



Report of the State Comptroller of Israel | July 2024

Ministry of National Security

Fire Investigation at the National Fire and Rescue Authority



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Background

The National Fire and Rescue Authority (the FRA or the Authority) operates under the National Fire and Rescue Authority Law, 2012 (FRA Law) to extinguish and prevent fires. According to the FRA Law, the Authority should investigate fire incidents to ascertain their circumstances and causes. Moreover, it outlines investigation protocols, certifies investigators and their powers, ensures the integrity of criminal investigations, and submit conclusive reports regarding the investigation. The National Fire and Rescue Authority (Investigation of Fires) Regulations, 2014 (the Regulations) detail guidelines concerning the investigation's objective, methodology, including eligibility criteria to perform an investigation. Fire investigation is at the core of the Authority's activity, and its findings may contribute to preventing future fires and assist the courts in determining the scope of direct liability and insurers' liability for fire damages.



Key Figures

117
people

died in fires in 2019–2023

about
328,532
dunams

burned in fires in 2019

over NIS 7
billion

fire damage cost across the country per year¹

about
50,000

fire incidents (responding to the call and extinguishing the fire) per year are handled by the FRA

only about
9%

of the fires handled by the FRA in 2022 were investigated (4,016 fire incidents), and about 14% of the fires handled by the FRA in 2023 were investigated (6,107 fire incidents)

at least
50%

of the fire investigation cases FRA opened in 2020–2022 (8,011) were closed only about a year later, and about 10% of the cases (1,537) were still open in September 2023

75%

of the investigation cases opened by the police on suspicion of arson crimes in 2019–2022, (9,030 out of 12,084) were closed without indictment


228

investigation cases were opened by the police in 2019–2022 on suspicion of arson on a nationalistic background, of which 33% resulted in indictments

¹ Estimated by the FRA, Keren Kayemet L`Israel – The Jewish National Fund and the Nature and Parks Authority





Audit Actions


 From January to September 2023, the State Comptroller's Office audited the Fire and Rescue Authority (FRA) fire incident investigations including the operational concept of the investigation system, its regulation, and the methods of its implementation; The management of human capital, including training programs and the maintaining of personnel competence, the investigation process and its outcomes, and the collaborative working interfaces between the investigation system and police officials. The examination was conducted at the FRA Commission and its districts, with supplementary examinations at the Police Forensics Department.

Key Findings



 **The Operational Framework of the Fire Investigation System** – the FRA operates without written policy documents approved by the Authority's headquarters, delineating its operational principles in the fire investigation. Additionally, the current policies in fire investigation do not derive from a documented risk analysis or optimal management.

 **The Initiation of Fire Incidents Investigations** – the FRA's procedures do not specify the officials who are authorized to decide whether a fire incident require investigation, and if the conditions set out in the Regulations are met. This ambiguity, particularly concerning the decision-making process during non-business hours and on rest and Sabbath days, may result in delayed decision-making, undermining the investigation's effectiveness. Furthermore, the procedure for launching an investigation into a fire incident varies by different districts of the FRA, lacking uniformity in the instructions and guidelines to investigators across regional fire stations nationwide. The risk levels for fire incidents outlined in the Authority's operations department's procedures, which relate to the contours of the fires (vehicles, open space, buildings) do not necessarily align with the event classifications established in the Regulations, which focus on different parameters (e.g., suspected arson, fire with casualties, and fires in buildings handled by the Authority).

 **Decision to Not Investigate Fires** – the Authority failed to investigate, on average, about 89% of the fires it handled between 2019 and 2022 (around 188,000 incidents) that were reported to the Authority's investigation system by the FRA control center. This occurred without the authorized officials assessing whether these incidents required investigation according to the Regulations. In 2022, the investigation system conducted a total of 4,016 investigations. According to the segmentation performed by the FRA's



research department, 184 instances, were not investigated (4.5%) due to documented reasons such as difficulties in investigating (96 cases), minor damage (74), and due to police orders (12). However, no documentation was available detailing the decision-making process for not launching an investigation regarding the 40,573 fire incidents reported to the investigation system in 2022 (constituting 90.6% of all fires handled by the FRA that year).






🔴 Decision to Not Investigate Vehicle Fire Incidents – the bodies specified within the Regulations – the Commissioner or the District Commander – are not authorized to sweepingly decide not to investigate all vehicle fires. Nevertheless, it has been determined that initiating investigations into vehicle fire incidents, particularly those occurring while driving, is not mandatory in the Authority's Coast, and Judea and Samaria districts. In 2022, these districts handled 736 vehicle fires, of which only 25 were investigated. Hence, the competent bodies in the Regulations did not examine about 96% of the incidents reported to the investigation system in the aforementioned districts in 2022.

🔴 The Employment of an Information Gathering and Investigations Division – in 2002, an Information Gathering and Investigations Division was established within the FRA to facilitate ongoing activities related to information gathering and research regarding fire incidents and manage the fire investigation system within the Authority. However, the Authority's operations department has yet to define workforce headcount standards or operational objectives for the new division. As of February 2024, about 62% of the professional positions within the Information Gathering and Investigations Division remain unfilled (8 out of 13). Thus, four years following its establishment, the newly added units within the investigation system operate only partially. The current operational state of the investigation system is deficient, functioning in an outdated format, lacking a planning, guidance, and regulation unit, and lacking the capability for continuous supervision and oversight over investigators' activities across the FRA's districts and stations.

🔴 Staffing of Positions in the Investigation System – in 2023, the positions of commanders and investigators within the investigation system were understaffed. Of seven branch head positions, one remained vacant; Among the seven heads of investigation bureaus, two positions were unfilled. Additionally, 18% of regional fire station investigator positions were not staffed. Since 2020 the number of investigators who are firefighters conducting investigations in addition to their main tasks is 108. In 2023, only two-thirds of these positions (78) were filled, reflecting a significant decrease of about 70% in the workforce of firefighters conducting investigations in addition to their tasks since 2016, when 258 such positions were staffed.

🔴 Drafting of a Conflict of Interest Policy for Fire Investigators – the FRA has not established regulatory provisions within its procedures to prevent conflicts of interest for firefighters acting as fire investigators in addition to their tasks. In this state of affairs, a


firefighter functioning also as a fire investigator may be compelled to gather testimony from colleagues concerning their involvement in extinguishing a fire during a joint shift, potentially creating a situation that raises concerns regarding conflicts of interest.


-  **Training of Fire Investigators and Maintenance of Competency** – aside from an introductory investigator course, the Authority does not offer advanced training programs to improve the quality and level of investigations or mentor new fire investigators. Consequently, investigators are impeded from advancing their professional skills and improving investigation processes and outcomes. Furthermore, the senior commanders' course, intended, among other things, to elevate operational commanders' proficiency in investigations, was not conducted during 2022 and 2023. Hence, about 30% of all certified investigators (54 out of 183), including those holding investigator positions, do not engage in fire investigations in practice, rendering them unqualified to conduct investigations in 2023.
-  **Disruption of the Incident Site** – the FRA procedure stipulates that fire investigations should commence promptly after receiving a report about a fire incident. However, 28% of investigations (4,428 out of 15,868) carried out between 2020 and 2022 were initiated with a delay of two days or more; Additionally, 5% (825 investigations) were delayed by a week or more. Delayed arrival at the incident site may result in compromised evidence, negatively impacting the effectiveness and reliability of investigations. It was raised that in 8% of all fire incidents investigated from 2020 to 2022, the disruption of the incident site hindered the formulation of accurate conclusions.
-  **Working Interfaces Between the FRA and Police Units** – an analysis raised that 74% of investigation cases (6,728) opened on suspicion of arson from 2019 to 2022 were closed due to "unknown perpetrator" status, while 21% (1,869) were closed because of insufficient evidence. The high rate of cases labeled as "unknown perpetrators" suggests a deficiency in suspect apprehension concerning arson offenses.
-  **Duration of Handling of Investigations** – according to the Investigations Section guidelines, fire investigations should be completed within one month from the opening of the investigation case. However, FRA data from 2020 to 2022 indicates that at least 50% (8,011) of investigation cases were processed for an average duration exceeding 11 months. In 2023, about 10% of all fire investigation cases initiated from 2020 to 2022 (1,537) remained open for over 20 months, with about 85% lacking documented justification, thereby not providing adequate service to fire-affected citizens.
-  **Professional Equipment and Safety Measures** – the investigation system lacks innovative technological tools recognized in fire services globally, which could enhance the investigation process and optimize resource utilization. Examples include laser scanners for rapid documentation of fire scenes in 3D, LIDAR² technology for scene decoding, portable X-ray devices for imaging burned objects, hydrocarbon detectors, and

2 Light Detection and Ranging.





combustion accelerators to trace the cause of the ignition, drones and the use of advanced applications installed on mobile devices to collect evidence. Furthermore, except for the Dan district, the investigation system failed to compile a uniform list of investigative equipment for fire investigators based on the classification of investigations, locations of fires and evolving arenas; also, discrepancies exist between districts concerning the equipment required for investigators according to the equipment lists. Additionally, the currently available equipment for fire investigators, both investigative and personal protective gear, fails to meet professional and safety standards. This results in an inadequate supply of essential equipment such as gloves, helmets, safety shoes, flashlights, adapted cameras, and advanced technological tools, endangering investigators' health and safety and hindering investigation.

 **Information Sharing Between the FRA and Various Authorities** – the data archived in the FRA's investigation system regarding fire causes, could significantly aid various enforcement, security, regulatory, and local authority bodies in preventing fire incidents in populated areas. However, no defined information-sharing mechanisms are embedded in routine activities among these bodies.

 **Lack of Targeted Information Available to the Public** – failures in household electrical appliances is the leading cause of fires, accounting for 31% (1,310 out of 4,178 incidents), with the leading flammable items – various components in air conditioners (59%) being installed in nearly every building in Israel. However, the FRA website does not provide targeted information on failures of these products or guidance on preventing fires in air conditioners, refrigerators, washing machines, dryers, and other electrical products.





Key Recommendations

 The FRA should establish a coherent and systematic policy for the operation of the entire investigation system, including the publication of a comprehensive organizational procedure addressing all operational matters that will be obligatory for all units within the system, while also considering the unique circumstances of each district that may necessitate a separate operational approach. It is also recommended that the policy formulation and the procedure's publication be determined in a work plan that includes a timetable and milestones for implementation.

 Given the critical significance of senior roles within the investigation system (at the Commission and districts) for the sustained high-quality operation of fire investigators nationwide, the Authority should prioritize the staffing of these positions. Additionally, considering that 80% of investigator roles at fire stations are occupied by firefighters conducting investigations in addition to their tasks, with one-third of these positions and



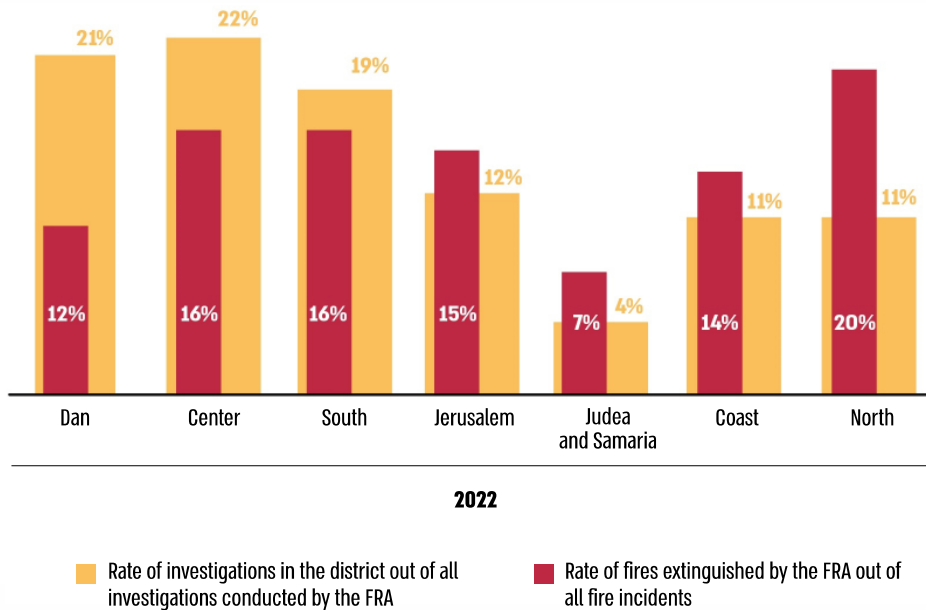
about 18% of investigator positions at regional fire stations remaining unfilled, it is recommended that the Authority engage with relevant stakeholders, including the Ministry of National Security and the Civil Service Commission, to address the current staffing structure of fire investigators. This will ensure that the investigation system is equipped with the personnel necessary to effectively perform its responsibilities as mandated by law.

-  Since the main objective of fire investigations is to ascertain the circumstances and causes of fires, hence increasing the number of investigations, in line with the conditions set out in the Regulations, can enhance both the effectiveness of fire prevention efforts and the dissemination of pertinent information to the public, particularly to those impacted by fires. Therefore, the FRA should identify the structural, operational, and administrative barriers that contribute to the significant disparity between the number of fire incidents annually and the number of investigations conducted. This includes evaluating the functional framework surrounding the employment of firefighters conducting investigations in addition to their tasks and exploring viable organizational solutions to close this gap. Additionally, authorized bodies within the FRA should develop detailed procedures regarding the decision-making process and documentation in cases of fire investigations not initiated, ensuring these procedures are integrated into the work of investigation officers in the Authority. Emphasis should be placed on the regulatory authority granted solely to the Commissioner and district commanders in making command decisions in this context.
-  Initiating an investigation into a fire incident within 12 hours following the fire's extinguishment allows the investigator to access the scene without restrictions, thereby increasing the likelihood of preserving evidence integrity. It is recommended that commanding officers at stations and the district's Head of Investigations verify the investigator's timely entry into the arena, ideally during the extinguishing operations, as outlined in the procedure. Furthermore, the district's Head of Investigations should assess the time elapsed from fire extinguishment to the commencement of the investigation, taking necessary measures to minimize this duration.
-  The Authority should ensure that investigators have adequate protective measures to conduct their investigations effectively, including the necessary equipment to safeguard their health and operational safety. Given the current lack of advanced technological resources for fire investigations, it is recommended that the Ministry of National Security, responsible for the Authority's proper functioning, collaborate to address these deficiencies. Concurrently, the Authority should consider the potential ramifications of insufficient investigative equipment and appropriate personal protective gear for fire investigators.
-  To ensure ongoing collaboration among the following bodies: FRA, pertinent government ministries (including the Ministry of National Security, the Ministry of Environmental Protection, and the Ministry of Economy), the national security system, and local authorities – concerning the investigation, protection, and prevention of fires, it is recommended that the FRA initiate inter-organizational regulation to facilitate the mutual exchange of information, including relevant insights from investigators.



Given the reduction of the outreach activities budget and the critical importance of prevention activities, the Authority should conduct a forward-looking situation assessment regarding the informational efforts of its fire protection department vis-à-vis the general public. As part of this assessment, an evaluation should be made to determine whether the resources allocated by the Authority for this matter are adequate to support a comprehensive outreach strategy across various media platforms targeting different population groups. Furthermore, it is recommended that targeted public information regarding the risks associated with household electrical products and a fire prevention guideline for these products be published on the FRA website.

The Investigations Rate Conducted by the Districts out of the Total Investigations Conducted in 2022, Compared to the Fires Rate Handled in the Districts out of the Total Fire Incidents Handled by the FRA





Summary

The National Fire and Rescue Authority Law and its regulations imposed the Authority to investigate fire incidents to identify their circumstances and causes. The outcomes of these investigations are intended to assist authorities, business entities, and the general public in preventing fires that threaten life and property, ultimately prioritizing the preservation of human lives.

The audit raised deficiencies related to the following: the activity of the FRA investigation system in building its force and its operation; The planning, management, and training of human resources required for the full conduct of fire investigations, in addition to the provision of necessary material resources for this purpose, including technological tools; And the management of both intra-organizational and extra-organizational interfaces within the investigation system.

The findings of this report indicate that the Authority is not adequately prepared to conduct comprehensive investigations as mandated by law. Since establishing the investigation system in 2012, an average of about 10% of fire incidents addressed by fire crews have been investigated. The decisions to not investigate the remaining incidents have not been based on systematic examination and proper decision-making procedures conducted by the authorized officials as required by the Regulations.

Addressing the gaps noted in this report necessitates the commitment of the FRA to implement the following actions: developing an effective operational framework for the investigation system, designing an organizational structure that meets operational needs, establishing a risk management-based policy, creating a systematic methodology, training, equipping, and retaining dedicated personnel to ensure sustained competency, and regulating collaborative interfaces with relevant organizations. The FRA should concentrate on fulfilling the purpose of fire investigations, including holding public outreach programs based on the findings of investigations to disseminate key messages regarding fire prevention and protection.

