated by Dead Sea Works. These represent significant regulatory deficiencies that, collectively, reflect a lack of competence and inadequate governance in overseeing the Dead Sea concession and its management concerning environmental and land factors. Furthermore, these failures substantially impact the public economy due to the non-collection of payments estimated at tens of millions of shekels annually, without proper evaluation of the reasons for the non-collection.

The Ministry of Finance, which is spearheading efforts to develop a future concession arrangement in anticipation of the current concession's conclusion in 2030, should collaborate with the Ministry of Environmental Protection to address the various issues identified in the report. Additionally, there is a need to explore the establishment of a dedicated and integrative agency to facilitate the management and oversight of the future concession.

The natural resources of the Dead Sea fundamentally belong to the public. The serious and numerous findings discussed in this report should invoke concern among all citizens due to the inadequate management of the Dead Sea concession to date, which has not effectively safeguarded environmental and economic interests. This neglect contravenes the "polluter pays" principle and undermines distributive justice. The Office of the State Comptroller expects all governmental ministries and additional entities referenced in the report to take decisive action to rectify the identified deficiencies. In this context, the involvement of the responsible ministers and directors-general in the process of addressing the deficiencies and implementing the report's recommendations is imperative.