

# 2021 ESG Report



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## Letter from the Chairperson

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The board of directors of Mekorot is proud to present the second ESG and Corporate Responsibility Report of the national water company of the State of Israel. The new report reflects the effects of the climate crisis, encompassing the implications arising from this disturbing reality affecting many countries around the world, which requires us – as the national water company – to prepare for what the future holds. Mekorot provides a life-giving product; the infrastructure and development industry requires a delicate balance between the conservation of nature and natural resources and the ability to deliver water for household, agricultural, and industrial use, as well as to neighboring countries.

The present report refers to several main aspects of the Sustainable Development Goals of the United Nations, including sanitation and water supply, energy management, and coping with climate change on an unknown schedule.

Over the last year, the Company expanded its efforts to integrate new technologies into its operations, based on its deep commitment to continual improvement in all areas of its activity, along with its dedication to excellence and multidisciplinary innovation in advanced work processes to support the achievement of its operational and business goals. Our human capital and our accumulated knowledge, experience, and capabilities are precious assets in confronting the global challenges surrounding water today. Relying on these assets and on our technological leadership, we strive to realize our potential through investment in startup companies, business collaborations in Israel and overseas, applied research, patent development, and internal innovation.

Mekorot is committed to progress in these areas, recognizing that these factors can combine to strengthen the resilience of the Company, promote the values of transparency and partnership, and create a business environment that is respectful to all.

Sincerely yours,

A stylized, handwritten signature in blue ink, consisting of a large 'Y' and a smaller 'A' joined together.

**Yitzhak Aharonovich**  
Chairman of the Board of Directors, Mekorot  
National Water Company





## Letter from the CEO

I am honored to present the second ESG and Corporate Responsibility Report of the Company, reflecting the full range of environmental, social, and economic considerations we apply as the national water company of the State of Israel. This report presents the performance of Mekorot in 2021, highlighting sustainable action during an era of climate crisis, continual population growth, and dwindling natural water sources. We are guided in all areas of our activity by the ambition to maximize value for our stakeholders while taking ESG strategies into consideration, earning us a Platinum Plus rating from Ma'ala for the second consecutive year.

The COP 27 United Nations Climate Change Conference convened in Sharm el-Sheikh in November 2022. Heads of state from every part of the world and thousands of other participants expressed their concern over the escalating threat of the climate crisis, and the awareness that we are already in the midst of this crisis. A representative of Mekorot led the water session of the conference, which drew a great deal of interest and attention from conference attendees who were introduced to our innovative developments.

In May 2022, Mekorot was rightly recognized by GWI as one of the sixty leading water companies in the world. Other nations are awed by the ability of Israel, a small desert country suffering from extended droughts, to supply water to its citizens 24/7, and are thirsty – literally and figuratively – for the knowledge and experience we have accumulated over the years.

Further, we have succeeded in positioning the Company at the technological forefront by embracing innovation and investing in startup companies, while strengthening and accelerating our annual development plans to an unprecedented scope of NIS 1.5 billion.

Over the last two years, we expanded our activities overseas, signing consulting agreements in Azerbaijan, India, Bahrain, Uruguay, Peru, Mexico, Argentina, Cyprus, and Morocco. We have recently received collaboration requests from developed countries in Europe and from the United States.

Our greatest and most valuable resource is our employees. I am proud to head a company of devoted professionals whose work is driven by a sense of purpose, Zionism, and responsibility towards the citizens of Israel. The employees of Mekorot have demonstrated their capacity to work under changing conditions by continually expanding the boundaries of their knowledge and fostering a culture of innovation, to achieve the goal of ensuring a reliable supply of quality water while protecting the environment. The management of Mekorot and I will continue to protect our employees' safety and job security, and thereby the resilience of the Company.

Further thanks to the government of Israel for its support and trust.

**We hope you enjoy reading the report.**

**Sincerely yours,**

**Amit Lang**  
CEO of Mekorot





## Corporate Responsibility at Mekorot

We are honored to present the Corporate Responsibility Report of Mekorot for 2021, summarizing its extensive activity and reviewing the environmental, social, and governance (ESG) aspects of our operations. Our choice to manage our corporate responsibility and report transparently to the stakeholders of the Company reflects our conviction that we must operate with the utmost integrity and endeavor to maximize value for our stakeholders and the general public.

In view of the climate crisis, a continuous supply of water can no longer be taken for granted. We at Mekorot are working tirelessly to secure a reliable, quality, continuous supply of water to all citizens of Israel.

The report was written in the spirit of the GRI:SRS reporting standard at the Core reporting level, and also addresses the Sustainable Development Goals (SDGs) of the United Nations. This report is being published in Hebrew, English, and Arabic, and is accessible on the Company's website.

Mekorot is committed to continued action to benefit the environment, society, and citizens of Israel and to continual improvement as the leading government water company in its field.

**We hope you enjoy reading the report.**

**Sincerely yours,**

**Riki Mor**  
Head of Customer Relations and ESG

**Avi Malul**  
VP Infrastructure Development  
and Customer Relations



# Organizational Profile and Economic Performance

**M**ekorot, Israel's national water company (hereinafter: the "**Company**" or "**Mekorot**"), has contributed since its foundation in 1937 to Israel's economic development and to the reinforcement of its economic and national resilience. The Mekorot Group is engaged in water extraction, drilling, pooling, quality treatment, transport, and supply to all citizens of Israel, while preserving and securing water sources. The Company also builds and maintains the facilities used to deliver water, and provides consulting, construction, operating, and initiation services for water projects. Mekorot is considered a globally unique company due to the scope of its activity and

- its expertise in a wide range of fields, all under one roof:
- > Developing water sources and transport systems, including increasing survivability
  - > Supplying high-quality water to all sectors, 24 hours a day, at all times and under any conditions
  - > Integrative management of all types of water in a uniform system
  - > Water treatment
  - > Water quality enhancement
  - > Water quality monitoring, in line with and beyond regulations
  - > Water production – desalination of seawater and brackish water
  - > Advanced effluent system management and operation
  - > Water security – water safety; security of water sources and supply processes, including responses to cyber threats
  - > Hydrology and drilling

- > Floodwater capture
- > Command and control
- > Protection of the environment and sustainable development

**Mekorot is the principal water supplier in the State of Israel. The Company produces approximately 47% of total water produced, purified, and desalinated in Israel, and transports and delivers approximately 69% of the total water supply in Israel (including supplying water to the Kingdom of Jordan and the Palestinian Authority) and approximately 82% of total water consumed by households in Israel.**

**Mekorot maintains optimal water availability, reliability, and quality through prudent integrative management. The Company operates responsibly, with a sustainable national perspective on the various sources of water.**







## Mekorot creates value

- > Approximately 1.8 billion cubic meters of water supplied annually to some 4,800 clients and 8 million end consumers.
- > 3,000 water production, supply, and treatment facilities, consisting of approximately 13,000 km of pipelines; 1,200 drill sites; 800 water quality improvement, sanitization, and treatment facilities; approximately 1,000 pools and reservoirs; and ten automated operations and control centers for remote command.
- > Approximately 271,000 water quality tests performed and 71,000 water samples taken annually by the central water testing laboratory and five regional laboratories. The laboratories perform chemical, bacteriological, and biological tests of water sources (drill sites, spring water, and water from the Kinneret Sea), in the transport system, at reservoirs, and at town entry points.
- > Operation of 24 brackish water desalination facilities and four seawater desalination facilities in and outside Israel, including a desalination plant of a subsidiary of the entrepreneurial company in Ashdod.
- > Global leadership in effluent recovery for agriculture – 60% of recovered effluent treated in Israel.
- > Drilling to exceptional depths of up to 1.5 km based on global expertise in hydrology.
- > Global leader with annual water loss of approximately 3%.
- > Water security and quality maintained at the highest global standards.
- > Development and implementation of innovative, groundbreaking water technologies through a dedicated center for water technology entrepreneurship and collaboration.
- > Construction and operation of the fourth-largest central filtering plant in the world, at a total cost of NIS 550 million. The plant positions Israel at the forefront of water treatment among Western countries, allowing efficient treatment processes and providing a high-quality ecological water supply solution.



Since 2011, the economic model at Mekorot has been based on regulatory rules enacted by the Water Authority Council under the Water Law. The regulatory rules have a different status than the previously prevailing system of agreements between the parties, in that the regulations constitute secondary legislation. Note that since 2008, the state budget no longer serves as a source of coverage for differences between the recognized costs and recognized income of the Company. It has been determined that any positive or negative difference should be reflected in an update of water tariffs, such that the full recognized costs of the Company are covered by income from the sale of water to consumers (a “closed water economy”).



Mekorot has a key role in the development of the national water sector; each year, it invests approximately NIS 1.5 billion in infrastructures for water production, capture, transport, and treatment. Mekorot is not supported by the state budget. Its operations are independently financed by its own resources and through the use of bonds. Bonds were issued on the institutional market until 2019, including to raise foreign capital. Since 2019, when Mekorot became a reporting company on the Tel Aviv Stock Exchange, it has also begun to raise capital from the general public, and has continually worked to preserve and reinforce its financial robustness.





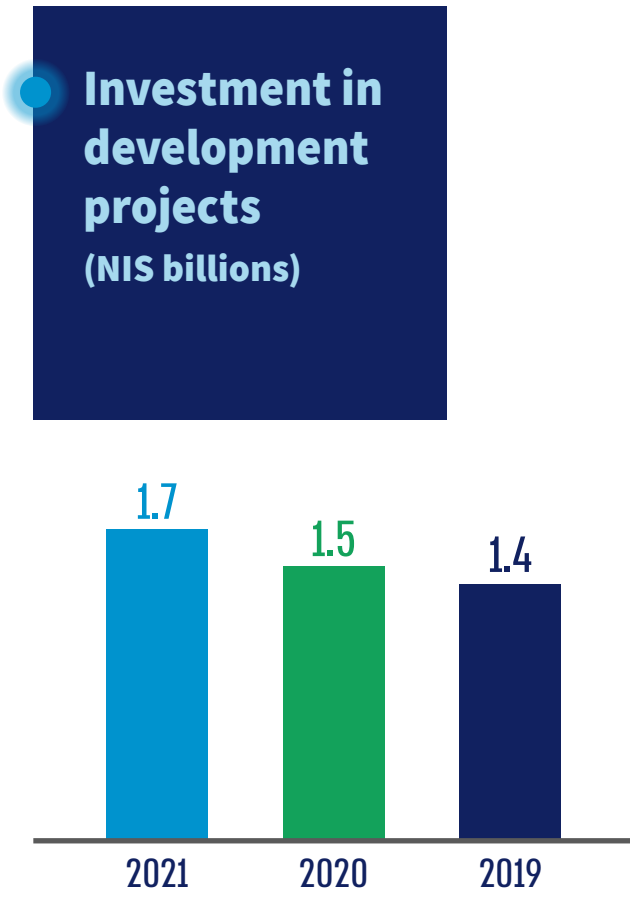


Mekorot demonstrates its financial robustness through annual revenue estimated at approximately NIS 5.1 billion, shareholders' equity of approximately NIS 4.4 billion, and total assets of approximately NIS 19.5 billion. Its responsible financial conduct and the satisfactory financial ratios it maintains have earned Mekorot the highest credit rating of ilAAA from Maalot Standard & Poor's, since 2003, and will enable it to double the scope of its development in the coming years, to fortify the water sector against prolonged droughts.

**Key projects in the Mekorot development plan for 2021:**

- > The Jerusalem Fifth Water System
- > Connection of the Somech cluster
- > Southern Arava plan, immediate stage
- > Arava Tichona plan, immediate stage
- > Water supply to the Kingdom of Jordan
- > Melach development plan
- > Water supply to Druze communal societies in the northern Golan Heights
- > Reinforcement of the water supply in Judea and Samaria
- > Ge'ulat Hayarkon
- > Expansion of the Shfelat Lod plant
- > Reduction of water withdrawal from the Kinneret Sea
- > Shafdan project
- > Integration of Sorek B desalination plant
- > Channeling water northward in the National Water Carrier

The Company's development plan and its construction of water plants reflect water supply needs. The Water Authority Council has approved a new series of projects for the Company's three-year development plan for 2020-2022, at a volume of approximately NIS 230 million. Based on Government Resolution 4514 for "The creation of infrastructure to increase the scope of development of the water sector in order to cope with periods of prolonged drought," a decision was made to increase the scope of the development plan of Mekorot. Accordingly, the board of directors of Mekorot approved a three-year development plan for 2020-2022 at a volume of NIS 1.5 billion per year. The main project in the development plan is the Fifth System for the Jerusalem region; the segment in the western part was completed in 2021, and development of the western part will be concluded in 2022.





# Quality management at Mekorot

**A**s part of the organizational change at Mekorot, the Quality Management Unit was created in 2020, in the Engineering and Technology Division, with the mission of planning, developing, and implementing quality assurance and control methods. The Company's approach to quality management focuses on understanding organizational processes and monitoring processes with the necessary requirements and inputs. This effort engages employees from various divisions and involves adapted equipment, materials, and environmental considerations.



**Mekorot operates based on cautious, controlled processes to generate desired results in the most effective and cost-efficient manner.**

To support the realization of the objectives formulated and embed quality as a component of the Company's organizational culture, a professional consultant was hired to guide the unit in shaping policies and procedures congruent with the nature of the Company's organizational operations and goals.

A strategic plan was formulated in 2021, encompassing:

- > A plan to carry out a comprehensive in-depth survey to study all processes at the Company.
- > A detailed, comprehensive work plan divided into work stages and schedules.
- > Examination of existing IT systems for various aspects of quality management.
- > Specification of parameters and metrics for quality requirements in various fields.
- > Writing a set of procedures and specifications for the quality units.
- > Preparation of implementation, education, and training programs for the Company.
- > Building infrastructure and specifications for contracts with quality assurance and quality control companies.

The Quality Unit works in full cooperation with all units of the organization in all fields to validate needs and interfaces and integrate quality methodologies in various processes. A steering committee dedicated to quality has been established, consisting of representatives from every discipline at the Company. A road-show<sup>1</sup> process has also been created, to introduce the activities of the unit and present its services to all divisions of the Company.

As an integral part of its activity, the unit works with the ISO standards in place at the Company. Eight standards were consolidated in a cross-company endeavor in 2021. The unit is preparing to guide and manage certification proceedings over the coming three years, including internal and external testing, management surveys, and consequent initiation of remedial and preventive actions aimed at continual improvement.

## Certification for ISO standards at the Company

1. ISO 9001 – Quality management In the organizational expansion process
2. ISO 45001 – Occupational health and safety
3. ISO 14001 – Environmental management In the documentation process
4. ISO 27001 – Information security management
5. ISO 17025 – Testing and calibration laboratories
6. ISO 50001 – Energy management In the documentation process
7. ISO 24001: Organizational resilience management system (ORMS) - In the documentation process

In addition, in 2021 the quality team began to provide support for five significant Design-and-Build (D&B) and Build (B) format development projects. This process began with writing of quality sections incorporating advanced quality assurance and control methodologies. Engineering surveys and a quality cost investigation were also performed with respect to completed infrastructure projects.

**The management of Mekorot is committed to this process as a key to its success, as we believe that quality is not an end but a means.**

## Future goals

- To continue to perform engineering surveys and failure investigations in order to find root causes and derive insights for implementation.
- To consider a dedicated system for quality control management at the organization.
- To write and validate procedures and directives, in collaboration with all relevant stakeholders.
- To hold training sessions and workshops to instill and enhance a culture of quality at the organization.

<sup>1</sup>Road show – an intensive marketing journey taken by companies to raise capital



# Organizational structure

**M**ekorot is a private company under government ownership, operating under the auspices of the Ministry of Energy and Ministry of Finance. The Company is defined as the national water company under the power of the Water Law; its activity is subordinate to the Water Authority, as the regulator that oversees its operations on behalf of the state. Beginning in 2019, Mekorot has been a reporting company that issues bonds. The Company and each of its employees are therefore subject to the provisions of the securities laws. Accordingly, an enforcement plan was formulated that year to ensure that the securities laws are upheld and help the Company identify and prevent breaches and offenses, and to maintain compliance of the corporation and its employees with the required directives.

Subsequent to a restructuring agreed upon with the government in 2007, Mekorot became a group of companies. The group is headed by the parent company "Mekorot Water", which is engaged in all aspects of water supply and water plant construction, operation, and maintenance. The structure of the Company consists of headquarters located in Tel Aviv-Jaffa and four operating districts across Israel: Northern District, Central District, Southern District, and Jordan District. **Mekorot Water has two subsidiaries<sup>2</sup>:**

**The subsidiary "EMS Mekorot Projects"** is the contracting and execution arm of the group, engaged primarily in water plant development and renovation work for Mekorot, maintenance work for Mekorot, and additional work for external parties, including in the areas of production, electromechanics, rain enhancement, drilling, laying water pipelines of up to 108", building pumping stations, restoration of pools and structures, and more.



## **The subsidiary "Mekorot Development & Enterprise"**

is the international business arm of the group, engaged in enterprises, promotion, and consulting on water projects in the areas of desalination and wastewater treatment in Israel and in other countries, including Argentina, Mexico, Cyprus, Malta, Romania, Guinea, and more.

The organizational structure of Mekorot comprises three new divisions and a new unit: the Strategy Division (which has also undertaken the areas that were under the authority of the Development Division); the Technologies Division (to which the Information Systems Unit now reports); and the Operations and Maintenance Division, which oversees all of the work of the districts, and has two subordinate functions

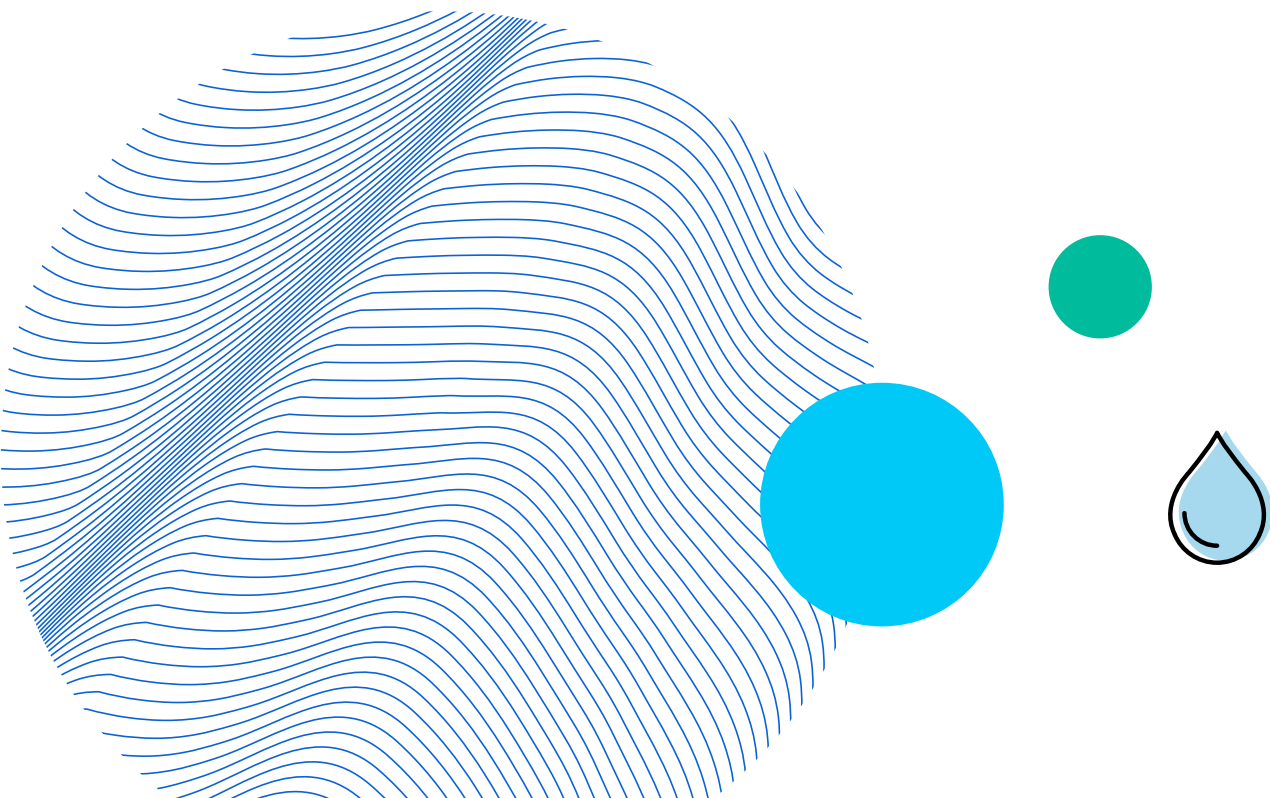
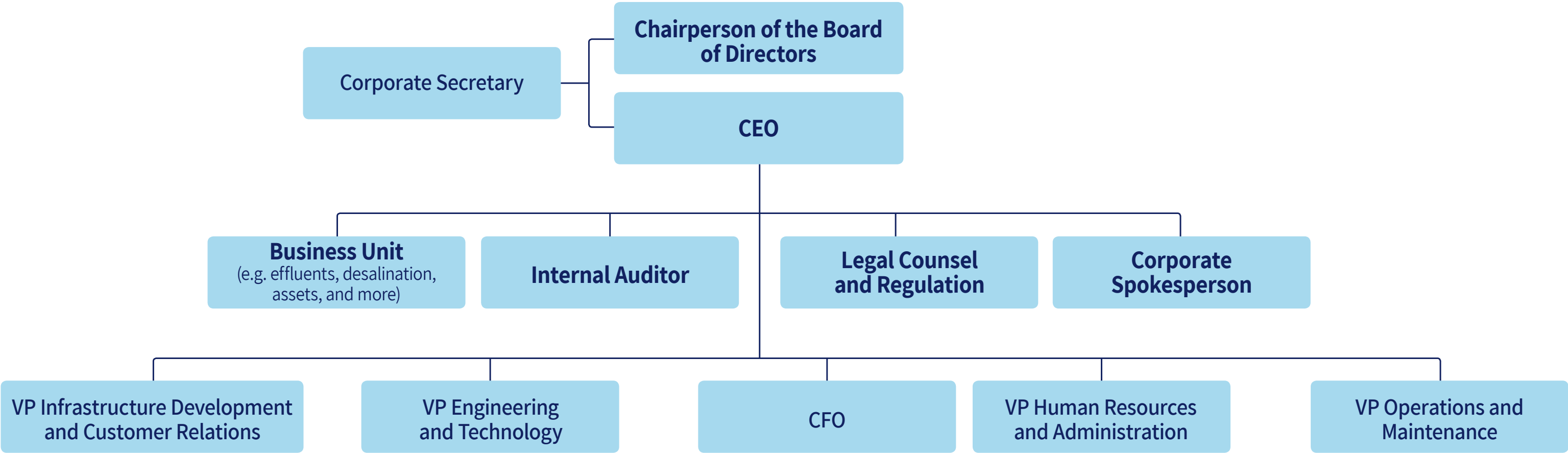
responsible for managing operations and maintenance at the national level; and the Business Unit, which reports directly to the CEO of the Company. Agreements regarding a detailed restructuring were signed in January 2021 (hereinafter: the **"January 2021 Agreement"**), as well as agreements regarding the improvement of efficiency at the Company (hereinafter: the **"November 2021 Agreement"**). In the January 2021 Agreement, the Company and the employee unions agreed on the specifics of the detailed restructuring at the Company, which includes, among other matters, consolidation of the Engineering and Technology divisions of the Company. The Company is guided by consultants in various fields in implementing and advancing the restructuring<sup>3</sup>.

<sup>2</sup> The two subsidiaries operate independently; accordingly, their reporting and control mechanisms are also operated independently and separately from Mekorot

<sup>3</sup> For further details regarding Government Resolution 4514 and the agreements, [see the 2021 Financial Statements](#)







For details regarding the holding structure of the Company (in Hebrew), see the annual financial statements of the Company for 2021, beginning on p. 8.



# About the Report

This ESG report, the second consecutive report by Mekorot, reviews the Company's activity in the reported year 2021. The report was written in the spirit of the GRI:SRS reporting standard, at the Core reporting level. Mekorot has made a commitment to continue to publish ESG reports annually, as a reflection of its dedication to action in the areas of corporate responsibility and to communicating this activity to its stakeholders. The report presents a comprehensive overview of the Company's activity in Israel, encompassing economic, environmental, and social aspects. This report describes the activity of Mekorot Water Company Ltd., and does not refer to subsidiaries unless otherwise noted. Sites operated but not legally owned by the Company are also not included in this report, unless otherwise indicated. This report describes the

ESG processes, data, and progress of the Company; its commitment to the United Nations Sustainable Development Goals (SDGs); and its strategic goals for the coming years. In accordance with the GRI guidelines, our reporting is focused on the topics most material to our activity, taking into consideration the expectations of the various stakeholders. Material topics are defined as areas of activity in which we have a significant impact on our stakeholders in the areas of corporate responsibility and sustainability, within and outside the Company. This report was written with the external assistance of the Corporate Responsibility Department of the BDO Consulting Group, which is providing guidance for the development and implementation of sustainability strategy at the Company.

To communicate on the topics in the report and for dialogue on the information presented, please contact:

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The report was written with support of BDO Consulting's CSR & Sustainability Unit. The Unit is a training partner of GRI Organization in Israel, and the consultant team undergo special training for this.





# Sustainable Development Goals

In 2015, Israel joined 192 United Nations members in adopting the seventeen Sustainable Development Goals (SDGs). These global goals and the derived targets refer to worldwide sustainability challenges in the area of the environment, society, and economy, and establish a global agenda for development through 2030.

As part of its promotion of sustainable development, Mekorot is proud to take part in the national effort to achieve the SDGs. Of the seventeen SDGs, all of which have relevance to Mekorot’s work, we have designated six key goals closely linked to our activity as a water infrastructure company:



UN SDG	UN targets material to Mekorot activities	Mekorot actions to achieve the goals
<div>Clean Water and Sanitation</div> <div>6</div> <div></div>	<div><ul style="list-style-type: none"><li>6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.</li><li>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.</li><li>6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.</li><li>6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.</li></ul></div>	<div><ul style="list-style-type: none"><li>Developing water infrastructures for remote, detached regions and implementing agreements to supply water to the Kingdom of Jordan, the Palestinian Authority, and the territories of Judea and Samaria.</li><li>Performing ongoing work to improve efficiency of water infrastructures and investing in advanced technologies.</li><li>Conducting environmental surveys and water sampling throughout the supply chain to ensure that the water is safe, free of pollutants, and of the highest quality.</li><li>Inserting system water and floodwater to rehabilitate water sources and aquifers, and planning to use water resources efficiently.</li><li>Formulating and promoting a national infrastructure plan to preserve reserves for extraction from aquifers for the coming years.</li></ul></div>







UN SDG	UN targets material to Mekorot activities	Mekorot actions to achieve the goals
<div><b>Affordable and Clean Energy</b></div> <div><div>7</div></div>	<ul style="list-style-type: none"><li>&gt; 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.</li><li>&gt; 7.4 By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.</li></ul>	<ul style="list-style-type: none"><li>&gt; Setting multi-annual goals for reduction of energy consumption.</li><li>&gt; Generating green energy at company sites.</li><li>&gt; Promoting tenders to increase the use of solar energy in existing water infrastructures.</li><li>&gt; Promoting the construction of hydroelectric turbines.</li></ul>
<div><b>Industry, Innovation and Infrastructure</b></div> <div><div>9</div></div>	<ul style="list-style-type: none"><li>&gt; 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.</li><li>&gt; 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</li><li>&gt; 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.</li><li>&gt; 9.6 Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing states.</li></ul>	<ul style="list-style-type: none"><li>&gt; Investing in high-quality infrastructures that are efficient and resilient for the long term.</li><li>&gt; Conducting research and development in the areas of water and infrastructure to examine ways of improving existing technologies.</li><li>&gt; Forming collaborations and agreements with other countries to improve their water infrastructures and facilities.</li><li>&gt; Collaborating on technology to promote environmental issues: environmental treatment of desalination concentrates and effluents, sustainable treatment of effluents, and reuse in agriculture.</li><li>&gt; Investing in local startups aimed at implementing innovative technologies and improving the efficiency of the water supply, in the areas of energy efficiency and savings, cyber defense, and more.</li></ul>

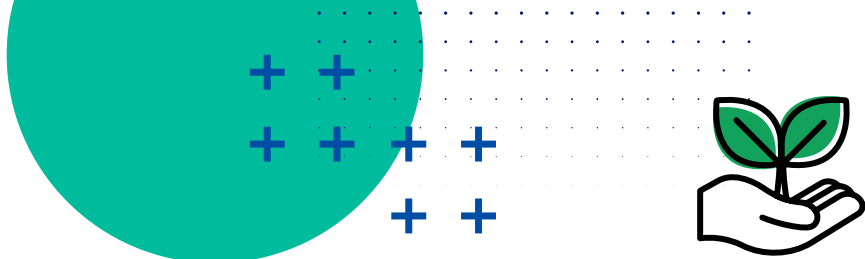






UN SDG	UN targets material to Mekorot activities	Mekorot actions to achieve the goals
<div><b>Responsible Consumption and Production</b></div> <div></div>	<ul style="list-style-type: none"><li>› 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.</li></ul>	<ul style="list-style-type: none"><li>› Developing efficient water technologies, to allow sustainable management of natural water resources.</li><li>› Promoting research and implementing new technologies to treat wastewater and to treat the sludge generated in wastewater purification processes, in order to improve its quality and redirect it to agriculture and energy production.</li></ul>
<div><b>Climate Action</b></div> <div></div>	<ul style="list-style-type: none"><li>› 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.</li><li>› 13.2 Integrate climate change measures into national policies, strategies and planning.</li></ul>	<ul style="list-style-type: none"><li>› Initiating innovation in technologies to cope with climate impacts, with an emphasis on water shortages caused by factors including global warming.</li><li>› Reducing carbon footprint by investing in energy-efficient systems and transitioning to green energy.</li><li>› Forming a working committee in the Risk Management Department to manage climate risks at the company, set formalized targets, and embed climate-change metrics.</li></ul>
<div><b>Life On Land</b></div> <div></div>	<ul style="list-style-type: none"><li>› 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.</li><li>› 15.10 Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.</li></ul>	<ul style="list-style-type: none"><li>› Collaborating with the Nature and Parks Authority and the Jewish National Fund on infrastructure and maintenance work.</li><li>› Integrating environmental aspects in infrastructure construction.</li><li>› Taking measures to prevent the proliferation of invasive species at company sites during development and maintenance work.</li><li>› Discharging water into nature.</li><li>› Working in accordance with environmental surveys and preserving biodiversity in work areas.</li></ul>





# Stakeholder dialogue

Mekorot has many stakeholders that directly or indirectly affect its activity and conduct dialogue with the Company on several levels. This dialogue primarily concerns the water sector in Israel and the ongoing operations of the Company.

In 2021, Mekorot formulated the foundations of a work plan aimed at formalizing methods for managing relationships, contacts, and communications with its various stakeholders: a stakeholder relations strategy, systematic implementation methods, effective tools for public relations and communications, added value in risk management, and more efficient and formalized work processes. All of these elements will cohere into action during 2022, within the ESG strategy plan to be formulated.

Accordingly, in 2021 we communicated with our stakeholders in a number of ways:

Stakeholder categories	Description of principal stakeholders		Dialogue channels
Government ministries	<ul style="list-style-type: none"><li>Ministry of Energy</li><li>Ministry of Finance</li><li>State Comptroller Office</li><li>Ministry of Environmental Protection</li></ul>	<ul style="list-style-type: none"><li>Ministry of Agriculture</li><li>Ministry of Health</li><li>Ministry of Defense</li><li>Knesset committees</li></ul>	Mekorot maintains daily contact with the managerial tier, as part of its routine work and regular professional dialogue. Government ministries and statutory agencies oversee various aspects of the activity of Mekorot, including permits, water allocations, infrastructures, and more.
Statutory agencies	<ul style="list-style-type: none"><li>Government Water and Sewage Authority</li><li>Nature and Parks Authority</li><li>Jewish National Fund</li><li>Israel Land Administration</li><li>District planning committees</li></ul>	<ul style="list-style-type: none"><li>Antiquities Authority</li><li>Drainage authorities</li><li>Water Authority</li><li>Ministry of Environmental Protection</li></ul>	
Municipalities	<ul style="list-style-type: none"><li>Heads of municipalities</li><li>Municipal engineers</li><li>Environmental planners</li><li>Environmental units</li></ul>		Dialogue with these stakeholders is conducted as part of routine work. The main topics discussed are development and statutory issues.
Civil society	<ul style="list-style-type: none"><li>Academia</li><li>Environmental organizations</li></ul>		Academia: Mekorot holds ongoing dialogue with academic institutions in Israel. These collaborations include academic and research collaborations, joint initiatives, support for designing courses on water, and guidance and mentoring for students on final projects. Mekorot also grants scholarships to support students in fields relevant to the group's core activity. Mekorot informs the Society for the Protection of Nature in Israel and other environmental organizations of changes and innovations in the field from time to time.







Stakeholder categories	Description of principal stakeholders	Dialogue channels
Customers	<ul style="list-style-type: none"><li>● Municipalities</li><li>● Water and sewage corporations</li><li>● Agricultural societies</li><li>● Industry</li></ul>	<p>Mekorot has approximately 5,000 customers. The Company routinely maintains multiple interfaces with consumers, including various aspects of service pertaining to the water supply to connected consumers as well as customer-service communications.</p> <p>Contact with customers is generally maintained directly, by many functions, according to need. Inquiries from the public are overseen by the Ombudsman in the Spokesperson Office of the Company.</p> <p>As part of its goals, the Company focuses on providing better and more efficient service, and on raising awareness of sustainability issues among its customers.</p>
Employees	Employees at Mekorot sites and headquarters divisions	<p>In 2021, the Employee Service Center was improved and expanded; an innovative, advanced platform was established to assemble information and tools on employees' conduct within the Company. The system contains information on essential topics relevant to employees.</p> <p>A number of channels for communication with management are available to employees, through the Human Resources Unit, which oversees employee inquiries, as well as through employee union representatives. Meetings are also held to allow open dialogue between management and employees: CEO Cafe, roundtable meetings, and the 100 Conference.</p>
Neighboring communities	<ul style="list-style-type: none"><li>● Environmental activists</li><li>● Town boards</li><li>● Volunteer organizations in regions where Mekorot has significant operations</li></ul>	<p>Ad-hoc dialogue is conducted with these stakeholders in cases where there is a wish or demand for communication from either party.</p> <p>The Jerusalem Fifth System project offers an example of ongoing dialogue with the local community, in which Mekorot conducted public dialogue with residents and the local community in regions with high environmental sensitivity. For further information regarding the community activity conducted as part of this project, see p. 50 and 74.</p>
Suppliers	<ul style="list-style-type: none"><li>● Suppliers</li><li>● Contractor companies</li></ul>	<p>Mekorot conducts dialogue with these stakeholders through a supplier conference, roundtable meetings, the purchasing and tender units, and district representatives responsible for contracts. As part of its sustainability strategy, the Company will promote commitment to ESG values among its suppliers and in its supplier engagements.</p>



As part of the varied dialogue with its stakeholders, in 2021 Mekorot held meetings to promote collaboration and maximize shared value:

- > Israel Electric Corporation – Quarterly team meetings in 2021 to remove barriers and promote collaborations between Mekorot and the IEC.
- > Netivei Israel National Transport Infrastructure Company – A unique collaboration on infrastructure development.
- > Business Roundtable Israel (Economic Social Forum) – Mekorot partnered with the forum to create shared value in the Israeli economy, with a range of other government companies working jointly to promote society and business in Israel. Within the forum, companies generate dialogue leading to collaborations, business innovation, shared learning, and the creation of solutions to social challenges.

**We believe that only a comprehensive sustainable perspective, in cooperation and dialogue with stakeholders, can make it possible to cope with the sustainability challenges in the water sector.**



# Selection of material reporting topics

**M**ateriality analysis is a process that allows the Company to identify and assess the topics most important to its various stakeholders. As a preliminary process prior to the formulation of the Mekorot report for 2019-2020, a comprehensive review of the topics material to the Company was performed in 2020, in accordance with the methodology of the GRI:SRS reporting standards. For full details of the materiality process, see p. 10 of the 2019-2020 Corporate Sustainability Report<sup>4</sup>. Correspondingly, the 2021 report focuses on the material topics most relevant to our business operations in the areas of ESG, in line with the expectations of the various stakeholders.



<sup>4</sup>Mekorot ESG Report, 2019-2020 ([mekorot-int.com](https://mekorot-int.com))







**Materiality matrix**

The materiality matrix presents the twenty topics relevant to the activity of Mekorot, by their importance to different stakeholders (horizontal axis), in relation to the rating assigned to the topic by Mekorot (vertical axis).

**At the conclusion of the process, ten material topics were chosen for the report, based on the highest weighted scores<sup>5</sup>.**

<sup>5</sup> The weighted score was calculated as the product of the score on the stakeholder axis multiplied by the score on the Mekorot axis





List of the ten selected topics and boundaries of each topic's impacts (in order of rating)

Topic	GRI indicator	Main impact
1. Water supply resilience	GRI 103: Management Approach 2016	Beyond the organization
2. Integrative water management	GRI 103: Management Approach 2016	Within and beyond the organization
3. Ethics and prevention of corruption	GRI 205: Anti-corruption	Within and beyond the organization
4. Transport system efficiency	GRI 103: Management Approach 2016	Within the organization
5. Occupational health and safety	GRI 403: Occupational Health and Safety	Within the organization
6. Energy efficiency	GRI 302: Energy	Within and beyond the organization
7. Innovation and technology	GRI 103: Management Approach 2016	Within and beyond the organization
8. Fairness to customers and customer satisfaction	GRI 103: Management Approach 2016	Beyond the organization
9. Compliance with standards and regulation	GRI 419: Socioeconomic Compliance	Within the organization
10. Environmental management and the climate crisis	GRI 305: Emissions GRI 307: Environmental Compliance	Within and beyond the organization





# Establishing ESG strategy at Mekorot

**A**s a large infrastructure company, Mekorot is committed to embedding ESG aspects in its activity and developing an ESG strategy aligned with its business strategy. These actions position Mekorot at the forefront of companies integrating ESG principles into their core business and operations. The strategy is an expression of Mekorot’s dedication to sustainable growth, and sets targets for its attainment.

## Foundation of the ESG Administration

In late 2021, Mekorot established its ESG Administration, tasked with developing this area and connecting it with the activity of the Company, and with formulating a dedicated ESG strategy aligned with the business strategy. The administration will commence its work in 2022, under the authority of the VP Infrastructure Development and Customer Relations, led by the Head of the Customer Relations and ESG Unit, with guidance from an external consulting firm. Representatives of all divisions will participate in the administration, reflecting the different aspects of the activity of the Company. Among the goals of the administration are to set ESG targets for the Company, prepare a three-year action plan and receive approval for the plan from management and the board of directors, embed the targets established in the activity and operations objectives of the Company, promote initiatives with significant value, spark change in the Company's organizational culture, and more.



To ensure realization of the strategy, metrics will be established to present the existing situation, and targets will be set for change by 2030. During 2022, Mekorot will formulate working routines for the coming years reflecting its commitment to the plan and promoting achievement of the targets.







# Mekorot Contributes to International Development and Geopolitics

22-24 →





**T**he geographical location of the State of Israel, climate change, and geopolitical complexities have led Mekorot, as the national water company, to continually endeavor to develop varied and innovative solutions. Towards that end, the Company works in two main arenas: routine water supply, and development of groundbreaking knowledge and technology. The Company supports the realization of the water-related goals of the government of Israel in the region, works to create and maintain long-term international partnerships with other countries, and strives to forge relationships and strengthen Israel’s global standing in the area of water.

The Company works in two main arenas: routine water supply, and development of groundbreaking knowledge and technology

## Regional collaborations

Under the peace agreements signed by the government of Israel and as part of its contribution to regional geopolitical relations, Mekorot also supplies water to Israel's neighbors – Jordan and the Palestinian Authority.

**Kingdom of Jordan** – Within the peace agreement between the State of Israel and the Kingdom of Jordan, the parties agreed to a water allocation arrangement. The Company supplied approximately **90 million** cubic meters (MCM) of water pursuant to this agreement in 2021. In addition, as part of the agreement with the Kingdom of Jordan to reinforce the water supply, extensive development activities have been underway for several years to allow the supply of up to **100 MCM** of water to Jordan annually. In years of abundant rainfall, when the water level in the Kinneret Sea is sufficient, the quantity of water transferred to Jordan is increased. Within the agreement, the states also agreed to protect the common water in their jurisdictions, in the Jordan and Yarmouk Rivers, and the groundwater in the Arava region, against any pollution, harm, or unauthorized extraction of the allocations of either state.

**Palestinian Authority** – The Company supplies water to the Palestinian Authority, under a water costs agreement. The quantity of water transferred to the Palestinian Authority has consistently trended up in recent decades; currently, the annual quantity supplied to the Palestinian Authority, at **73.7 MCM** in 2021, is greater than the quantity Israel is obligated to supply under the agreements, which stands at **46.16 MCM** per year.







**Gaza Strip** – The Gaza Strip is contending with a severe water crisis. The water shortage and poor sanitation pose a severe threat to the health of the residents. Under an agreement of 2017 with the Palestinian Authority, Israel supplies **20 MCM** of water per year to the Gaza Strip<sup>6</sup>.

**Judea and Samaria** – Due to the water scarcity in Judea and Samaria, to support development in these regions, as directed by the Minister of Energy, under the supervision of the Water Authority and in coordination with the Civil Administration, Mekorot is preparing to supply large quantities of water, based on the anticipated demand through 2030. The proposed plan responds to the water supply needs of Palestinians and of Jewish Israeli towns, including added water for agriculture for the Israeli settlements; routes have been upgraded and enlarged to meet the demand.

## International collaborations

Mekorot works with governments around the world and a wide range of business organizations, offering a wealth of knowledge assets to create solutions to worldwide water challenges. Thanks to its technological leadership and development capabilities, proven over the years, with the support and backing of the Israeli government, Mekorot has led cross-continent collaborations helping local water sectors to exceptional achievements.

**Several leading projects carried out within international activities in 2021 are described below:**

**Kingdom of Bahrain** – In early 2021, Mekorot signed an agreement with the Kingdom of Bahrain for development and improvement of its water sector. Within the agreement, which is a part of the Abraham Accords<sup>7</sup>, the Company will provide consulting, planning, and guidance services on desalination of seawater and brackish water, water resource management and supply, and more. Mekorot is the first Israeli government company to sign an agreement of this kind.

<sup>6</sup> Of a total of 95 MCM of water supplied annually to the Gaza Strip

<sup>7</sup> Abraham Accords – Agreements intended to normalize relations between Arab countries in the Middle East and Israel



**Maharashtra State, India** – In this collaboration, consulting and planning were provided to the Maharashtra government on a master plan for a potable water supply system to meet the projected demand in 2050, required to respond to challenges associated with climate change.

**Punjab State, India** – Consulting and planning for the government on a master plan for the local water sector, aimed at stopping groundwater depletion and presenting a long-term plan for sustainable water management through 2050.

**Peru** – A preliminary survey performed for the water company in Lima with the aim of developing a plan to utilize water resources for irrigation and produce water at the quality necessary for household, industrial, and agricultural use.

**Government of Cyprus** – Processes were conducted in 2021 to activate and operate two desalination facilities in Limassol, for a period of 25 years.

**Government of Azerbaijan** – Mekorot is working to build a mobile sampling system for coping with emergencies in the water sector, and to train and upgrade water quality testing laboratories.

**Government of Mexico** – Mekorot is working with the Mexican government to restore, manage, and plan water supply systems, based on treatment of aquifer sources in its territory.





# Mekorot – an Innovation Leader

25-39 →



Over the decades of our activity, we have accumulated knowledge, experience, and capabilities in the water industry that position us at the forefront of water companies globally. Through its combination of professional knowledge and technological leadership, the Company works to develop advanced water technologies, in four main areas: investment in startup companies; business collaborations; applied research; and patent development and internal innovation.

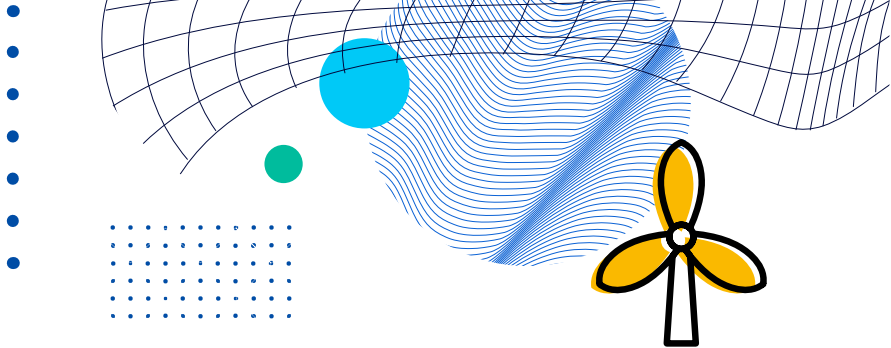
Innovation is interwoven with every aspect of the Company's operations, grounded in the belief that innovative and leading water-sector management requires the adoption of innovative technologies – predictive supply, smart control rooms, big-data analysis, and cybersecurity. The Company's innovation drive is primarily focused on responding to the growing needs of the Israeli economy as it faces the effects of climate change, which are expected to cause desertification and droughts, alongside natural population growth. These trends are expected to lead to a shortage of water. Mekorot is working continuously to find solutions for future needs by generating new water sources and rigorously maintaining water health and quality using innovative, advanced means.

The Innovation Unit promotes initiatives and innovative thinking of all employees of the Company. This field is overseen by the Head of the Innovation Unit, who submits regular reports to the VP of Engineering and Technology. As necessary, relevant topics are discussed by the board of directors of the Company.

The Company's innovation drive is primarily focused on responding to the growing needs of the Israeli economy as it faces the effects of climate change, which are expected to cause desertification and droughts, alongside natural population growth







**Our innovation endeavors relate to every area of activity at Mekorot, enabling us to lead, develop, and provide better solutions to our customers.**

**Investment in startup companies**

Since 2019, Mekorot has invested in startup companies operating in its core areas. In 2021, the Company invested **NIS 1.1 million** in various startups. In addition to the monetary investment, the Company provides relevant ventures with support by allowing them to run pilot projects at Company sites, use its resources, and eventually embed their product at the Company<sup>8</sup>. This collaboration creates shared value, as Mekorot gains development of

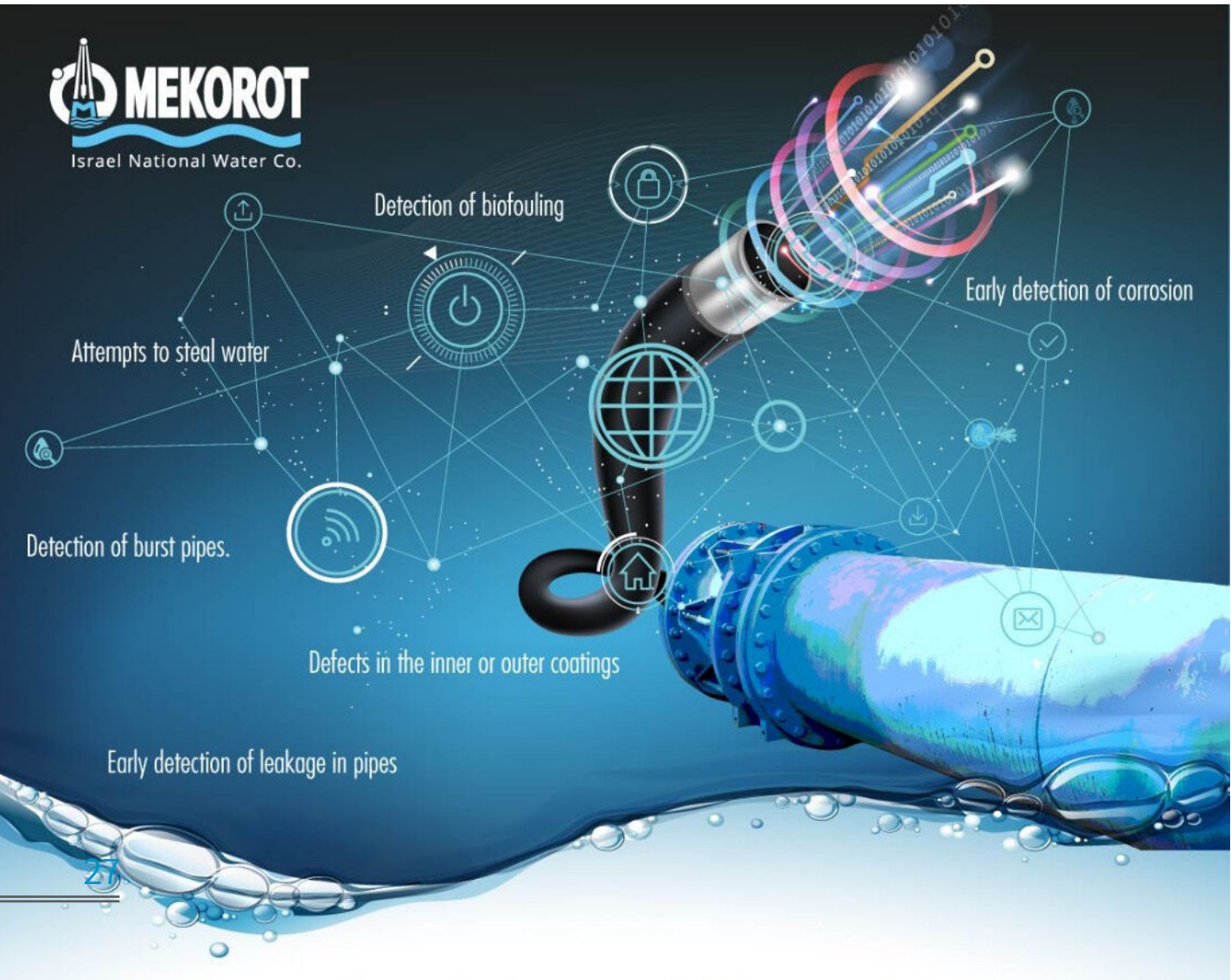
its systems and improved quality of the water it supplies, while the startup companies gain a strategic client.

As part of the process of selecting technologies for investment, a committee has been established to delineate investment strategy and recommend companies to the board of directors; the CEO and the VP of Engineering and Technology are on the committee.

**In 2020-2021, Mekorot invested in the following projects:**

- > **Evolution Water** – Further to an energy efficiency pilot project conducted by Mekorot with Evolution Water Ltd., an investment was made in this company and a commercial agreement was signed for implementation of the system. In 2021, system development began and a work plan was established, including development phases with criteria such as energy importance, built-in redundancy in operations, and hydraulic constraints.
- > **WaterSight** – A joint company of Newsight and Mekorot that will operate in the field of water quality, in Israel and globally. The company has developed capabilities for spectral identification of water components, through experiments, research, and adaptation of the system to field needs. The system will provide water control and indication of water quality in real time, continuously and at low cost, across the nationwide network.

- > **IXDen** – A cybersecurity company providing patent-protected operational solutions through continuous monitoring using sensors. The software ensures data reliability and identifies threats at the source, offering the operational advantage of a sensor system for equipment health indications and protection of all IoT components.
- > **CQMWater** – A joint company of Newsight and Mekorot developing disinfection systems based on electrolytic chlorine production.
- > An agreement for investment in Rapida Communications Ltd. was signed in 2021. In addition, a memorandum of understanding (MOU) was signed with Razor Labs Ltd., an AI product developer, to develop a system for predicting burst water pipelines. Implementing the system will improve efficiency in the operation of the pipelines, better prioritization of routine pipeline replacement, and considerable monetary savings.
- > An investment agreement was signed with Rapida Infrastructures Ltd., with the aim of embedding an algorithm in the Company’s maintenance systems to identify cracks and defects in concrete. The development provides an effective solution for approximately 700 concrete pools operated by Mekorot as reservoirs for potable water.



<sup>8</sup> Pursuant to Government Resolution 3837







## Research and development

**Entrepreneurship and Collaboration Center** – Within its multiannual plan, the Company initiates research and development (R&D) activities aimed at promoting knowledge and searching for new water technologies. Approximately forty applied-research studies were in progress during the year, by professional research staff at the Company in collaboration with leading Israeli and global academic institutions, as well as international research foundations and prominent industry companies. Research is conducted at three advanced R&D facilities: the Eshkol surface water research site, in Beit Netofa Valley; laboratories with analytical equipment; and the Sabha brackish water and seawater desalination research site in Eilat. Additional research is conducted at various experimental sites nationwide. Within its commitment to the environment, Mekorot invests extensive resources in research in the area of sustainable development, and works assiduously to seek eco-friendly water technologies with maximum utilization of renewable natural resources.

The research is reviewed annually by the research committee, which consists of senior management members and is headed by the VP of Engineering and Technology. Research focuses on seven main fields: hydrology, desalination, water quality, models, engineering services, command and control, and wastewater purification. A subcommittee for each topic oversees the research within its field.

Undergraduate students are involved in the research, among other parties, and are offered scholarships to operate studies for six-month periods. Students who participate in research gain the opportunity for

experience in a real-life work environment in the water industry, working on interesting and innovative research with close guidance from a Mekorot researcher. The Company accords high importance to student participation in its research and sees mutual synergies in this practice; when possible, when the students complete their research, the Company aspires to hire those who excel to work at Mekorot. Four students, primarily from colleges in peripheral regions, participated in research in 2021; one of the students was hired at Mekorot as an environmental engineer.

**European Union research programs** – Mekorot is an active participant in the European Union research programs Horizon 2020 and PRIMA. These programs focus on developing technologies in the area of effluent recovery for agricultural use, wastewater treatment technologies, and improving the resilience of water companies against cyber events and physical attacks. In 2021, we participated in five research groups composed of 20-30 research institutes, startup companies, and water companies from several European countries, including Ultimate, Stop-It, Smart-Plant, Suwanu, and Fit4Reuse.

**Nofar program** – Mekorot, in collaboration with the Innovation Authority and Israeli academia, supports early-stage technology development and participates in research financing, in the amount of approximately NIS 50,000. Projects in this program focus on developing new environmental knowledge. In 2021, Mekorot supported two developments in the areas of water quality monitoring and the Covid-19.

Mekorot participates in two international programs promoting innovation and sustainability in the water sector: the Ultimate project, financed within the European Union's "Horizon2020" research and innovation program, and the Israeli-American program CoWERC, under the Bird Foundation. Over the coming years, we expect to carry out several pilot programs within these projects, to test and demonstrate various technologies for reducing energy consumption in waste treatment, including the use of advanced anaerobic membrane systems, biogas production and betterment, innovative concentrate reduction processes, brackish water desalination, and more.

## Collaborations with companies in Israel

The Innovation Unit aspires to collaborate with large business organizations with similar characteristics to Mekorot, to promote activities in the area of innovation and research. A key collaboration with Microsoft has been underway since 2019. Mekorot also maintains ties with other companies such as Amazon and Strauss Water, accelerators, and more, to promote innovative solutions.

**Microsoft** – The Innovation Unit at Mekorot is in ongoing contact with Microsoft; in 2021, a joint call for proposals was issued to find software companies interested in developing technological solutions in the water sector. Mekorot also participated in a hackathon run by Microsoft.







**Desert Tech** – Mekorot actively participates in water community events in Israel aimed at seeking climate technologies, including hosting international delegations at its sites.

**Galilee Accelerator** – Mekorot supports collaboration with startups and is considering a joint program with the accelerator.

**Ramot, the Tel Aviv University Technology Transfer Company** – Joint technology development is being considered.

**Capital Nature** – A climate investment fund; Mekorot has focused on considering collaboration and further investments in the Mekorot portfolio.

**Internal innovation – encouraging employee initiatives**

Within the Innovation Administration, which consists of representatives from each division, Mekorot encourages its employees to suggest ideas for development at every level of its operations. In two innovation activities during 2021, thinking teams were formed to develop technologies, guided by business development mentors. Mekorot also has a digital knowledge-sharing system, to collect, screen, and evaluate ideas and subsequently realize the ideas, while reporting and monitoring key performance indicators (KPIs). Mekorot funded ten projects created by employees in 2021, including the development and manufacturing of a multi-drill diffuser for the injection of chemicals and an upgraded inclined split connector. Three patents were filed in 2021, for projects involving air windows, a pressure gauge for turbid water, and a membrane charging robot. Two procedures were written and approved in 2021 allowing employees to be rewarded for internal innovation that contributes to the development and advancement of the national water supply system. The rewards are planned to be granted in 2022.



# Further Goals

- To encourage and increase employee involvement in intra-organizational innovation by announcing new challenges to develop and present initiatives and technological solutions.
- To renew the operation of the Eshkol Visitor Center at Mekorot, which emphasizes innovation and technology.
- To perform two studies in 2022 on topics that promote protection of the environment through technology.
- To invest NIS 5 million in research and development by 2025.
- To expand investment in Israeli startups that contribute to the Israeli and global water industry, while conducting joint pilot projects to implement the proposed technologies. The Company's target for 2022 is to invest in two new startups.
- To sign an agreement for an investment by Mekorot in Razor Labs for the development of systems to predict burst water pipelines.





# Environment

30-53 →



**P**rotection of the environment, including responsible use of natural resources, is an essential foundational principle for Mekorot, as a company engaged primarily in managing a life-giving resource. Mekorot embeds environmental considerations in its work processes, developing and adapting advanced technologies and environmental innovation, to reduce its environmental impacts and supply water with the optimal quality and efficiency. The Company believes in a direct connection between our actions in the environment and in the human sphere, and is leading change within and beyond the organization to make the values of sustainability, environment, community, and society integral elements underpinning its activity. The Company honors its unwritten contract with the environment by upholding the values of fairness, integrity, respect for nature and ecosystems, and caring for humans and the environment everywhere. The Company also works to create and strengthen positive impacts and interactions with the community and environment, while maximizing value for itself and its employees. Mekorot has set a goal of being a leader in energy efficiency and increasing its use of renewable and eco-friendly energies. Its strategic plan focuses on sustainable development and efficiency, and extensive resources are invested in realizing the multiannual goals set within the plan.

Mekorot initiates and promotes organization-wide environmental innovation, setting far-reaching environmental targets. This activity is essential both for the national water sector and for the continued global leadership of Mekorot. Mekorot works to reduce its carbon and environmental footprint by generating renewable energy on its premises, reducing emissions intensity, decreasing the use of chemicals, and preserving biodiversity.

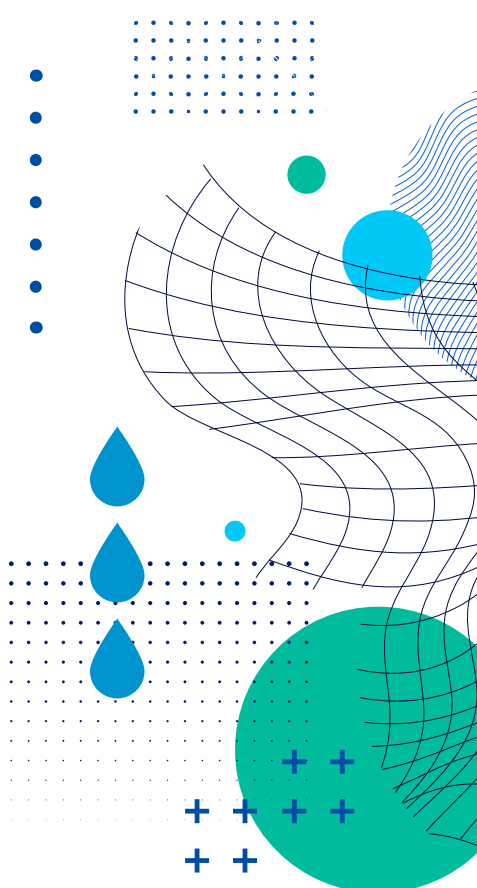
# Integrative water management

**M**ekorot is responsible for supplying approximately 69% of total water consumption in Israel and approximately 82% of the country’s potable water. The health of the residents of Israel depends on water availability and quality. Mekorot therefore takes diligent care in producing water and improving its quality, while reducing the potential risk of pollution of water sources and the ground.

To respond to the evolving needs of the residents of Israel, in view of its shortage of natural water sources, the Company aspires to systemic water-sector management, with ongoing control, and seeks alternatives to conventional water supply. Accordingly, as part of its strategic plan, Mekorot produces water in a variety of ways to supply the needs of households, agriculture, and industry in Israel by generating, purchasing, and supplying potable water from a number of sources:

- > **Groundwater** – Water produced by drilling from aquifers: Yarkon-Taninim, the Coastal Aquifer, Kinneret Basin, Western Galilee, Carmel, Eastern Mountain, Negev, and Arava.
- > **Surface water** – Produced from the Kinneret Sea and from springs, primarily in the northern region.
- > **Desalinated water** – Produced at seawater and brackish water desalination plants, including desalinated water purchased from private producers.

We are working to expand the scope of desalination, while reducing water produced from natural water sources. This area is overseen by the Deputy CEO, VP Operations and Maintenance, VP Development, and VP Engineering and Technology.







# Water production and extraction

## Extracting water from natural sources

The natural water sources on which the water supply relies are the Mountain Aquifer (Yarkon-Taninim), the Coastal Aquifer, the West Galilee Basin, and pumping from the Kinneret Sea. To preserve the water sources and prevent overpumping, water is pumped according to quantities established by the Operations Committee. Water levels in the aquifers are also monitored both by Mekorot and by the Water Authority, to ensure that excessive exploitation is avoided. When necessary, Mekorot reduces its pumping operations.

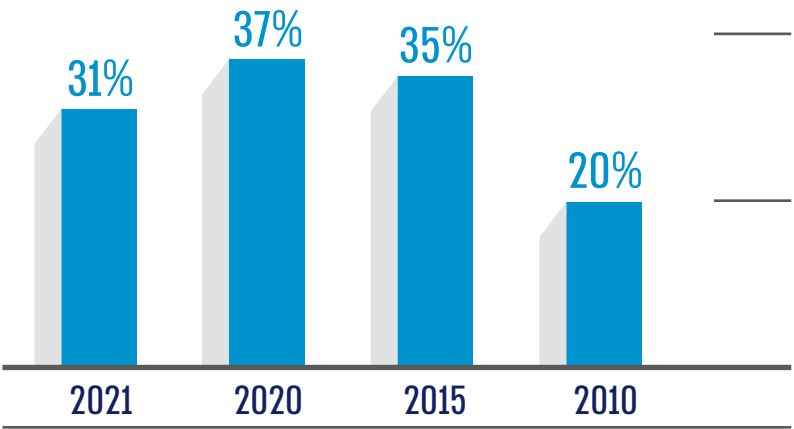
## Desalination and membrane systems

The arid climate, population growth, and increase in water consumption in Israel necessitate searching for and developing creative, innovative solutions to the problem of water scarcity. Mekorot develops membrane systems<sup>9</sup> in general, and desalination systems in particular as an alternative water source, while concurrently promoting education and public campaigns on the reduction of water use. The employees of the Company have over

fifty years' experience with desalination of seawater and brackish water. Today, Mekorot is one of the leading companies in the world in planning, building, operating, and maintaining desalination plants. Mekorot desalination plants are monitored for functional, efficient, high-quality water supply and operate in accordance with regulation by the Ministry of Health and Ministry of Environmental Protection. The Company's investment in desalination will allow water desalination and membrane filtering from varied sources in the coming years, including secondary effluent water and river water, to maximize the utilization of water sources and rehabilitate natural water sources in Israel. Investment in desalination also allows the use of the facilities as emergency reservoirs, when seawater desalination facilities of private suppliers are shut down.

**In 2021, the percentage of purchased desalinated water (from large seawater desalination plants and the brackish water desalination plants at Masarik and Hof Hacarmel) stood at 31%.**

**Desalinated water as a percentage of total water supplied by Mekorot**



<sup>9</sup> Membrane systems are used to treat water by separating out pollutants







**Groundbreaking projects**

In recognition of the national importance of desalination and membrane system solutions that enable it to significantly increase the available supply of water, Mekorot invests in research and development of new technologies in this field. This activity is aimed at continually improving the production process and reducing the associated environmental impacts.

**Leading projects include:**

- > **Ge’ulat Hayarkon project.**
- > **Addition of calcium and magnesium to desalinated water using innovative technology by Omya.**
- > **Project to reduce boron in water supplied to the city of Eilat.**
- > **Eastern drain project.**
- > **Unique removal of concentrate (brine) from desalination plants.**
- > **Small desalination facilities in the Arava Tichona region.**
- > **Development of capability to add magnesium to desalinated water.**
- > **Implementation of AI capabilities to reduce consumption of chemicals and improve energy efficiency.**
- > **Examination of the use of phosphorus-free anti-scalants.**
- > **Energy efficiency at the Lahat facility – renovation of the turbocharger energy recovery device and addition of boosters to the energy recovery system.**
- > **Upgrades of energy recovery systems at Sabha desalination facilities.**
- > **Increasing the recovery ratio using reverse-flow technologies by Rotec at the Sabha C desalination plant.**

In addition to these processes, five "demonstration facilities" have been built at Mekorot desalination plants to allow applied research at the sites, encouraging the development of innovative initiatives and implementation of advanced technologies.

**Minimizing environmental impacts in the water desalination process**

Mekorot works to minimize the potential impact of the brine formed in the desalination process on the marine environment. Accordingly, we examine new technologies and conduct advanced research to find environment-friendly chemicals and test technologies to reduce nitrates in brine and means of minimizing the quantity of brine discharged into the sea, according to discharge permits. Furthermore, we continually promote reduced consumption of chemicals, energy efficiency, and process efficiency at the plants, including through conversion to more efficient pumping equipment and energy recovery equipment; replacing and increasing energy efficiency of membranes; cleaning membranes with unconventional materials; and more.



**23** desalination facilities for brackish water, seawater, and secondary effluent water, with production capacity of approximately **55** million cubic meters per year

**5** demonstration facilities for the promotion of innovation on Mekorot premises

**4** patents in desalination owned by Mekorot

**8-10** desalination studies conducted annually



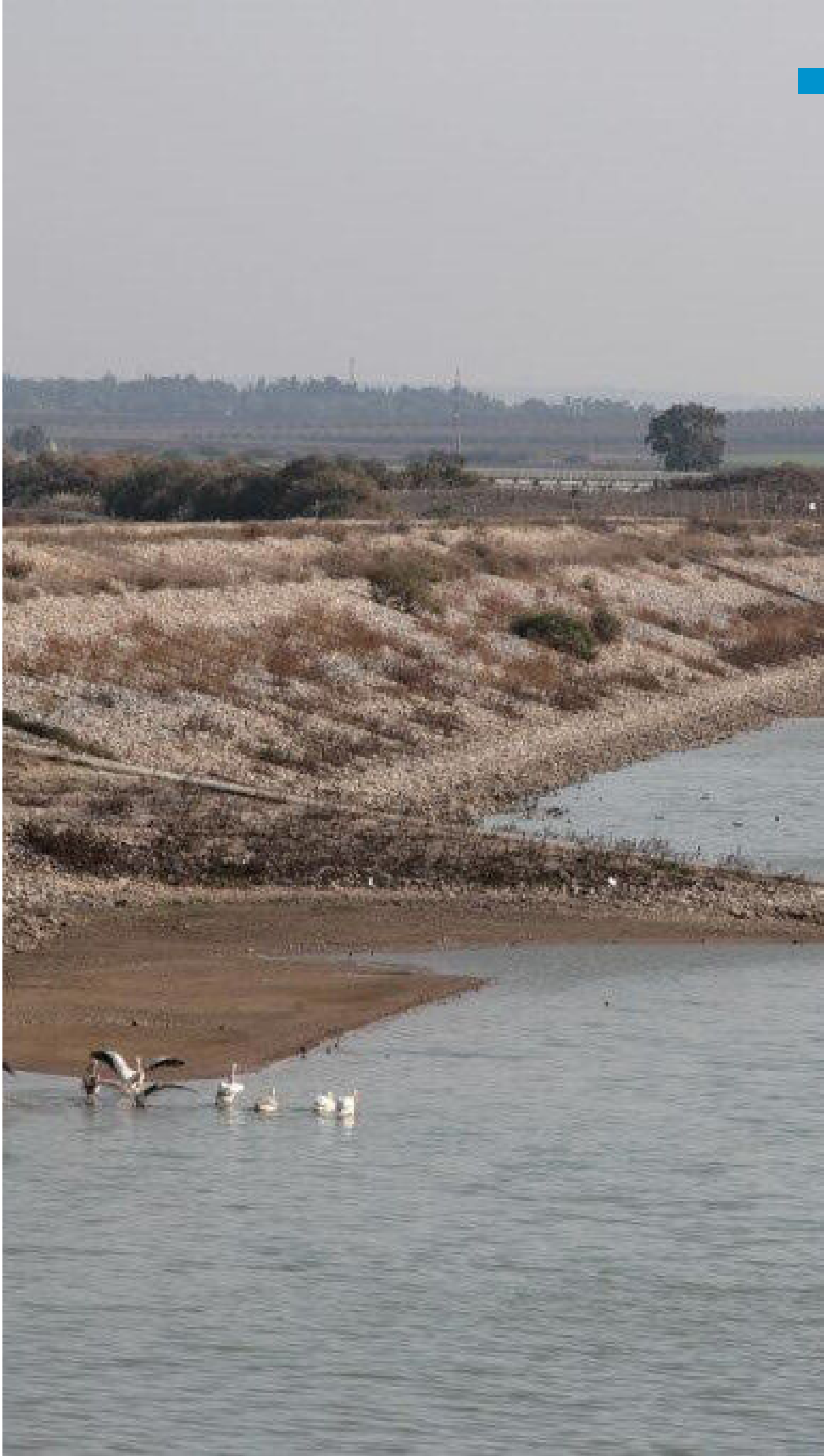
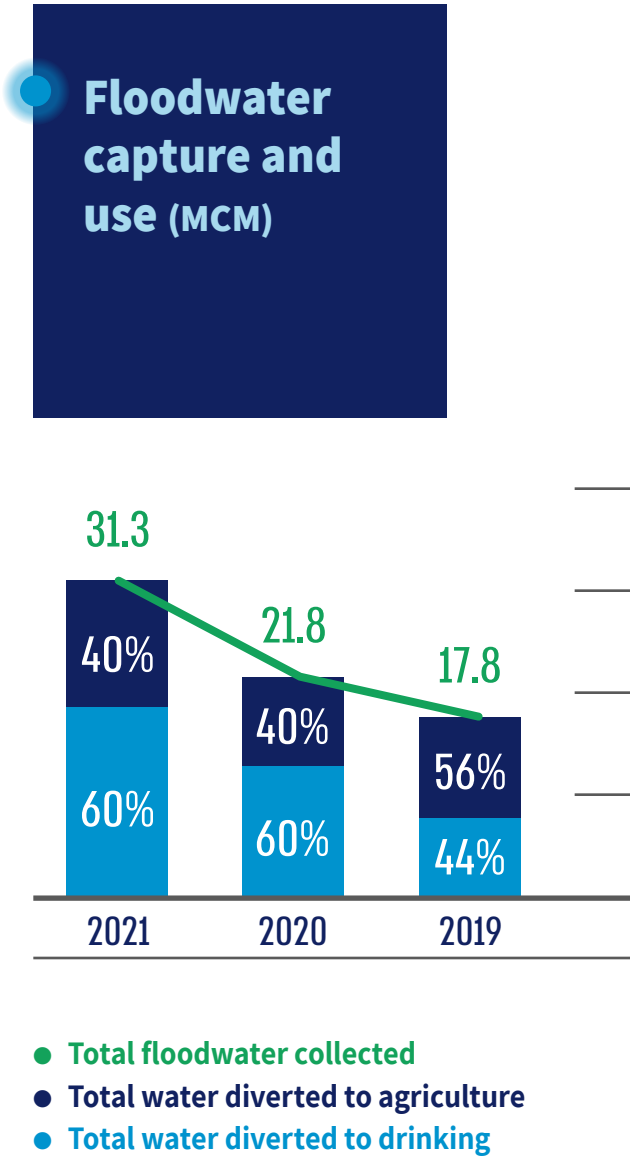
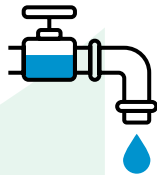




## Floodwater capture

Floodwater capture helps to increase the quantity of available water and improve balance in the water sector. Floods and water flows in streams are directly linked to the integrity of ecosystems. To preserve natural systems, Mekorot usually endeavors to capture floodwater downstream, after it has traveled some distance in the stream channel. Some dams also allow water flow during a flood, in order to protect stream ecosystems. Mekorot has two types of floodwater capture facilities:

- > **Facilities designated to supply water for household consumption** – Floodwater is diverted to settling basins and seepage basins, and inserted into the aquifer. This process allows natural filtration, does not require the use of energy, enriches groundwater quantity and quality, and allows integration of the water into the national water supply system during high-demand months.
- > **Facilities designated for irrigation** – Floodwater is captured and integrated into effluent water reservoirs, and used to irrigate agricultural land, as needed. Floodwater capture for agriculture allows a regular water supply for agriculture during drought years, reduction of the salinity level by diluting the water with effluent water, and a cheaper water supply, which improves the financial feasibility of agriculture.







## Wastewater and effluents

Untreated wastewater is an environmental and sanitation hazard, and may pollute natural water sources. Mekorot has developed unique capabilities in the area of wastewater recycling and recovery for agriculture, across Israel, particularly in the desert, and aspires to continue to develop advanced technological capabilities in this field. Towards that end, the Company combines some of the world's most advanced mechanical, biological, and technological processes in wastewater treatment, thereby transforming wastewater from an environmental nuisance to a water resource supplied as effluents for agricultural irrigation, freeing up freshwater for household use. A globally unique technology is used to apply further biological enhancement of the water underground, bringing the reclaimed water to the highest quality level.

Effluent reclamation encompasses all of the complementary activities involved in secondary and tertiary wastewater treatment at the wastewater purification plants, aimed at making the effluents usable for agricultural irrigation. These actions include:

- › Planning and building pumping stations and transport lines to transport effluents to consumption locations.
- › Planning and building operational and seasonal reservoirs to optimize the effluent supply between the collection season in winter and consumption in the summer.
- › Treatments required to maintain the engineering stability of reservoirs.
- › Treatments required to maintain stability of water quality in reservoirs, to prevent algae and zooplankton blooms and clogging of the irrigation systems; and as needed, chemical treatments against clogging factors.
- › Monitoring water quality in reservoirs to test for compliance with quality levels required for agriculture under the prevailing standards.
- › Installation of pumping stations and filtering systems at reservoir exits to remove clogging factors.
- › Delivery of effluents to consumers, with disinfection as required by the standards.

<sup>10</sup> As of 2021, the overall environmental activity of the Shafdan is reported by Igudan, as Mekorot functions only as the operator.

## Operation of the Shafdan

The Dan Region Wastewater Treatment Plant (Shafdan) is the largest and most advanced wastewater and sludge treatment plant in Israel and in the Middle East. The Shafdan wastewater purification plant, owned by Igudan (Dan Regional Association for Environmental Infrastructure) and operated by Mekorot, serves some 2.5 million residents, at a volume of approximately 150 MCM per year, or a quarter of all wastewater treated in Israel, with a 9% increase in treated wastewater compared with previous years.

Effluents undergo tertiary treatment to bring their quality to the highest level, and are then channeled to stream rehabilitation or agricultural use, with no restriction on irrigation of specific crops. The wastewater treatment process generates two main byproducts: sludge and biogas. As part of the sustainable development approach applied by Mekorot, the Company arranges for reuse of both byproducts, to achieve positive impact. The Shafdan has a system of eight thermophilic anaerobic digestors, which have made it possible to stop discharging sludge into the sea and transition to generating eco-friendly energy. The sludge generated is processed by an anaerobic digestion system until grade-A sludge is obtained, which is diverted for dispersal as fertilizer in agriculture or soil amendment for agriculture. Biogas, a byproduct of the digestion process, is collected and diverted for electricity production.

**Pilot project to test feasibility of an industrial process for the Shafdan** – The Water Authority has charged Mekorot with examining the feasibility and construction of an advanced industrial plant for secondary effluent treatment, to generate better quality water than currently produced. The industrial Shafdan facility process would be based on a combination of technologies widely used globally, primarily for indirect potable reuse (IPR) and direct potable reuse (DPR) of reclaimed water. As of the end of 2021, results of the pilot project affirm that the treatment system tested led to a positive increase in many functional indicators, beyond the requirements set in the preliminary planning. In addition, full removal of all microorganisms was observed as early as the initial stages of the treatment, as well as more than 80% removal of most micropollutants.







Environmental and social advantages of wastewater treatment and effluent reclamation:

- > Increased quantities of water for thriving agriculture, even in the most arid regions.
- > Cultivating nutritional security and independence.
- > Diversion of more freshwater to households.
- > Postponement of the need to build additional desalination facilities, which increase energy consumption and greenhouse-gas emissions.
- > Protection of the environment in general, and water sources in particular, by reducing ecological damage that may be caused by untreated wastewater and wastewater removal.
- > Use of sludge from wastewater purification plants as fertilizer, which reduces waste buried as well as the need to manufacture fertilizers, leading to reduction of the carbon footprint of Mekorot.
- > Production of biogas, allowing energy consumption savings in the operation of wastewater treatment plants.
- > Reduced potential for the spread of causes of disease in the population.
- > Reduced potential for smell nuisances in residential areas.
- > Reduced costs of water and of agricultural produce for consumers.

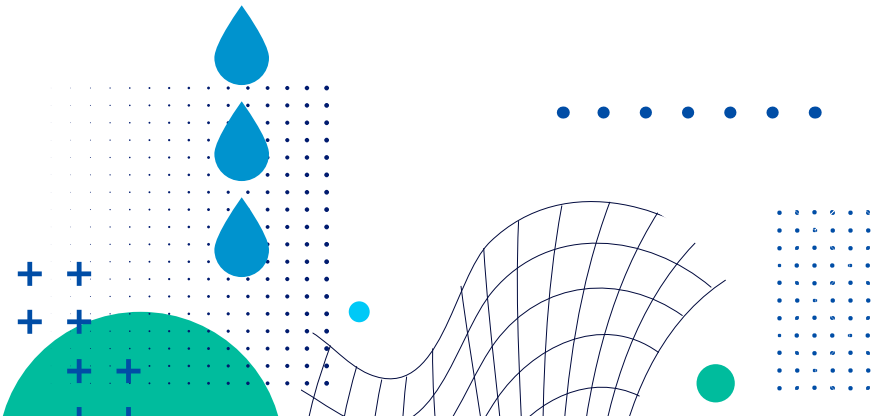


Mekorot treats approximately **29%** of wastewater treated in Israel

Mekorot supplies approximately **40%** of effluents currently supplied for agriculture in Israel

Approximately **651 MCM** (Mekorot nationwide + private) of effluent water piped for agriculture annually, freeing the equivalent quantity of freshwater for household use

Over **80%** of water is reclaimed for agricultural use, making Israel the world record holder in the reuse of water







Wastewater  
purification plants  
operated by Mekorot

- > Shafdan<sup>11</sup>
- > Karmiel<sup>12</sup>

Effluent reclamation  
plants operated  
by Mekorot

- > Third line to the Negev  
(Shafdan)
- > Kishon conglomerate
- > Emek Hefer
- > Ayalon Latrun
- > Gush Etzion
- > Ge'ulat Hayarkon –  
in production



# Future goals

- To expand the desalination system at Sabha with additional capacity of 10 MCM per second.
- To increase the volume of usable effluents by 20 MCM by 2025.
- To rehabilitate the environment by increasing water restored to nature by 25%, in terms of MCM, by 2025.
- To reduce deviations from the groundwater pumping license by 2025.
- To build irrigation systems at the Lahat and Neve Zohar desalination plants.
- To set up an innovative stabilization system at Granot, using micronized limestone.
- To create data collection and processing systems for each desalination facility, in order to improve the efficiency of chemical use, energy consumption, and membrane replacement schedules.

<sup>11</sup> The plant is in the final stages of construction  
<sup>12</sup> Operated by Mekorot Enterprise



# Transport system efficiency

## Efficient water supply management

**W**ater resources and the efficiency of the transport system are at the core of Mekorot's business. We work to mitigate environmental impacts through more efficient use of water, investment in technologies to improve infrastructure efficiency and prevent leaks, and consumer education on water savings. These efficiency efforts reduce energy consumption, operating costs, and the need to expand infrastructures. The transport system is a key component of the ability to supply water to all of our consumers. We rigorously maintain the integrity of the transport lines, thereby significantly reducing water loss during transport; concurrently, we maintain the efficiency of pumping units at water sources and pumping stations in the transport system, which directly affects energy consumption by the Company. The VP of Operations and Maintenance oversees the transport systems. Efficiency and water loss are monitored at all managerial levels and presented to management and the board of directors as part of the BSC metrics. Monthly monitoring is also performed by the Engineering Units and district managers. The VP of Infrastructure Development and Customer Relations is responsible for determining pipeline diameters and developing the transport systems.

<sup>13</sup> Three sets of hours have been established for each season, in terms of electricity pricing: peak, high, and low. High hours are the middle level, while low hours are the lowest level; electricity prices are regulated accordingly

### Initiatives to increase efficiency, reduce water loss, and increase financial savings

- > Implementation of automation systems in control rooms to track levels of pools and reservoirs and efficiently operate pumping equipment.
- > Reliance on computer-based models to forecast consumption and optimize energy consumption in the water systems.
- > Smart use of varying energy tariffs during the day by redirecting pumping from peak hours to low and high hours<sup>13</sup> and optimal use of storage volumes, while also increasing volumes.
- > Maximum protection of pumping equipment efficiency through routine monitoring, in accordance with the standards of the Ministry of Energy and the guidelines of the Engineering and Technology Division.
- > Replacement of dozens of pumps each year, to improve energy efficiency.
- > Replacement of engines and transformers.
- > Monthly monitoring of water balances in areas with exceptional pressure, to identify leaks or other malfunctions.
- > Operation of teams to prevent water theft and find hidden leaks.

We use computer-based mathematical models to operate water-supply systems optimally, in terms of energy efficiency as well as efficient use of water resources:

**Models for optimal planning of annual operation** – To examine various scenarios of annual production from natural water sources (the Kinneret Sea and the aquifers) and analyze the effects on the reliability of the water supply and on energy investments in the system.

**Model for optimal operation of the water-supply system in real time** – Allows translation of annual operating guidelines into daily operating guidelines, optimal system operation in terms of energy efficiency through hourly water consumption forecasts, calculation of optimal combinations of pumping units, and sound management of water levels in pools and reservoirs.

**Grid solvers and hydraulic simulators** – For planning and control of pressures in the supply system, and consequent reduction of leaks and water loss rates.

**Models for planning optimal operation of effluent water plants** – Allowing planning of seasonal reservoir filling and water supply to agricultural consumers during consumption season. The purpose of the models is to optimize the reliability of the water supply, save energy, and reduce water loss from seepage and evaporation in reservoirs.

Mekorot reports to the Ministry of Energy annually on efficiency results of pumping equipment, including pumping units in deviation that are not compliant with standard requirements. Mekorot has 1,065 drill sites and 1,958 boosters (pressure enhancers) with different structures. According to the standards of the Ministry of Energy, the minimum permitted efficiency is 55% for drill sites and 65% for pressure enhancers.

**946 new field tests were performed in 2021; the average efficiency/capacity of all pumping units was found to be 74.2%, of which 64.1% at the drill units and 76.7% at the booster units.**







**Transport system**

"The National Water Carrier" and the "New National Water Carrier" are part of the national supply system. The National Water Carrier, Mekorot's flagship project, was created in the 1960s to transport water from northern Israel to the central region and the arid south; today, it carries more than half of the drinking water in Israel, over a distance of some 130 kilometers.

Due to the escalating climate crisis, population growth, and rising standard of living, demand for water has increased. With a view towards the future needs of the nation as a whole, for the current generation and for those to come, in the second decade of the twenty-first century Mekorot undertook an immense project: the "New National Water Carrier". The new project is designed to capture desalinated seawater from five plants built along the Mediterranean coastline and a substantial part of the water drilled from aquifers for integration into the national water system; the direction of the water supply will change, flowing from the west to the east and other points, and new technologies will be implemented. Over the years, we have also connected additional areas and reinforced existing connections allowing water to be transported to new regions, thereby permitting development. "The New National Water Carrier" will supply desalinated water to Jerusalem and its surroundings through the "Jerusalem Water Supply Fifth System", designed to respond to the expected growth in water consumption in this area in the coming decades. Work on the system will be completed by the end of 2022. The new system will make it possible to rehabilitate the Mountain Aquifer by reducing water pumping from drill sites in the mountain region and maximizing the use of desalinated water.

The national supply system is supervised and managed through sophisticated control rooms using advanced technologies, which allow real-time responsiveness to the changing demands of various water consumers (including households, factories, and agricultural fields), weighing in the production capacities of the desalination facilities.

**Water loss**

Mekorot works continually to reduce water loss in its water systems, through integrated activities to identify, resolve, and prevent leaks. The transport system is regularly and continuously monitored, in terms of throughput as well as pressure, allowing immediate identification of leaks. The Company is examining innovative technological means to help maintain low water loss and further reduce loss. These include technologies to identify and monitor leaks, submarines traveling the lines to identify leaks early, optic fiber sensors, satellites, and hydraulic shock prevention systems.

The Company also ensures that pipeline segments that are outdated or have cumulative malfunctions are replaced. Pipeline purchasing is performed at Mekorot in accordance with stringent criteria aligned with international standards, to ensure that pipelines can be retained in the ground for 40-50 years.







**Activities to monitor water measurements:**

- › Daily data monitoring and analysis – Analysis of characteristics of water consumption at an hourly level, comparison of monthly consumption in different years to identify changes and trends, expanded analysis of extreme variations in monthly consumption, development of a water balance model, real-time water balance analysis, and more. AMI systems are analyzed by water supply engineers, continuously and using monthly data from field inspections. This monitoring improves water-loss reduction through immediate identification of deviations in consumption and/or measurement, reduction of water theft, more precise estimates where necessary, and more.
- › Installation of double consumer connectors (y-connectors) allowing precise estimates using a control meter. The double connection also allows continuous monitoring of exceptional discrepancies between measurements on the two meters installed in connections of this type, so that malfunctions are identified more quickly.
- › Minimization of water theft and leaks through tours and monitoring by the Security Unit of the Company and through the use of an AMI system.
- › A project for continuous monitoring of pressures in the Scada system, as an indication of burst pipelines.
- › A system of optic fibers to sense and provide alerts of pipeline breaches.
- › Quarterly monitoring meetings, attended by the Water Resources Unit.
- › Use of dedicated applications to record and track water loss.
- › Installation of water meters at facilities without measurement systems; addition of balancing water meters between operational areas; and replacement of water meters to fit the quantity of water consumed, in order to achieve precise measurements.
- › Testing and calibration of water meters according to the required standards.
- › Lowering pool levels in advance of cleaning.
- › Reduction of evaporation in effluent reservoirs using floating covers / solar cells / experimental floating balls on reservoir tops.

Water loss at Mekorot over the years stands **3%** at approximately of water supplied in **13,000** km of water pipelines

Approximately **20** km of water pipelines are replaced annually

**150-250** km of new water pipelines are installed annually

Mekorot has more than **700** pumping stations with over **1,800** pumping units

**Objective achieved:**  
Improve efficiency and water loss at the Company by developing an application to report water-loss data, such as discharges into the environment, allowing monitoring and analysis of operational water-loss data

## Future goals

- To continue to examine water-loss quantities in each district, every quarter, and create a work plan for improvement based on the findings.
- To create a multiannual plan to address water loss.
- To conduct research aimed at formalizing water-loss testing in transport systems.



# Environmental management and the climate crisis

**M**ekorot is an infrastructure company, producing, transporting, and supplying water with broad geographical reach. Its activities therefore affect the environment. The Company's main impacts stem from infrastructure work, such as construction of facilities, installation of pipelines, building water pools, and drilling, as well as from the routine operation of water supply systems, which consume large quantities of energy and generate water discharges into the environment. We work to promote the protection of the environment, protect natural water sources, and optimize the use of water resources, including effluents, for the long term, while advancing the use of green technologies. We have established four areas of action aimed at reducing our carbon footprint and protecting the environment: **energy efficiency; increasing the use of green energy; reduction of water loss; and decreased use and transportation of chemicals nationwide.**

Energy consumption at the Company is a consequence of the supply of water and production at its facilities; the majority of consumption derives from water pumping, through the operation of pumps. We are promoting energy efficiency initiatives in several areas:

- › Reducing consumption of materials and shipping.
- › Acquiring equipment from local suppliers, which generates dual value: reduced air emissions from shipping, and strengthening of the domestic economy.
- › More efficient use of chemicals at facilities and reduction of concentrate removed into the environment.



Environmental management at the Company is under the responsibility of the VP of Operations and Maintenance and the VP of Engineering and Technology. Within environmental management at Mekorot, an **environmental enforcement plan** has been formulated, approved by management in 2021. Under the enforcement plan, an environmental compliance survey was conducted to map environmental regulatory requirements, the activity of Mekorot and its existing control mechanisms, and the directives and procedures for compliance with the requirements of the law.

Beyond the regulatory aspects, Mekorot proactively conducts an environmental risk survey every three years. The Company has also formulated an enforcement plan to improve its compliance with the environmental regulatory requirements to which it is subject, and the mitigation mechanisms to manage the requirements, including mapping of activities to reduce risk.





## Energy efficiency

Mekorot consumes approximately 3% of the power consumed in Israel and is one of the largest electricity consumers in the country. The Company has set a goal of continuing to promote sustainable development, lead energy efficiency to the extent possible, and reduce the use of conventional energy sources. To save energy, Mekorot invests extensive resources in improving its efficiency in this area. Under the "Sources of Energy Regulations, 5778-2018", of the Ministry of Energy, a survey was conducted in 2021 to identify potential ways of conserving energy. The survey encompassed energy usage at the Company and presented actions executed and planned to improve energy efficiency. As Mekorot is a major energy consumer with unique characteristics, the survey was not aligned with the energy consumption patterns of the Company; accordingly, at the initiative of Mekorot, an agreement was reached with the Ministry of Energy regarding a unique outline for a survey adapted to the Company. This survey was submitted to the Ministry of Energy in June 2021; several months later, the survey was approved by the ministry and completed to its satisfaction.

### Strategic energy efficiency initiatives:

- > **Technological innovation** – Advanced machine-learning and artificial-intelligence tools are used to improve nationwide energy consumption efficiency.
- > **Green energy** – To provide green electricity for internal use, Mekorot has built hydroelectric turbines and solar-power systems at or adjacent to its facilities. The Company has also signed a broad agreement for the acquisition of electricity from a fence-adjacent photovoltaic facility in the Be'er Tuvia region, and plans to install solar panels on the tops of its water reservoirs.

- > **Efficiency of pumping equipment** – The Company regularly measures the efficiency of its pumps and takes action to repair and replace energy-inefficient pumps. In 2019-2020, the frequency of pump replacement was increased, and an average annual sum of approximately NIS 20 million was allocated to this project. **This effort allows reduction of annual energy consumption by approximately 20 million kWh on average. In 2021, approximately NIS 13.5 million was invested, with estimated energy savings of approximately 16 million kWh.**

### Use of diesel fuel in generators

Mekorot uses diesel-fueled generators as part of its emergency preparedness. The diesel-fueled generators provide a systemic backup for Mekorot in the event of a shortage of electricity. Mekorot also uses the generators as part of its shedding arrangement with the Israel Electric Corporation (IEC). Under the arrangement, when demand for electricity is high the IEC disconnects the power supply to Mekorot, and Mekorot relies on in-house power production using generators. In addition, under the directives of the Water Authority and the binding rules for emergency conditions in the Israeli economy, some Mekorot facilities are equipped with diesel-powered generators, which are required to be maintained in an available state to ensure the supply of water in emergencies. Each generator has an overhead diesel fuel tank located in the storage compartment.

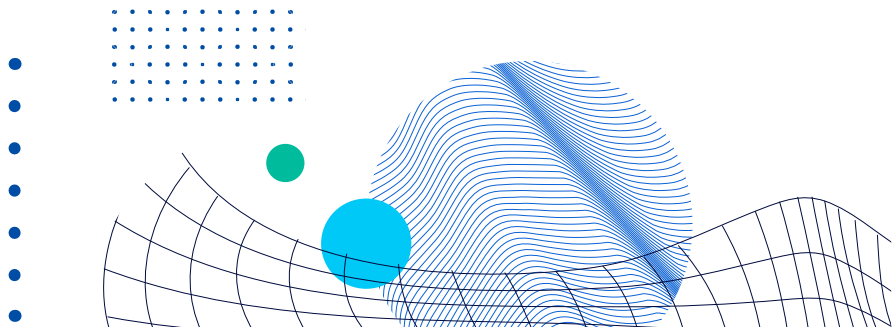
Mekorot supplies  
**1.94 billion**  
cubic meters of water  
per year, and consumes  
**2.4 billion** kilowatt-  
hours of electricity each year

The transition to  
renewable energy saved  
energy consumption  
from the IEC estimated at  
approximately

**16.3 million kWh,**  
equivalent to about  
**8,883 tonnes**  
CO2 equivalent<sup>14</sup>

Approximately **29%**  
of vehicles at the Company  
are hybrid or electric

<sup>14</sup> Calculated using  
emissions coefficients from  
the voluntary mechanism





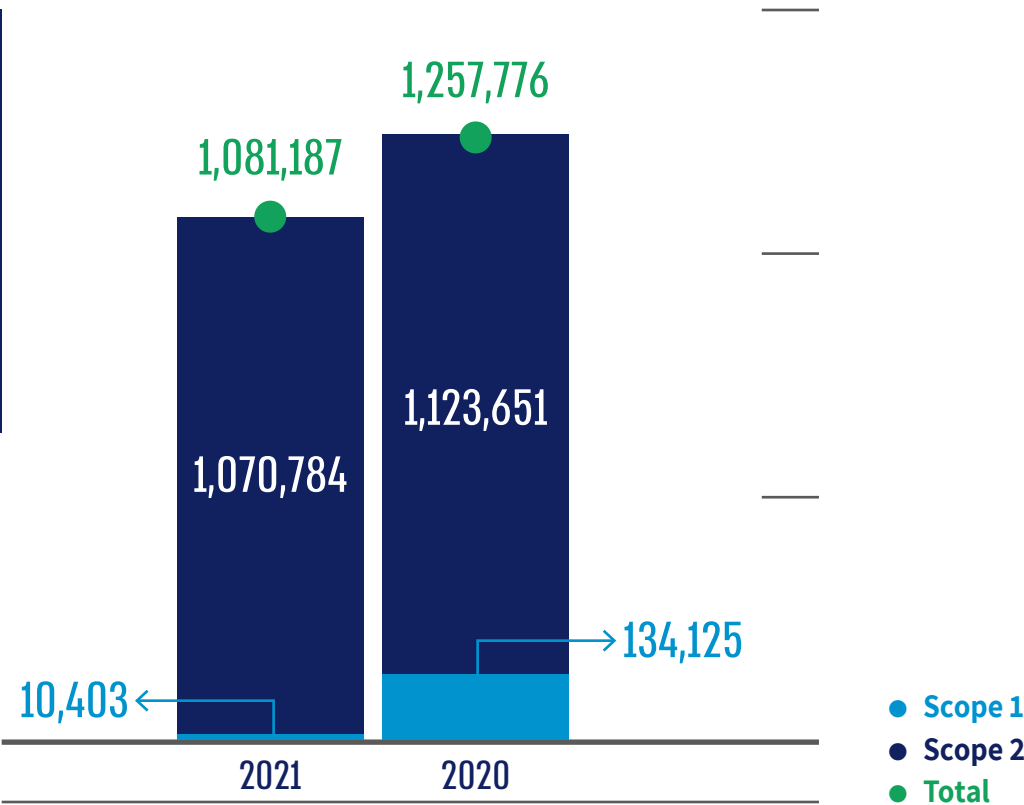


### Carbon footprint

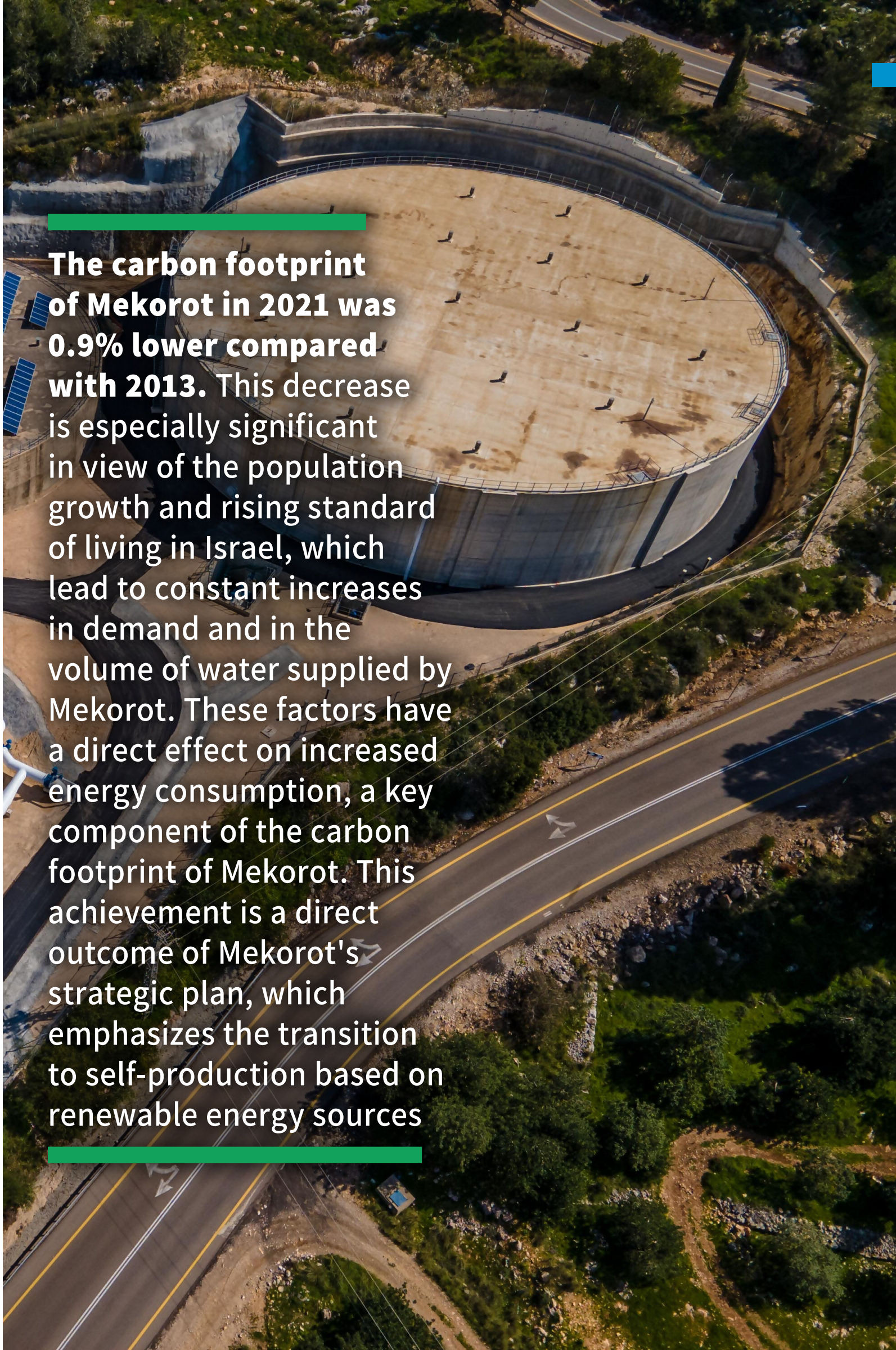
We measure our carbon footprint based on a methodology commonly used in this field, as part of an internal analysis of the overall environmental impact of the Company. Data on greenhouse-gas emissions of Mekorot refer to direct emissions and indirect emissions due to energy consumption.

- > **Direct emissions:** Direct (Scope 1) emissions of Mekorot primarily result from fuel burned by its vehicle fleet, fuels burned in generators under agreements with the IEC and as part of emergency preparedness, and emissions generated by the wastewater treatment process.
- > **Indirect emissions:** Indirect (Scope 2) emissions of Mekorot arise from electricity consumption, and depend on the composition of fuels and water supply requirements.

● **Segmentation of the carbon footprint of Mekorot by scope (in tonnes of CO<sub>2</sub> equivalent)<sup>15</sup>**

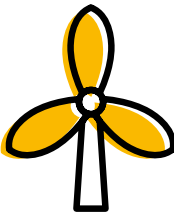


<sup>15</sup> Calculated using BDO methodology



**The carbon footprint of Mekorot in 2021 was 0.9% lower compared with 2013.** This decrease is especially significant in view of the population growth and rising standard of living in Israel, which lead to constant increases in demand and in the volume of water supplied by Mekorot. These factors have a direct effect on increased energy consumption, a key component of the carbon footprint of Mekorot. This achievement is a direct outcome of Mekorot's strategic plan, which emphasizes the transition to self-production based on renewable energy sources

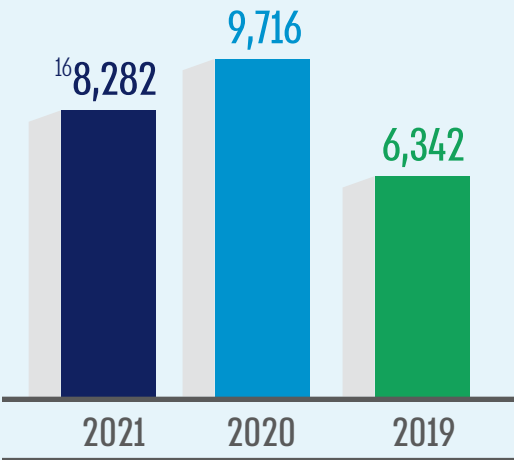




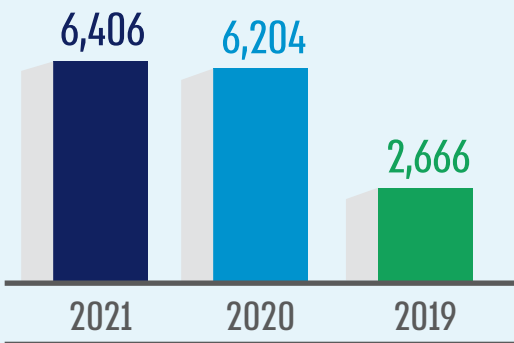
Independent electricity production projects at Mekorot:

Hydroelectric energy	Solar energy
Use of pressure surpluses formed by water traveling from a higher pool to a lower pool, allowing energy production. Turbines are in operation at the Kfar Yehoshua site, the Tavor reservoir, the Metzger site in the Jordan region, and the Sabha site in Eilat. <b>Total average capacity 1.7 MW; annual production of approximately 8.3 million kWh<sup>16</sup>.</b>	Use of photovoltaic (PV) systems installed on building rooftops at the Sabha desalination plant in Eilat, rooftops of potable water pools in the Jerusalem water system, the Emek Hefer North plant, the Menashe station, and office rooftops in the Negev and Arava regions. <b>Annual production approximately 6.4 million kWh.</b>

Electricity production from renewable sources, by year 2019-2021 (thousand kWh)

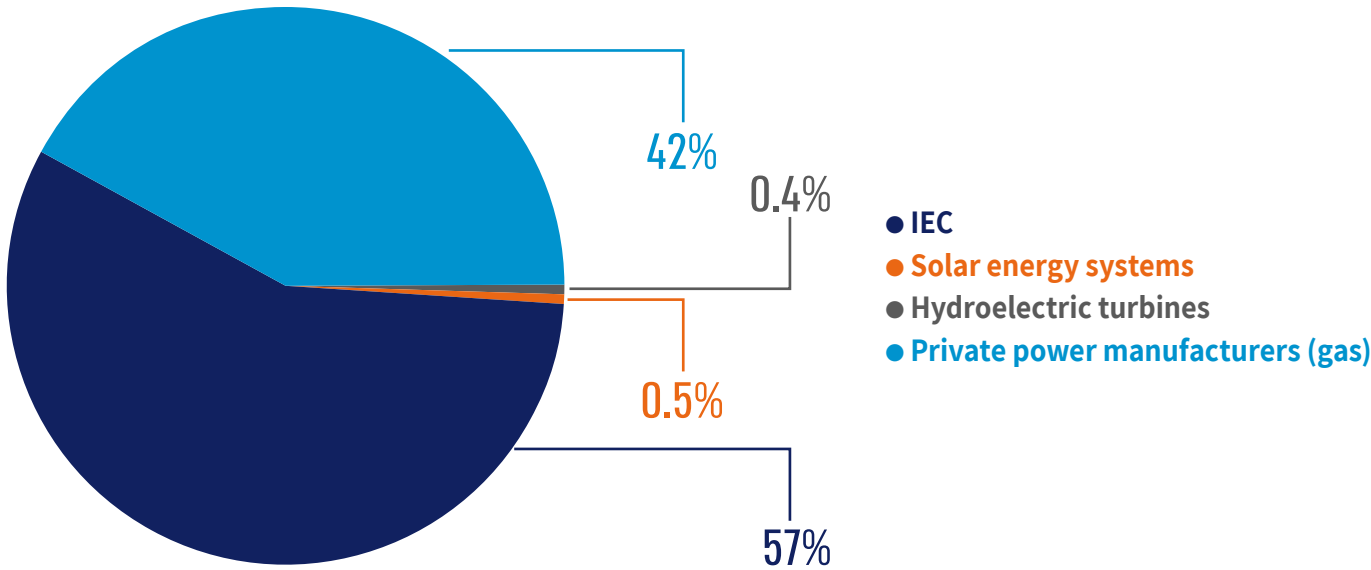


Hydroelectric turbines



Solar-power systems for self-consumption

Segmentation of energy consumption for use by the Company by source, 2021



<sup>16</sup>The data are lower than in the preceding year due to a decrease in the operation of the turbines in Kfar Yehoshua in comparison to 2020, as a result of a malfunction





## Green, sustainable action

Recognizing that our actions today affect future generations, we have set a goal of managing our intra-organizational activities and the services we provide sustainably. The green vision of Mekorot requires us to establish continuous sustainable processes for the long term. As part of this drive, we are leading a shared-value strategy, interweaving the Company's business objectives with national, social, and environmental benefits. Accordingly, we are committed to continual implementation of activities and projects that promote a holistic green perspective in all areas of research, development, and entrepreneurship, at all of our sites, for the well-being of the public, the environment, and our employees.

Our vision is based on the values of fairness, integrity, respect for nature and ecosystems, and caring for people and the environment everywhere. We work to create a positive impact that strengthens our interactions with the community and environment and maximizes value for the Company and our employees.







**Green initiatives at Mekorot**

- › Mileage reduction – "The Derech Erech" campaign, calling for changes in travel habits; online meetings encouraged; transition to work from home.
- › Remote work and learning.
- › Reduced printing (mail, deliveries, Finance Department).
- › Printer scrapping – Reduction of the number of personal printers and transition to printing at printing centers.
- › Efficient gardening.
- › Hybrid vehicles used; expanded use of electric vehicles considered.

**Resource consumption**

The principal form of waste generated by Mekorot, as a water infrastructure company, is hazardous waste formed in water quality enhancement and testing processes, most of which is removed for burial at licensed sites, and sludge waste formed during the waste treatment process.

In 2021, Mekorot was responsible for generating 300.1 tons of hazardous waste, a considerable increase compared with the preceding year.

<sup>17</sup> The calculation refers to 50% of the activity of the Carmiel plant, the Center plant, and the Carrier plant



277 tons of the waste originated with a localized failure incident – a diesel fuel leak in Rosh Ha'ayin: in October, a leak occurred near the Rosh Ha'ayin 7 drill site, in which 12,000 liters of diesel fuel seeped into the ground, contaminating the ground and groundwater. The incident was reported to the Ministry of Environmental Protection immediately when the leak was discovered, as required. The Company immediately mobilized to address the incident, in cooperation with the Contaminated Ground Division of the Ministry of Environmental Protection, the Water Authority, and the Nature and Parks Authority. The contaminated soil was removed for treatment, and later used for coatings of Mekorot facilities. An investigative committee was subsequently established to inquire into this severe event, in order to draw conclusions and make decisions to prevent the recurrence

of such incidents. Mekorot acted and is acting to implement the recommendations, in coordination with representatives of the regulatory agencies. In addition, a lessons-learned tutorial video was produced and distributed to all employees, describing the preventive actions to be taken; employees who viewed the video were required to sign a declaration. No sanctions or fines were imposed in connection with this incident. Total solid waste of Mekorot stood at 11,184.41 tons. This includes scrap, grit, greases, and post-thickening sludge; approximately 90% of the waste is transferred for use as agricultural fertilizer. The process of converting liquid sludge into compostable sludge generates biogas as a byproduct. The quantity of biogas was approximately 10.43 million tons in 2021.







Mekorot is taking the following measures to prevent environmental nuisances:

- > Use of eco-friendly pesticides that do not harm water sources.
- > Addressing smell nuisances and prevention of air emissions of pollutants.
- > Use of phosphorus-free anti-scalants.
- > Production of chlorine on site and avoidance of shipping and transporting hypochlorite.
- > Minimization of noise nuisances.
- > Reduction of the use of chemicals and transition to biological pest control.
- > Collaborations with the Ministry of Environmental Protection on hazardous materials.



# Future goals

- To expand the use of green energy, with an emphasis on solar power – two tenders are to be issued in 2022.
- To establish a working committee on climate risk management.
- To reduce the use of chemicals by developing independent electrolysis-based chlorination capabilities.
- To minimize shipping of disinfectants.
- To plan and build turbines at the Tsafit pools in the south and the Katef Tsofim site in the Jerusalem area, with capacity of approximately 0.5 MW, at production of approximately 3 million kWh annually<sup>18</sup>.
- To build solar-power systems (on land, and floating on open water reservoirs) in the areas and facilities of the Company at a volume of approximately 40 MW.
- To build a fence-adjacent solar-power facility at the Granot site, with capacity of approximately 7.5 MW, at production of approximately 12.5 million kWh annually.
- To operate a pumped-storage power plant at Tsuk Manara with capacity of 156 MW.

<sup>18</sup> A separate target for each site.



# Protecting ecosystems

**M**ekorot is an infrastructure company with facilities located across Israel. As part of its sustainable management worldview, Mekorot works to protect ecosystems and biodiversity.

## Landscape rehabilitation and nature preservation

Mekorot accords high importance to the protection of nature and landscapes. We have therefore formulated a document of lateral guidelines, as a foundation for detailed planning, to be used by facility engineers and landscape architects in complex engineering projects. In accordance with this document, Mekorot acts to reduce the space taken up by its facilities, while endeavoring to blend the facilities into the natural environment. This is achieved by planting trees, applying environmental development, painting facilities to blend with the landscape outline, burying facilities underground, and more. According to the type of work, in some cases Mekorot provides "environmental compensation" by building lookout points, bicycle trails, and effluent reservoirs, accessible for the benefit of the public.



## Jerusalem Fifth System

The Jerusalem Fifth System is designed to respond to the demand for water in Israel's capital, its largest city, adding to the four existing systems to solve the problem of transporting water to Jerusalem in the coming fifty years. This is a complex, long-term project at a cost of approximately NIS 2.5 billion, aimed at supplying the water needs of the city of Jerusalem and the surroundings in the future by building pumping stations, large-diameter pipelines, water pools, a tunnel, and a connection of this system to the municipal system.

In this project, a clear example of Mekorot's environmental sensitivity and protection of the environment as a top priority, the Company is devoting extensive resources to protecting the environment and landscape, and has adhered to several principles: including environmental considerations in planning, holding ongoing dialogue with the community in the area of the activity, applying green building approaches, and preserving landscape. Mekorot is also taking care to preserve biodiversity in the area, plant and relocate trees, and rehabilitate existing quarries. The project as a whole emphasizes energy efficiency, reducing its carbon footprint.





## Protecting water sources

Water sources (drill sites, springs, and surface water) and water transport systems (pipelines, pools, and stations) are exposed to contamination as a result of various hazards. Mekorot has approximately 3,000 facilities nationwide, some in proximity to potential environmental hazards such as industrial factories, gas stations, sewage lines, and waste disposal sites. Pollutants from these sites may seep into the ground, penetrating to contaminate groundwater.

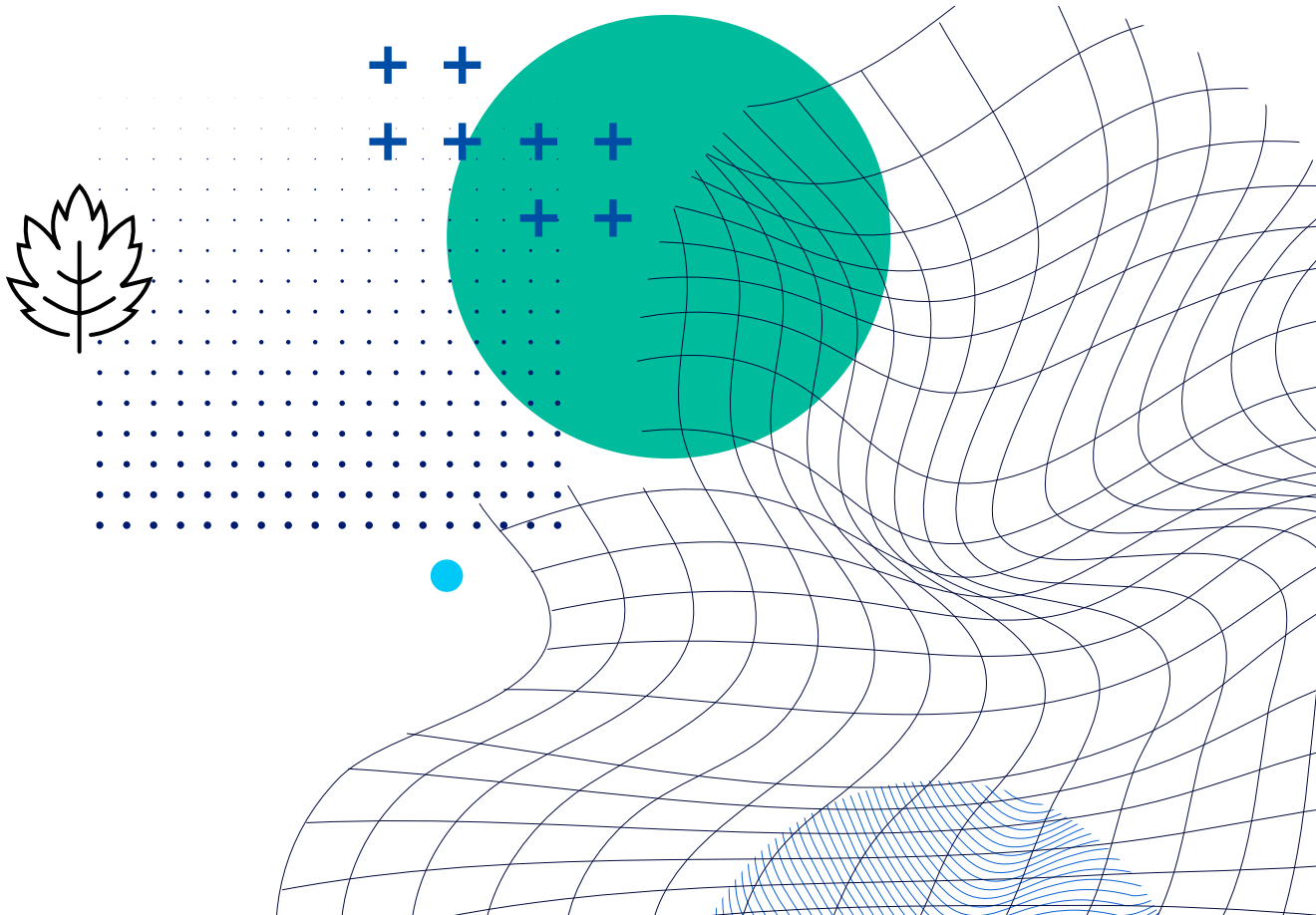
Mekorot has set an overarching goal of preventing and minimizing the contamination of water sources. Its actions to protect water sources are grounded in the Public Health Regulations (Sanitary Quality of Drinking Water), 5773-2013. The Company also has a formalized working procedure in this area, aimed at establishing uniform guidelines for the identification, reporting, monitoring, and treatment of environmental hazards in the surroundings of drinking water supply systems and sources. Each district has an environmental protection engineer responsible for this area, who is charged with determining the risk level of hazards and overseeing inquiries.

As an infrastructure company, Mekorot has activities with the potential to contaminate the ground in various ways: use of lubricant oil for deep drilling, use of generators to protect the continuity of the water supply, and washing and disinfecting pipelines and water pools according to the requirements of the Public Health Regulations. To reduce environmental risk, Mekorot endeavors to reduce discharges to the extent possible, and to reduce the use of materials bearing environmental risks; for example, expanding the use of water in place of lubricant oil to drill sites with depths of up to 400

meters, and maintaining a limited supply of diesel fuel, stored in spill pallets that prevent ground pollution and allow continuous reporting of breaches. Mekorot also works to minimize environmental threats to water sources in order to preserve this national resource. Where it does not have the statutory authority to address and resolve a hazard, Mekorot contacts the regulators to request that they exercise their authority to eliminate potential hazards.

## Biological removal of nitrates from potable water drill sites

A risk of pollution exists in the area of the Southern Coastal Plane and Northern Coastline Aquifer, due to the fact that these are agricultural regions where fertilizers are used. To purify the water in these areas and reduce concentrations of nitrates in groundwater intended as potable water, in 2020 Mekorot began a pilot project using biottta™ technology (for information regarding this technology, see the Sustainability Report for 2019-2021, p. 47). In 2021, it was discovered that the technology had in fact reduced groundwater nitrate levels, from 80 milligrams per liter to less than 5 mg/l in treated water. All of the physicochemical parameters measured in the treated water were compliant with the standard for drinking water, most of the time. However, the development of pseudomonas bacteria, which may cause disease, was detected during the pilot period. This requires reexamination of the effectiveness of the technology. In 2021, the Ministry of Health began to consider approving implementation of the technological system at Mekorot facilities.







## Performing environmental surveys

Environmental risks to water sources are an issue of national importance. Mekorot has therefore embarked on a process of nationwide environmental surveys, based on a formalized engineering methodology, to identify potential sources of pollution that may harm or contaminate groundwater, including potable water drill sites of the Company. Furthermore, the Company tracks focus areas of potential drinking water contamination, including sewage systems, wastewater purification plants, garbage dumps, landfills, quarries, gas stations, livestock farming areas, industrial zones with potential for environmental pollution, and more, and routinely monitors water quality. The surveys examine physical, statutory, and sanitary aspects of the water systems, helping to preserve water quality, as a complementary measure to water pollution treatment and monitoring. To emphasize, the findings described below do not refer to water supplied to consumers, which is rigorously monitored, meets all required quality standards, and is satisfactory and suitable.

The surveys are conducted at the frequency required under the Drinking Water Regulations, which prescribe annual preventive surveys of water treatment facilities (excluding facilities used only for disinfection), surveys every five years for potable water production facilities, and surveys every ten years for potable water supply systems. All of the surveyed systems were found to be sound, and are subject to preventive maintenance, such that repairs are performed routinely according to field needs.

**113 potable water drills were performed in 2021, and the Company's treatment facilities were surveyed, as required under the regulations.**

<sup>19</sup> The execution of the rehabilitation process requires state budgets and direction by regulatory agencies



## Rehabilitation of aquifers

Aquifer rehabilitation has been designated a national project, in view of its high importance. Mekorot began to proactively inject water into aquifers after they were damaged by seven years of continuous drought in Israel. The water injections are designed to rehabilitate the aquifers and improve the water quality therein. Mekorot also operates drill sites to rehabilitate and purify contaminated or salinated water. A notable example is the Eastern Drain program, a flagship project to stop salination and rehabilitate the Coastal Aquifer. Desalination plants were built as a complement to aquifer rehabilitation, aimed at providing an alternative source of potable water and allowing the rehabilitation process, which requires reduced pumping and injection of water into the aquifers, to begin. Mekorot represents the state in aquifer rehabilitation projects and is responsible for building and operating pumping facilities to treat contaminants<sup>19</sup>.

## Restoring water to nature

Mekorot accords high importance to the protection of the environment, and of nature and landscapes. Maintaining, preserving, and rehabilitating natural water reservoirs and aquatic habitats for the long term are some of the most significant, important challenges in sustainable water management. Natural reservoirs are critical for the water sector in several ways: they provide high-quality, low-cost natural water; their geographical locations across Israel reduce the risk of centralized damage, allow operational flexibility, and reduce transport distances; and the volume of the reservoirs allows seasonal and multi-annual storage and modulation of water on a national scale, which, among other matters, helps protect the biodiversity dependent on the reservoirs. Efforts are being made to restore water to nature, based on the approach that this is a key element of sustainable conduct.







## Rehabilitation of streams and aquatic habitats

Within its commitment to landscape rehabilitation and the protection of nature, Mekorot acts, in accordance with regulatory guidelines and in collaboration with green organizations and government agencies, to restore water to nature, with an emphasis on the rehabilitation of streams and aquatic habitats. Mekorot is also working to formulate an agreement with the Water Authority and the Nature and Parks Authority in this area. Within this activity, based on permits from the Water Authority, Mekorot returns quantities of water to nature; these quantities are expected to grow based on Water Authority allocations and on the amount of desalinated water available. **Mekorot restored approximately 40 MCM of water to nature in 2021.** The group also performs deep water drilling, intended, among other purposes, to restore water to nature and divert it into streams where the flow of water has stopped, as part of the rehabilitation process. These efforts are underway in the Golan Heights and Galilee regions.

## Discharges into the environment

As part of the routine operation of Mekorot water infrastructures, water is occasionally discharged into the environment, involving potential risk of contamination of the ground and water sources. Mekorot operates in accordance with an annual permit, in collaboration with the Water Authority and the Ministry of Environmental Protection, and ensures that discharges are performed only in compliance with the established requirements and permits. Accordingly, in the case of necessary discharges not included in the annual order, Mekorot applies for a dedicated authorization. This issue is managed and monitored at company headquarters, with direct oversight by the CEO. Most discharges by Mekorot are from potable water drilling and do not entail a risk of ground contamination. For further information regarding discharges into the environment, see the Periodic Report for 2021, p. 117-118.

## Geulat Hayarkon Project

A project started in 2013 to build a capture facility and pumping station, in order to absorb water at the Yarkon River. At the completion of the project, the system is expected to allow water to be captured from the Yarkon River in the Sheva Tahanot area, transferred to a treatment facility being built near "Bereshit Forest", and piped for irrigation in agriculture and urban gardening. This unique project encourages the reuse of effluent water to rehabilitate the Yarkon River, and later also for irrigation and landscape rehabilitation. When the project is concluded, the Yarkon will become a developed area with unique landscape, available for use for leisure and enjoyment by the population. To create a pleasant and healthy environment for the local community, Mekorot is also considering the impacts of its facilities in terms of nuisances and protection of the environment. Mekorot completed an acoustics report, which indicated that no noise nuisance is expected in the area. As the activity does not involve water treatment, there is no concern over smell nuisances. In coordination with the Forest Clerk of the Tel Aviv municipality, work was performed to uncover ground and relocate trees, for the construction of the treatment facility, and new trees were planted to form a green border around the site. A perimeter wall has been built around the facility, and an earth embankment will be built from the wall towards the park, with plants and trees. A visitor center will be built at the site, accessed by a trail on the embankment, in coordination and collaboration with the Tel Aviv municipality. The visitor center will have the capacity to host groups of up to fifty people.





## Reduction of light pollution

The plan for transition to environment- and nature-friendly lighting at Mekorot facilities is part of the sustainable development policy led by the Company in recent years, aimed at protecting the natural environment and natural resources in the present, for the generations of the future. Within the plan, formulated in collaboration with the Nature and Parks Authority, the Society for the Protection of Nature in Israel, the Ministry of Environmental Protection, and the Water Authority, most of the Company's facilities are darkened at night and only illuminated when necessary, to minimize the negative impacts of lighting on the surrounding flora and fauna. Lighting plans are also adapted to routine operational needs, to prevent light leakage; where necessary, facility lighting is replaced with soft LED bulbs.

The plan has been implemented in full at the Eshkol site, one of the largest Mekorot facilities. The Company is currently working to implement the plan at all of its facilities, within a comprehensive work plan, based on prioritization of lighted facilities located in areas with higher ecological sensitivity. A series of implementation procedures has been formulated as part of the plan, including procedures for lighting planning, examinations of facility lighting planning, adaptation of illumination power to types of usage, examination of photometric planning, and more.

**134** facilities located in ecologically sensitive areas have been darkened

Energy savings from this process stand at approximately

**NIS 364,500** per year

### The project is the outcome of interfaces between two concurrent processes:

- > An ecological risk management process in progress at the Company, which has contributed significantly in other ways, including time and resource savings in lighting planning, reduced maintenance costs, improved efficiency of electricity consumption, and, consequently, reduced greenhouse-gas emissions.
- > The Company's collaboration strategy, within which employees launch and respond to calls for proposals, in collaboration with various companies, overseen by the Innovation Unit, jointly with content leaders at the Environmental Protection Unit.



## Prevention of invasive species

Invasive species pose a serious threat to biodiversity and ecosystems. As part of our commitment to the protection of Israel's unique biodiversity, Mekorot has entered into a four-way agreement with the Society for the Protection of Nature in Israel, the Nature and Parks Authority, the Ministry of Environmental Protection, and the Water Authority specifying guidelines to prevent invasive species from becoming established and address invasive plants in the course of the construction, development, and operation of Mekorot facilities and pipelines. Formalized work processes were established within the joint project for cases in which an environmental landscape annex is required for an activity of the Company, or the activity occurs in a nature preserve. Within the invasive species prevention projects at Mekorot sites (including the "Western Yarkon Pipeline", the "Kohav Ya'ir 30 Pipeline", and "Mikhmoret"), inspection tours are conducted with the Nature and Parks Authority, and pruning and spraying are performed in line with the agreements.

## Biological pest control using barn owls

Mekorot is a participant in a national initiative to use barn owls and falcons for pest control in agricultural areas, led by the Society for the Protection of Nature in Israel, the Duchifat Foundation, and the Plant Protection and Audit Services at the Ministry of Agriculture. Within the sustainable development activities promoted by Mekorot, dozens of nesting boxes were placed at its water reservoirs, to help fight rodents and reduce the need to use harmful poisons that endanger humans and the environment. The barn owls, which feed primarily on rodents, form a key element in biological pest control, helping to reduce the number of rodents in the vicinity of facilities and agricultural fields. Rodents can damage water reservoir embankments, as well as electricity and communications infrastructures; reducing the rodent population helps maintain a regular water supply and protect groundwater.



## Future goals

- To use environment-friendly pesticides, reduce the use of chemicals, and transition to biological pest control, which reduces harm to water sources.
- To implement the pilot project for reducing light pollution throughout the Company.
- To address smell nuisances and prevent air emissions of pollutants.
- To use phosphorus-free anti-scalants.
- To produce chlorine on site and avoid shipping and transporting hypochlorite.
- To minimize noise nuisances.





# Social

54-74 →





# Resilience of the water supply to the public

**W**e at Mekorot see the consistent supply of high-quality drinking water as the foundation of our success. Climate change and global warming are causing reduced availability of water in natural sources, heat waves, floods, and increased aridity, accompanied by fires, and a corresponding rising demand for water. In the awareness that water is a degradable resource, we apply prudent and sustainable resource management aimed at meeting the present demand and providing for long-term needs. In Israel, where a desertification process can be expected as a consequence of climate change, the optimal solution for the consumption of potable water from natural sources is a massive transition to seawater desalination. This substitute requires altering water supply systems, reinforcing the transport system and production facilities, and reducing the extraction of potable water from natural sources.

Within Mekorot's effort to prepare for every scenario and possibility, including security threats, the Company is working to develop some of the most advanced means and processes in the world for water monitoring, water safety, and water incident management, to help reduce dependence on external factors. Mekorot employees are dedicated and faithful in their work, in any field and weather conditions, delivering personal, professional, reliable service to supply water at the

utmost quality, availability, and trustworthiness. Integrated service management is performed by the Operations and Maintenance Division, the Engineering and Technology Division, and the Development Division, each overseeing the activities relevant to its core operations. A board of directors' committee oversees operations, development, and planning.

As a government water company, Mekorot reports to the Water Authority, which manages the water sector in Israel.

Mekorot supplies water to consumers based on water quotas set by the Water Authority. The Water Authority accords high importance to the resilience of drinking water supply systems, and has a department dedicated to this issue. Mekorot is working to upgrade its water quality monitoring system, set up a national control room, upgrade its cybersecurity system, and establish an alternate disinfection system, to improve water supply reliability and reduce dependence on chemical suppliers.





## Water supply continuity

To ensure a high-quality, safe, regular, reliable water supply for the broad range of current users and needs, Mekorot operates ten integrative command and control centers that control approximately 3,000 facilities remotely, in real time, including drill sites, pumping stations, and water pipelines, using IT systems and advanced technologies allowing effective and energy-efficient operation. The command and control centers take in hundreds of thousands of data points from the field every day, creating a status snapshot of water quality, safety, and delivery, at the level of individual facilities as well as the facilities in aggregate. The systems can also issue alerts of unusual situations, so that they can be addressed immediately. The control rooms operate 24 hours a day, seven days a week.

The Company also uses local systems for automatic operation, without intervention from the command center. When necessary, these systems allow the control system to intervene in routine operation remotely through a secure online connection. Control is performed through several communication channels, including landline, wireless, cellular, and satellite communications. Mekorot also operates an automatic remote reading (AMR) system, which can read water meters remotely and provide alerts of sabotage, damage, or failure of water meters. The control systems provide a real-time overview of the water sector at any moment, allow remote control over all of the Company's water facilities, and ensure the reliability and availability of the water supply.

## Preparedness to supply water during crises

As a national water infrastructure company, Mekorot is obligated to prepare and preserve its preparedness to cope with any emergency in Israel. The Company has a management system backed by dedicated procedures to manage water crises arising from climate risks, earthquakes, or security threats, among other factors. In an emergency, Mekorot would serve as the execution arm of the Water Authority, and would be required to ensure a regular water supply to its consumers, including essential enterprises and livestock farms. To meet this requirement, Mekorot has a special unit for emergency periods and events. The unit is the core of the Mekorot staff for preparation of the system to cope with crises. In the event of a threatened crisis, Mekorot operates according to the procedures and adapts means to enable it to cope with the anticipated crisis in all areas of its activity: water supply, water security, water quality, information security, communications, personnel, and emergency inventories, in line with regulatory guidelines. The Company is working on three levels to allow optimal utilization of water sources and backups during supply disruptions: connection of consumers to more than one system; reduction of areas served by a single water source; and connection of additional areas to the national network. Our water supply system allows continued activity and use of surplus water during a crisis, or during load shedding leading to a shutdown of desalination plants. When load shedding is expected at the IEC, Mekorot prepares in advance by increasing water stores and using alternate water sources.





## Water security

The geopolitical history of the State of Israel has led Mekorot to develop strategy to protect water sources and potable water supply systems for agriculture and industry. We have developed methods of coping with threats to water security, including an advanced risk-assessment system, an event management system, alert and protection systems to prevent penetration and damage of the Company's facilities, capabilities for preparedness for scenarios, and training of professional teams. The security approach implemented by the Company minimizes the risk of a failure to supply water as a result of various scenarios, and improves protection against sabotage and damage to equipment. **The Company takes various actions within this approach, ranging from the water sources to the supply to customers, primarily the following:**

- › Security-focused system planning.
- › Fencing and security of facilities.
- › Integrating advanced technologies with physical and electronic protection.
- › Activation of means of discovering and identifying hazards.
- › Installation of a sophisticated system for continuous monitoring, command, and control throughout the supply system, for early alerts of deterioration of water quality.
- › Development and implementation of strategies, including procedures and methods to cope with contamination incidents.



## Water supply to Arava region communities

Mekorot continually develops new solutions to increase water sources in the Arava region, in order to support settlement in this area, promote accelerated agriculture development, and improve residents' quality of life. The National Water Carrier connects northern and southern Israel; the southernmost town connected to the system is Mitspe Ramon. Arava residents are not connected to the National Carrier, and are currently supplied with water from local drill sites with high salinity levels.

By building new brackish water desalination plants and connecting Arava residents to the national supply system and the Sabha desalination plant in Eilat, Mekorot aspires to provide a long-term solution for the water scarcity suffered by the region for many years. **Within our multi-annual plan, we aim to supply 32 MCM of water to the southern Arava and 70 MCM of water to the middle Arava by 2030, thereby meeting the annual consumption target.** As part of its preparations for a regular supply of quality water in the future, the Company is investing in research and development of new technologies for water desalination and membrane treatment, to maximize utilization of water sources.



# Water management and control quality standards and laboratories

The Mekorot water supply system is planned for maximal reliability, through the operation of multiple water sources feeding potable water into the national water system. The Company does its utmost to protect water quality and public health. To ensure that water quality is at the required standard, Mekorot applies controls and continuous monitoring to examine quality and detect contamination, throughout the supply chain, from the water source to the final delivery point, based on a sampling plan compliant with the requirements of the Drinking Water Regulations and approved by the Ministry of Health. The sampling plan is applied at production sites as well as in the water supply system. Each sample is tested for several factors (microbial or chemical), at a licensed laboratory and/or in the field. To protect water sources and the spheres of influence of the production sites from environmental pollution, the Ministry of Health has established protective zones surrounding drill sites. Spheres of influence are set at the protective zone plus 100 meters. This is a complementary measure to the treatment and monitoring efforts of Mekorot, highlighting our approach to water quality assurance.

## Control activities include, among others:

- > Preventive sanitation surveys.
- > Routine water quality tests at production, acquisition, and treatment facilities and in supply systems.
- > Disinfection of water at exits from production and acquisition plants, to protect water quality, in accordance with the requirements of the Ministry of Health, and continuous monitoring of the concentration of substances.

- > Continuous measurement instruments, such as turbidity meters, installed in supply systems and at exits of treatment and disinfection facilities, for constant monitoring of water quality.
- > Supervision of water systems through staffed control rooms operating 24 hours a day, which receive data on the water supply and water quality from measurement devices, and immediate alerts if a measurement threshold is crossed or if a malfunction is suspected. Any alert of a suspected malfunction is addressed immediately through corrective action, and, if necessary, reported in real time to the Ministry of Health. The corrective actions may include correcting the disinfection level, redirecting excessively turbid water to reservoirs for sedimentation of the turbidity, switching to alternate sources of potable water, washing and draining pipelines, and repeated testing of the water to track the effectiveness of the actions taken.



As part of its commitment to transparency towards the public and its stakeholders, Mekorot releases an annual **"Drinking Water Quality Report"**, in accordance with the Drinking Water Regulations. The report, which is accessible to the public, describes water quality and any unusual incidents over the past year. As stated in the report, the percentage of deviations in bacterial measurements is minuscule, reflecting a multi-annual trend of low deviations relative to the guidelines of the World Health Organization and the United States Environmental Protection Agency (EPA), which accept up to 5% deviations.

Less than **0.5%**  
deviations in water  
quality in both microbial  
and chemical tests

Mekorot operates  
more than **800**  
advanced, dedicated  
treatment facilities to  
improve, disinfect, and  
treat water according to  
the highest standards  
prevailing in the  
Western world







● **Total tests performed at Mekorot laboratories\*, 2019-2020**

	2019	2020**	2021
Chemistry	91,711	84,779	81,548
Bacteriology	28,749	31,358	32,396
Total excluding catchment basin	120,460	116,137	113,944
Catchment basin	47,576	36,659	386,49
Total carrier	168,036	152,796	152,593
Rosh Ha'ayin	27,171	27,577	26,870
Ashkelon	20,969	18,053	17,797
Shafdan	29,089	6,416	27,923
Eilat	10,102	10,157	9,264
Total	255,367	214,999	234,447

\*The data do not include the performance of the Biology Department, due to settings for recording in the system and testing for external parties.

\*\*The decrease in 2020 resulted from a change in the activity of the laboratories due to government instructions on working during the Covid-19 crisis.

## Future goals

- To provide approximately 90% independence in water supply during emergencies<sup>20</sup>.
- To attain the annual sampling plan by performing 145,000 microbial and chemical tests.
- To preserve high water quality, at up to 0.5% deviations in water quality in both microbial and chemical tests.

Mekorot has **6** laboratories that perform approximately **380,000** tests annually, for Mekorot as well as private companies. The laboratories are recognized by the Ministry of Health, licensed by the Laboratory Licensing Authority, and compliant with the **ISO 17025** standard

Approximately **10** studies are performed each year in the area of water quality, seeking solutions for water treatment, wastewater treatment, testing of new monitoring devices, and more

<sup>20</sup> This figure refers to 60-90 liters of water per day per capita in emergencies



# Responsible behavior towards employees

**O**ur employees are our most valuable asset, and we at Mekorot consider them the bedrock of our success. We therefore strive to create a safe and respectful work environment. The guiding values at Mekorot in general and for management in particular are cooperation, mutual respect, transparency, and good communication. We are committed to protecting our employees' health and safety, and creating a workplace that promotes equal opportunities and individual and professional development for every employee. The relationship between the employee union and management is led by the VP of Human Resources and the chairperson of the union; we see our employees and their union representatives as partners on our journey and in our actions.



## Terms of employment in 2021<sup>21</sup>

There are **1,562** employees at Mekorot

Approximate **99.6%** of the employees of Mekorot are employed full time

**99%** of the employees of Mekorot are covered by collective labor agreements

**86%** of employees are permanent (including local permanence)

**51** employees – **50** women and **1** man – took parental leave. One employee chose not to return to the Company after parental leave

The average age of Mekorot employees is **49.4**

The average duration of service of Mekorot employees is **16.2** years

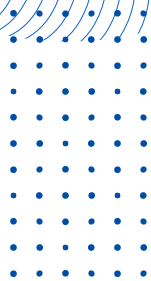
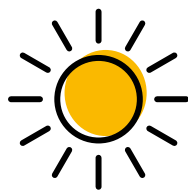
**23%** of the Company's employees hold academic degrees

**15** employees completed higher-education programs with tuition subsidized by the Company

**100%** of employees went through a feedback process

<sup>21</sup> Data as of the end of 2021

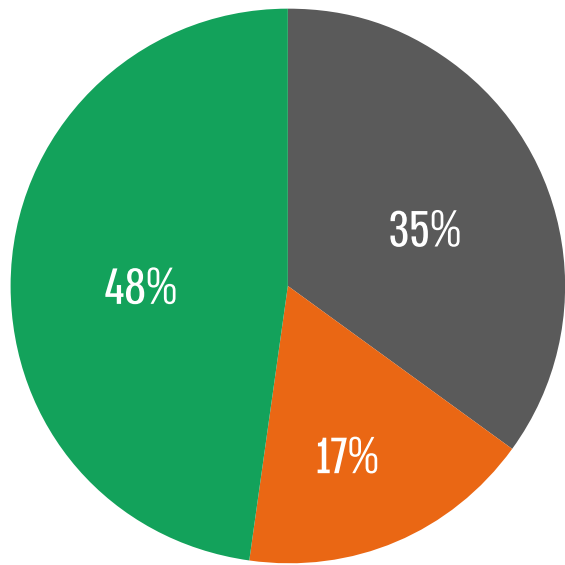




Headcount segmented by age, gender, and rank

		2020			2021		
		Women	Men	Total	Women	Men	Total
Management / senior management (executive agreements)	Up to 30	0	0	0	0	1	0
	31-50	2	1	1	1	1	2
	50+	2	8	15	2	6	8
	Total	4	9	13	3	7	10
Middle management (unit heads – Tier C management)	Up to 30	0	0	0	0	0	0
	31-50	11	12	23	5	12	17
	50+	7	18	25	11	8	19
	Total	18	30	48	16	20	36
First management rank (department heads – Tier B management)	Up to 30	0	0	0	0	1	1
	31-50	25	24	49	9	45	54
	50+	10	71	81	17	48	65
	Total	35	95	130	26	94	120
Employees	Up to 30	22	45	67	23	40	63
	31-50	206	519	725	206	520	746
	50+	125	462	587	119	467	586
	Total	353	1,026	1,379	368	1,027	1,395
Total		407	1,169	1,576	413	1,149	1,562

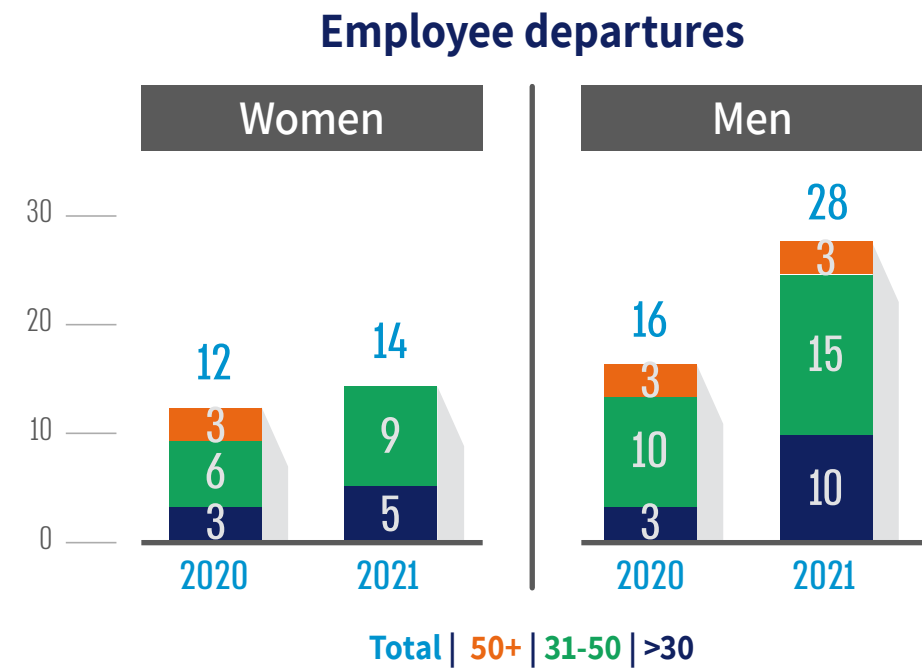
Geographical distribution of Mekorot employees



- North (including Carrier)
- South
- Center (including headquarters)



Employee turnover by gender<sup>22</sup>



<sup>22</sup> Data on employee departures refer to employees who resign or are dismissed, and do not include employees who retire





Employee retention

Mekorot management views the Company's organizational culture and climate as an important strategic pillar of its overall strategy, particularly as it concerns employee retention. This approach is reflected in many areas, including embedding organizational values; strengthening management tiers and managerial skills; developing processes and tools to improve transparency and partnership, including intra-organizational communication; promoting all elements of personal and professional development; empowering employees in their roles; adapting organizational structure, remuneration, and benefits; and more.

Intra-organizational communication

We value intra-organizational communication, and we work to promote multi-directional communication channels among the units of the Company. We believe in the value of mutual inspiration and encourage our employees to hold dialogue with professional experts in their field. In our view, systemic thinking and cooperation among different units have high value for both the employees and the Company. This dialogue enables employees to gain broader understanding, learn from each other, deepen interpersonal relationships, and improve the corporate climate. We also ensure open dialogue of management

and the CEO with our employees and managers, through various channels: CEO coffee sessions, roundtable meetings, the 100 Conference, intra-organizational communication, employee experience human-resource activities, innovation platforms, a wide range of professional forums, an intra-organizational application, and more.

In 2021, Mekorot conducted an evaluation and feedback process for all of its employees. This process, administered through a software system, will be held annually, fostering dialogue between managers and employees. An intra-organizational service survey was conducted at Mekorot in 2021, to measure employee satisfaction.

The Employee Service Center was enhanced and improved during 2021. Within this process, an innovative advanced online platform was created to compile knowledge and tools on employee conduct at the Company. The system offers information on benefits, employment data, a digital tender submissions mailbox, administrative forms, a service mailbox for employee inquiries, questions and answers, and a social newsletter.

Mekorot participated in rankings of the **100 best workplaces in 2021**, and maintained its position in **14<sup>th</sup> place**





### Employee well-being and improvement

Mekorot aspires to provide its employees with optimal conditions for an appropriate balance between their personal and family needs and the demands of the workplace. We care for employees' well-being in a number of ways:

- > Flexible work hours.
- > Set days with no afternoon meetings.
- > Parent positions with suitable work hours.
- > A uniform, ordered hiring and onboarding process, including individual guidance, from hiring to retirement.
- > Adapted mentoring and handover processes, employment terms and entitlements in accordance with collective agreements, and timely promotions in rank and role.
- > Vacation days beyond the legally required amount; employees are encouraged to use their vacation time.
- > Periodic monitoring of the percentage of employees who work more than 50 hours a week.
- > Work from home permitted, based on approval by management and regulators.
- > Subsidized medical examinations and health-insurance policies, with insurance terms improved from time to time.
- > Raising awareness of health and promotion of healthy lifestyles: Health Month, the Nutrition Challenge, supportive messaging, and more.
- > Ergonomic adaptation of workstations to employees' needs.
- > Support during life events and assistance in crises, for employees and their family members.
- > Aid for employees experiencing financial distress.
- > Reimbursement of children's daycare and camp expenses, for eligible employees.
- > Tuition aid for children of eligible employees.
- > Enrichment lectures and workshops for employees and their families, in a variety of fields.
- > Regular well-being events for employees: an event for employees' children beginning first grade in school, an event for employees' children celebrating their bar/bat mitzvah, a ceremony for outstanding employees, teambuilding days, a conference for new employees, a conference for permanent employees, and more.



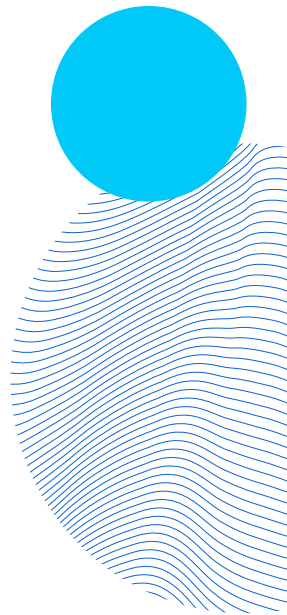
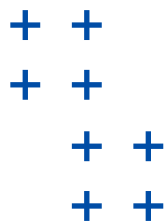
### Preparing for retirement

As part of its obligations in the areas of fair employment and the creation of a safe and respectful work environment, Mekorot is diligent in developing knowledge and preparing employees for retirement, including through a retirement seminar, held about six months before retirement to equip employees to cope with the anticipated change. The following are also offered to retirees:

- > Knowledge and useful information on a range of aspects relevant to life in retirement, such as monetary resources and budgeting, rights pertaining to National Insurance, pension rights, taxation, and more.
- > Some employees are offered the opportunity to continue to work as consultants post-retirement.
- > Leisure and other activities are offered to retirees of the Company.



We ensure that all of our employees receive fair retirement terms; retiree rights are covered by the collective labor agreements. Most employees of the Company retire with a pension, through an early retirement program or at retirement age, and receive benefits and grants, as well as the retirement preparation plan described above.





## Occupational health and safety

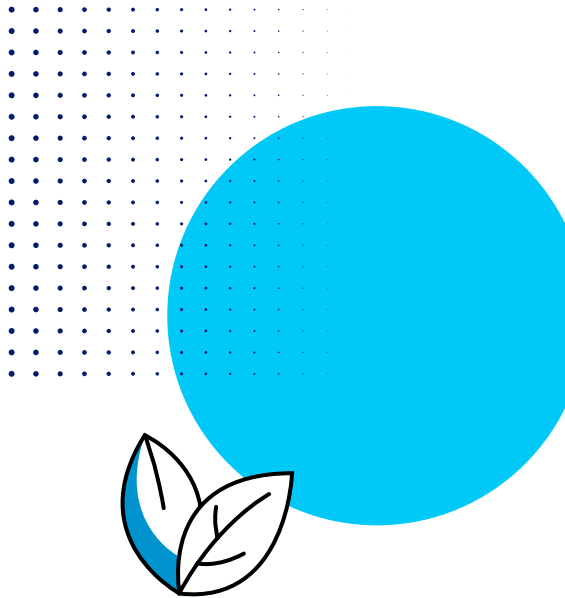
Mekorot is committed to protecting the safety and health of its employees, suppliers, contractors, customers, and community, in accordance with a safety policy approved by the management and board of directors of the Company. Its occupational safety and health policy addresses promotion of employees' physical and mental health and is an integral element of the Company's strategy; Mekorot applies the highest standards in this area. The VP of Operations and Maintenance is responsible for safety management at the Company, overseeing five district safety supervisors who are registered with the Ministry of Labor, charged with advising and assisting management in all matters concerning occupational safety, hygiene, and health. Mekorot has joint committees on safety and hygiene for management and employees (half of the members of the safety committees are employee representatives and half are management representatives). The committees operate based on a geographical division, by district, and a central committee oversees these issues on the national level. In 2019, Mekorot voluntarily performed a safety diagnostics survey, with guidance from an external firm; application of the findings is currently underway. Mekorot conducts internal and external safety tests, for certification under the ISO 45001 occupational safety and health standard and the ISO 9001 quality standard. Based on the findings of the tests, Mekorot applies corrective action and adjusts its work procedures as necessary. In 2021, further to the safety diagnostics survey, the Company's safety policy was also updated.

To ensure that all employees of the Company are aware of safety policy updates, training on safety policy is provided to all new employees; when necessary, changes are posted on bulletin boards at the districts. Field employees undergo a basic eight-hour training program annually, in addition to targeted training by role. To maintain employees' health and minimize potential risks in its work processes, Mekorot conducts medical monitoring and testing in the workplace for employees in roles exposed to greater risk. We provide equipment to protect employees' health and safety, to a strict standard, and distribute informational leaflets on exceptional events, such as extreme weather conditions. **Mekorot rigorously tracks and monitors safety, setting measurable targets:** the number of work accidents, dangerous events, and near-miss events; the frequency of work accidents; and the severity of work accidents. Mekorot has invested great effort in improving its safety culture, leading to improvement in overall accident figures.

### Segmentation of data on accidents<sup>23</sup>

	2020	2021
Work accidents	27	28
Hazardous events	26	45
Near-misses	4	44
Frequency of work accidents	0.16	0.15
Days of absence due to work accidents	557	543
Total days of absence due to all accidents	1,062	841

1.8 work accidents per 100 employees in 2021  
1.7 in 2020



Mekorot has various initiatives to raise awareness of this issue, including:

- > Enforcement inspections to comply with the requirements of the law.
- > Safety training for employees and contractors.
- > Investigation of safety incidents and publication of findings for lessons-learned processes.
- > Publication of a monthly safety report distributed to all employees of the Company.
- > Management controls applied in the area of safety.
- > Meter forum held to set professional standards.
- > Encouragement of employees of the Company to excel in safety, and awards for outstanding employees.

<sup>23</sup> The reporting method has changed (relative to 2020) in terms of the normalized measure of accidents relative to employees – the number of accidents is normalized per 100 employees



## Transportation safety

Mekorot has sites located nationwide; as part of their routine work, employees and contractors need to make many trips between facilities and infrastructure locations. Transportation safety is therefore a top priority for us. We apply the following measures to protect our employees' safety:

- > A quarterly report released to all employees of the Company on transportation safety.
- > Monitoring and maintaining vehicles at importers' garages, with original parts, according to manufacturer instructions.
- > Training provided to all drivers, trailer users, and forklift operators at the Company.
- > Proactive safety audits of vehicles, engineering equipment, and trailers by district safety officers.
- > Sample audits by the national transportation safety supervisor.
- > Accident committees.
- > Investigation and lessons-learned process regarding severe traffic accidents.
- > Training for family members of employees who drive leased vehicles and vehicles of the Company.



## Future goals

- To establish a unit responsible for implementing the findings of the safety report of 2020.
- To promote digital transformation in safety by creating an application to document the various safety processes, such as safety incident reports, documentation of field inspections and tours, risk and hazard surveys, digital work permits, regulation of equipment lending and electricity for contractors, documentation of records, training, and more.
- To establish a network of safety trustees at Mekorot based on a new outline.
- To increase the involvement of managers in safety, including through training on incident inquiries for 33% of managers in 2022.
- To reduce the number of accidents, normalized per 100 employees, by 10% by 2025 and 20% by 2030.
- To formulate a new safety concept and policy for safety management at the Company, and obtain approval of Company management.



## Diverse, equitable, respectful employment

Mekorot maintains equal opportunities and fair processes in hiring, screening, and promotion of employees at the Company, and avoids discrimination on the basis of religion, race, sex, or ethnicity. All workers at the organization are entitled to equal rights. The Company believes that diverse human capital contributes to its strength and to the creation of an inclusive and pleasant work environment for all employees. As a government company, Mekorot accords high importance to promoting diverse employment and focuses on the inclusion of population groups underrepresented in the labor market<sup>24</sup>. Diverse employment expands the potential of human capital, allows quality hiring from all segments of the population, enhances innovation and creativity, and generates shared value for employees and the Company. A work plan has been formulated in the area of diversity, including diversity targets. This area is overseen by the Human Resources Division and regularly reported on by the head of the division to the board of directors. The Company is in regular contact with non-profits and organizations specializing in hiring and placement of workers from population groups underrepresented in the labor market, including "Olim Beyahad", "Equal Chance", "Ryan Employment Centers", and the "Kemach Foundation". Employees from these groups are also granted precedence in admission to training and study programs, including financial aid. The Company holds regular training for managers and human-resources staff on this subject.

<sup>24</sup> According to the definition of the Israeli Forum for Employment Diversity, these groups primarily include people from the ultra-orthodox (Haredi) community, people from the Arab sector, Israelis of Ethiopian descent, and people with disabilities

## Prevention of harassment and abuse

Mekorot takes a severe view of any form of discrimination or harm to its employees, and addresses such matters immediately. Mekorot aspires to create a workplace free of violence and of physical or verbal harassment, and takes preventive action through training and education. Based on the expansion of the letter of appointment of the Supervisor of Sexual Harassment in 2020 to encompass responsibility for the prevention of abuse in the workplace, a mechanism is available to employees of the Company to file complaints on this matter. The messages received are sent to the Supervisor of Sexual Harassment, who follows an ordered procedure for addressing complaints, with guidance from legal experts in this field. Various channels are at employees' disposal for submitting complaints, including email, the employee portal, and a physical mailbox; employees who choose to do so can submit their complaint anonymously. Two complaints regarding sexual harassment were filed in 2021. Both complaints were found to have factual grounds. Mekorot conducted an inquiry of each case and responded immediately, in accordance with an ordered procedure, to prevent recurrence of the incidents. In one of the cases, the complaint of sexual harassment referred to an employee of a contractor; the complaint was transferred to the employing company for further processing, while the employee's work at Mekorot facilities was discontinued immediately. In the second case, the inquiry indicated that the circumstances originated with a lack of awareness and occurred without malicious intent. To prevent recurrence, a reprimand was issued, procedures for working at Mekorot were clarified, and a dedicated training session on sexual harassment was scheduled to clarify the prohibitions.

**5** complaints of discrimination against employees were filed in 2021, of which **0** were found to be justified

**21%** of employees hired in 2021 are from population groups underrepresented in the labor market





**Lighting up Mekorot buildings to raise awareness and express support**



^  
Mekorot sites illuminated to raise awareness of breast cancer in October – corporate headquarters in Tel Aviv



^  
Mekorot sites illuminated on the International Day of Persons with Disabilities – Birwa Station



## Promoting gender equality

Mekorot values the promotion of gender equality in the workplace and therefore applies a policy of equitable employment, with diligent protection of women's rights at work. Under the collective labor agreement, there is no differentiation in remuneration between women and men; employees are hired and promoted based solely on their skills and the Company's needs. To promote gender equality, the Company conducts a range of processes, including setting measurable quantitative targets to promote the professional and personal development of women employees and managers. Lectures and workshops dedicated to the empowerment of women were held in 2021,

on topics including racism and gender equality, leadership, the development of excellence, and branding, as well as talks on raising awareness of early detection of breast cancer and recognizing signs of distress and domestic abuse. **Mekorot also launched a campaign in 2021 to promote women through a training program in practical engineering in water technology, for field positions.** Mekorot selected three women found to be suitable for this program, and provided them with tuition aid, professional training, and close mentoring, at an investment of NIS 10,000. The program is aimed at increasing the inclusion of women and creating a more diverse and equitable work environment.

Wage gaps between men and women by rank<sup>25</sup>

	Gap found in 2020	Gap found in 2021
Senior management	17%	2%
Middle management	8%	1%
First-tier management	18%	16%
Non-management employees	39%	38%

<sup>25</sup>Variations in reported data between 2020 and 2021 are influenced by an organizational management change, as well as by changes in employment terms under the collective labor agreement, derived from individual attributes of employees: length of service, increments for children, overtime, etc

## Future goals

- Appropriate representation – to meet the goals of the work plan on inclusion of underrepresented groups at the organization and establish positions specifically for these population groups.
- To increase diversity by raising the rate of hiring from underrepresented population groups to 24% of all hires.





# Employee development

Mekorot views its human capital as the key to its success, and considers it an essential goal to invest in its employees and managers and in their development and training. We believe that a skilled, professional, quality workforce is key to the resilience of a company in a market characterized by transformations arising from resource scarcity, ecological changes, technological progress, and growing competition in the area of water. Accordingly, comprehensive training software has been developed, covering several parallel learning axes for employees: a study program based on law and regulation, a professional development program, a managerial development program, and a program on personal and organizational development and leadership in embedding digital transformation at the Company. A key element in motivating employees is the Company's ability to develop their skills, reinforce their connectedness to the Company, and apply their professional capabilities so that they can bring optimal performance to their role. Mekorot encourages employees to complete and expand their academic education, from practical engineering to postgraduate degrees, with tuition aid granted to eligible employees.

In the area of learning based on law and regulation, a detailed study program is built each year according to the requirements of the various regulatory agencies, differentially adapted to the occupations required to study each law.

In the area of learning for professional development, a program has been designed consisting of professional training tracks for various occupations at the organization, including courses and workshops for a wide range of target audiences, such as regional managers, cluster supervisors, welders, engineers, overseers, project managers, laboratory workers, risk managers, and more. These programs are aimed at imparting professional skills to participants, as well as soft and interpersonal skills, to benefit optimal performance in their roles.

In learning for managerial development, a broad training infrastructure has been created, including basic and advanced managerial skills, reinforcement sessions for course graduates, and more. Various management forums have also been established for the different tiers of management within the organization.

59 hours  
of training per  
employee on  
average

92,000  
hours of training<sup>26</sup>



<sup>26</sup> Total training hours refer to all training programs at Mekorot, which are divided into three categories: learning programs based on law and regulation, learning programs for professional development, and learning programs for managerial and organizational development





The Nachshon program was introduced at Mekorot in 2021. This personal development and empowerment program is designated for the group of employees mapped and identified as having potential for high contribution to the organization. The Company holds training for relevant employees on the subject of digital transformation, in collaboration with the Engineering and Technology Division, in connection with the launch of information systems, new applications, and/or new versions of existing systems. The training encompasses the conceptual level of change management, learning about business-related work processes, and operation of the systems, including implementation, as well as continued guidance and ongoing support for end users. The Human Resources Division leads employee learning and development throughout the organization.

Mekorot participated in the National Excellence Competition of the Human Resources Israel organization, in **4** categories, and earned the following achievements:

- 1. **Innovation in learning** – a paper reached the finals stage and won second place in the national competition.
- 2. **Change management in organizations** – a paper earned an honorable mention.
- 3. **Emotional connectedness and the employee experience** – a paper earned an honorable mention.
- 4. **Digital transformation in the world of human resources** – a paper earned an honorable mention



## Future goals

- Work from home – to transition to a hybrid model, in line with the guidelines of the Commissioner of Salaries at the Ministry of Finance, while measuring outputs and setting targets.
- Employee experience – an employee experience program adapted for the post-Covid period is being formulated, retaining activities conducted over the last year.
- Digital transformation in human-resource processes – to digitize all human-resource processes and forms throughout the employee life cycle, from onboarding to retirement or departure, including transition to mobile.



# Activities of Mekorot with the community and customers

## Fairness to customers and customer satisfaction

One of the key challenges confronting Mekorot is the quality of service at the Company. Mekorot is working to adapt to changing conditions, including the following: progressive improvement of service quality at corporate and public organizations, along with customers' expectations for outstanding professional service; a leap forward in technology in the private and public sector, greatly contributing to improved service and competition; and an evolving reality in which customers are more aware and social networks are more present, leading to increased demand for service to be delivered to customers efficiently, through technological means, as in other service sectors in the economy.

Accordingly, Mekorot is conducting a significant process, led by the Customer Relations and External Parties Unit, in which it is adopting the perception of the consumer as a customer, and working to instill norms concerning the service concept, operational efficiency, and technological tools for customers. The new service concept positions customers as active partners in the activity of the Company and enables them to receive the information and services they need quickly and easily.

Mekorot has approximately 5,000 customers, including consumers, private producers, laboratory

customers, and external parties that request one-time or ongoing work from the Company. Laboratory customers receive water quality testing services from the Company's laboratories. Each district has its own clients; customer service is provided at the level of the operational district, and reported to headquarters.

**Initiatives and processes promoted by Mekorot for fair, transparent action and stronger customer relationships:**

- > Dialogue and proactive communication with customers.
- > Surveys to measure the customer experience.
- > Roundtable meetings to share information about the Company and understand customers' needs.
- > Mapping of customer interface processes.
- > Adaptation of services to the business environment and to customers' needs, and improving the accessibility of service to customers and the general public.
- > Development of infrastructures, tools, and systems for access to information, documenting contacts, and conveying messages to customers.

A first-of-its-kind customer satisfaction survey was conducted at Mekorot in 2021 to measure customers' satisfaction with the services provided by the Company

- > Creation of a new website to make information accessible to customers of the Company.
- > Operation of the digital system Tamar for infrastructure coordination, allowing users to contact the responsible function online, through the Mekorot website or the Ministry of Transportation website.
- > Digitization of processes and transition to smart forms.





# Community engagement

Empowerment of the community is a key element of the fundamental values of Mekorot, and of its activity in each of its core areas. Mekorot believes that the community is an essential partner in promoting a sustainable reality, and views the public as having a vital role in coping with environmental challenges. The Customer Relations and Corporate Responsibility Unit, which is responsible for this area, has set a goal of strengthening and developing relationships with stakeholders of Mekorot, and promoting shared value in Mekorot projects. The Company promotes social activity in areas related to its core operations, creating value for the community and the environment, and raising awareness of the protection of the environment in general and water in particular. All of these actions form components of the value chain at Mekorot. We work to realize these values by harnessing the Company's resources; collaborating with a range of community elements; and carrying out long-term, annual, and ad-hoc projects.

## Environmental education

In view of the national challenges confronting the water sector in Israel, it is essential to constantly think ahead, including in the area of education. Over the years, in recognition of the importance and crucial role of education in the attainment of values-related objectives, we have taken action to raise awareness and increase knowledge regarding the environment and water, with a range

of academic and community partners, including:

- > **Educational activity for the holiday of Shavuoth:** An educational campaign at schools and preschools about the importance of water conservation.
- > **Professional conferences:** Participation in local and international conferences to present the activity of the Company (in the areas of water sector management, sustainable development, and more) and gain exposure to the many advanced technologies in the water industry.
- > **Social media:** Mekorot maintains professional pages on the social networks Facebook, Instagram, LinkedIn, and Twitter, to raise awareness of environmental and water-related issues.
- > **Visitor centers:** Our visitor centers are a way for us to connect with the community and consumers, and display the unique and advanced activities of Mekorot. The largest Mekorot visitor center has operated since 2009 at the Eshkol site. The center is open to the public free of charge and receives about 20,000 visitors annually, including children, retirees, and families. Mekorot also offers online tours, in line with the guidelines of the Ministry of Health. Virtual tours of the Company's sites, focusing on various topics in the water industry, are available to the public on social media.
- > **Academic research:** Promotion of research on water, in collaboration with research institutes and universities.







- > **Collaboration with academia:** Mekorot cooperates with various academic institutions and educational programs, including "ORT Braude", "Atidim Infrastructure", and "Atidim Industry", where employees provide individual and professional guidance to students. Most of these programs are located in peripheral regions. Experts from the Company also give lectures to students in various academic settings.
- > **Scholarships:** Outstanding engineering students are granted scholarships at the Technion and at Ariel College.
- > **Business collaborations:** We promote business activities with commercial companies, creating collaborations to promote technologies for monitoring and maintaining water quality and quantity for households, industry, and agriculture.
- > **Intra-organizational education:** To raise awareness among all employees of Mekorot, the Company holds online learning and dialogue sessions (webinars); sends out bulletins, tutorials, lectures, and instructional videos on sustainability and environmental issues; and distributes information to relevant employees regarding environmental and water content and conferences, according to their professional role at the Company.

Employee volunteering

In 2021, our employees volunteered and took part in a wide range of social activities in various fields: education in peripheral regions and in academia, assistance for people in need, raising awareness of water conservation, and more. As a government company, Mekorot is prohibited from making monetary or money-equivalent donations, or financing employee volunteering at the expense of work hours. The Company promotes community engagement activities within its work plans and in the form of employee volunteering (outside work hours), as well as through employees' initiatives.

5,799 total hours  
of volunteering by Mekorot  
employees in 2021

2.82% of Mekorot  
employees volunteered  
regularly, at 125 hours  
per employee on average

5.06% of Mekorot  
employees volunteered  
once, at 4.01 hours  
per employee on average



Future goals

- To issue an annual customer survey, beginning in 2022.
- To create a structured policy for community engagement.
- To centralize community engagement management under a single function at Company headquarters, overseeing all districts.





# Responsible Corporate Governance

75-85 →



Corporate responsibility is a key tool for Mekorot's management of its economic, environmental, and social impacts, encompassing all aspects of its business performance. This approach constitutes a way for the Company to develop and enhance its business advantages, in terms of efficiency, innovation, improved reputation, risk management, protection of water resources, and identification of new business opportunities. Mekorot is a government company operating under the responsibility of the Ministry of Energy and Water, the Ministry of Finance, and the Water Authority, and subject to laws and regulations pertaining to government companies in Israel. Sound corporate governance is an integral part of the organizational culture of Mekorot and a prerequisite in every area of its activity. It is also a vessel for risk management and for attainment of the Company's strategic objectives.

Mekorot is a government company operating under the responsibility of the Ministry of Energy and Water, the Ministry of Finance, and the Water Authority

9 board members

44% women on the board of directors

22% external directors

56% directors with accounting and financial expertise

39 board meetings in 2021

48 meetings of 7 board committees in 2021

Segmentation of directors by age:





# Structure of the board of directors

**A**t Mekorot, the identity and duties of the chairperson of the board of directors are separate from the identity and duties of the CEO, and the duties of the board of directors are separate from the duties of the officers of the Company. As Mekorot is a government company, the process of searching for members of its board of directors is under the responsibility of the relevant ministers, and the Company has no control or responsibility in this matter. The Government Companies Authority (hereinafter: the “**Companies Authority**”) has established an equitable team of directors, open to the public, with acceptance based on threshold conditions and predetermined criteria. A managerial core has been established for the Company, to ensure that directors are appointed who provide an appropriate response to the needs of the Company in terms of required skills, experience, and occupational diversity by population segment (religion and gender). As of the end of 2021, the board of directors of the Company consists of nine members, of which three are women. Two of the directors are external directors pursuant to Section 1 of the Government companies Law 1975 - 5735 (hereinafter: the “Companies Law”) who do not hold office at the organization. Five of the directors have accounting and financial expertise.

## Committees of the board of directors

› **Personnel committee** – Discusses salaries, benefits, perquisites, bonuses, and other employment terms of the CEO, Deputy CEO, VPs, unit managers, CFO, Internal Auditor, Corporate Secretary, and other officers, as determined by the ministers, after consultation with the Companies Authority, and of the other employees of the Company. The committee provides recommendations to the board of directors; its purpose is to make the discussions of the board more efficient and hold in-depth discussions of the

topics noted above, conclusions and recommendations of which are presented for approval by the board of directors.

- › **Finance and risk management committee** – Discusses and routinely monitors financial matters, including the Company's budget, debt write-offs, credit policy, and funding; also serves as the committee designated to oversee risk management. The committee provides recommendations to the board of directors; its purpose is to make the discussions of the board more efficient and hold in-depth discussions of the topics noted above, conclusions and recommendations of which are presented for approval by the board of directors.
- › **Audit committee** – Routinely discusses internal audit reports of the Company. Duties: approval of the annual internal audit plan; approval of transactions with interested parties; contractual engagement of the Company with directors regarding the terms of their service, including exemption, insurance, commitment to indemnity, or indemnity pursuant to permission to indemnify; contractual engagement of the company with its directors regarding the terms of their employment in other roles; decision regarding the procedure for quality assurance of internal audit (an external procedure); approval of termination of the service of the Internal Auditor.
- › **Planning, development, and operations committee** – Routinely monitors the development plans of the Company and project execution status; routinely monitors assets at the Company; and discusses topics pertaining to planning and operations. The committee provides recommendations to the board of directors; its purpose is to make the discussions of the board more efficient and hold in-depth discussions of the topics noted above, conclusions and recommendations of which are presented for approval by the board of directors.

- › **Balance sheet committee** – Serves as a subcommittee of the board of directors; examines the financial statements and formulates recommendations regarding the approval thereof for the board of directors. This committee is not the audit committee of the board of directors.
- › **Remuneration committee** – Discusses salaries, benefits, perquisites, and bonuses of senior officials at the Company, subject to the compensation policy approved by the board of directors. The recommendations and conclusions of the committee are presented to the board of directors for approval.
- › **Technology committee** – Discusses all technological matters at the Company. The committee also discusses investments in technological ventures (startups), and monitors the progress of technological developments and systems developed or implemented at the Company.

## Composition of the board of directors

As Mekorot is a government company, the processes of searching for and appointing directors are performed by the responsible ministers – the Minister of Finance and the Minister of Energy and Water – and through the Companies Authority. The ministers are charged with selecting candidates who meet the requirements of the Companies Law, which sets threshold conditions, and who are in the pool of directors established by the Companies Authority. The directors should also be aligned with the characteristics of the managerial core established for the Company by the Companies Authority, which requires a representative with financial skill and a representative with background in infrastructure management. The directors are screened by an appointment examination committee, which reviews their experience, education, and political affiliation.





Mekorot has a formalized onboarding process for directors, derived from a circular of the Companies Authority, to enable new directors appointed to the board to become familiar with the Company as quickly as possible. In accordance with the circular, Mekorot ensures that, upon appointment, members of the board of directors and senior management members receive the necessary information and tools regarding all activities of the Company. Towards that end, the appointees meet with a series of relevant parties at the Company and receive a director's file containing all of the basic information and data they require to begin their role in the best and most professional manner.

The board of directors elects committee members based on their skills and the qualifications required for each committee.

## Remuneration of executives and officers

Mekorot, as a government company, is subject to the laws and regulations applicable to government companies. Pursuant to the law, the government has established rules and procedures for the salaries and employment terms of CEOs and senior executives at government companies and subsidiaries, which form the guidelines for the board of directors, the management of the Company, and the Companies Authority in approving arrangements in these areas.

The remuneration policy document concerning the terms of service and employment of the officers of the Company was prepared in accordance with the provisions of the Companies Law and the Companies Regulations (Reliefs in Connection with the Obligation to Establish a Remuneration Policy), 5773-2013. The remuneration policy document aims to define, describe, and specify the Company's policy with regard to the remuneration of its officers, including the

extent and components of such remuneration, within the applicable law. The remuneration policy was prepared with due attention to the nature of the Company, among other matters, as a government company and as a bond company (as defined in the Companies Law). The considerations, principles, and metrics established in the remuneration policy are based on the Company's objectives, with the aim of improving its performance by creating a correlation between the extent of achievement of the Company's objectives and the remuneration of its senior employees; retaining quality officers able to cope with the challenges the Company faces; and encouraging excellence at work. During the course of 2020, an updated remuneration policy was formulated with respect to the terms of service and employment of officers at the Company. At the date of publication of this report, the resolution to approve the policy has not yet been passed. In general, employment agreements of senior executives at government companies are grounded in a senior executives' contract with a uniform format. With regard to senior executives' pay, the Ministerial Committee on Wages has determined that the terms of employment of senior employees are to be based on a contract, established in coordination with the Companies Authority. This policy provides a regulated option for clawbacks of remuneration received under certain conditions. However, some senior executives at Mekorot are employed under a collective labor agreement. The remuneration policy applies to officers of the Company who are employed under individual employment agreements, excluding provisions specified in the policy that apply to officers employed under a collective labor agreement; all of the foregoing excludes provisions stated to apply to certain officers, as specified therein.

Part of the remuneration policy is a remuneration model, grounded in a circular of the Companies Authority concerning

principles for a remuneration and incentive model for senior employees of government companies, as of 2015. The remuneration model, which is approved annually by the board of directors, is based on remuneration of employees based on the performance of the Company and their individual performance. Retirement arrangements and severance pay are regulated in accordance with the provisions of the law.

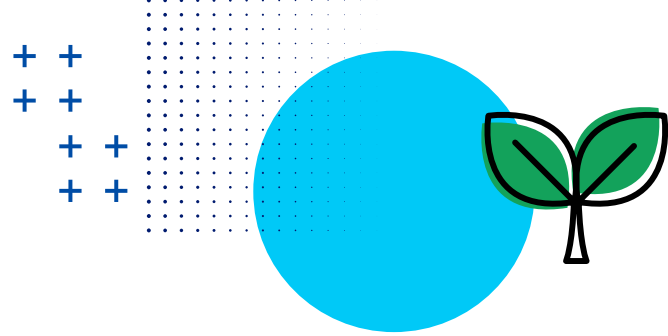
## Wage gaps and remuneration of members of the board of directors

In 2021, the ratio of the annual pay of the CEO of the Company to the median cost of remuneration of all other employees (excluding the CEO) stood at 3.26; the ratio of the annual pay of the CEO to the average cost of remuneration of all other employees was 3.46. These ratios were 2.79 and 2.81 respectively in 2020<sup>27</sup>.

Remuneration is granted to members of the board of directors in accordance with the Government Companies Regulations (Compensation and Expenses for Directors from the Public at Government Companies), 5754-1994. Thus, compensation and reimbursement of expenses are performed pursuant to the law. In 2021, the total amount of the compensation of directors at the Company was approximately NIS 216 thousand. In 2020, by contrast, the total amount of the compensation of directors at the Company was approximately NIS 327 thousand.

<sup>27</sup> The gaps arise from the payment of excellence bonuses to senior executives, approved by the board of directors and the Companies Authority, for the two years 2019 and 2020.





## Mechanisms for contacting the board of directors

Mechanisms for sending feedback and recommendations from employees to the board of directors are established by regulatory rules of the Companies Authority. The state is the only shareholder of Mekorot; Mekorot is controlled through the appointment of the members of the board of directors by the responsible ministers. Employees can contact the board of directors through the Corporate Secretary, or contact the chairperson of the board of directors directly, without mediation. The management tier at Mekorot consists of people who have risen through the ranks from the field, and encourages direct communication and employee engagement. Employees are requested and required to report immediately on incidents of suspected impairment of corporate governance, any matter pertaining to suspected fraud or theft, or any failure to comply with the law or with Company regulations. In any case of doubt regarding the completeness or accuracy of information transmitted at the Company, the matter must be reported to the supervisors and to the responsible parties.

## Prevention of conflicts of interest

The CEO and the chairperson of the board of directors are appointed in accordance with the law and the guidelines of the public committee for the examination of appointments. The committee is charged with, among other matters, examining and preventing conflicts of interest. All officers of the Company sign a certification of avoidance of conflicts of interest. Mekorot upholds moral conduct and integrity. Employees of the Company are required, through its code of ethics, to avoid actual or apparent conflicts of interest. Private employment of subordinates, suppliers, or any party with a working relationship with Mekorot in any form beyond their work-related engagement is prohibited.

## ESG aspects in the board of directors

Sustainable development is separately audited and addressed in discussions of management and the board of directors. ESG is under the managerial responsibility of the Customers and External Parties Unit, which was established in the course of the restructuring. The unit is working to formulate a dedicated ESG strategy, as described above, and continually examine the environmental, social, and economic impacts of the Company on its stakeholders. The head of the unit reports to the VP of Development and Customers, and submits periodic reports on the activity of the unit to management and the board of directors. The board of directors addresses environmental and social issues in

the course of its routine work and in the context of the Company's annual goals. Exceptional events, including events and hazards with environmental impacts, safety incidents, and more, are reported immediately to the board of directors. Through its committees, the board of directors is also engaged with processes pertaining to ESG aspects at the Company, such as approval of the ESG report; occasional renewal of the code of ethics; energy efficiency; preparation for climate change, particularly preparing to supply water during droughts, earthquakes, and emergencies; procedures for participation by the public and for the community relations of the Company; and establishment of a team to manage climate risks.





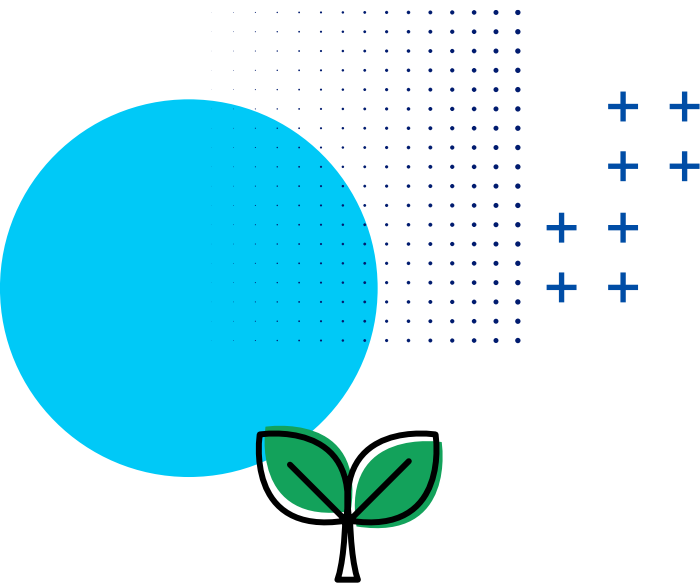


### Risk management and internal enforcement programs

An annual discussion is held to examine the activity of senior management in terms of economic, environmental, and social aspects, as part of the risk management and identification procedure. The Company is working to implement an enterprise risk management (ERM) system, and has appointed a higher committee on risk management. The committee convenes frequently to discuss the overall risk-management system of the Company, led by the Risk Management Unit and headed by the CEO. Discussions are also held by the finance committee, which has adopted working procedures aimed at instilling norms of compliance with the Companies Law and the Securities Law at the Company, thereby reducing the exposure of the Company, its managers, and its employees to potential risks. To embed and implement the enforcement program, a supervisor of internal enforcement has been appointed to oversee the implementation of the plan and apply controls through various mechanisms. Environmental risk is a corporate risk to which a risk-management procedure is applied. In this procedure, risks material to the Company's operations are identified and assessed, as a tool for decision-making, risk mitigation, improvement of performance, and utilization of opportunities to create shared value for the Company and its stakeholders. In 2021, the Company's management also approved an environmental compliance and enforcement plan, as well as internal plans on safety, cybersecurity, and self-licensing<sup>28</sup>.

<sup>28</sup> Self-licensing – as a company primarily engaged in development of structures and infrastructures, Mekorot established a self-licensing committee to supervise internal processes in which construction permits are issued, in order to ensure that the Company complies with the provisions of the Planning and Construction Law and the derived regulations.

In 2021, the Company completed a risk survey dedicated to safety, cybersecurity, self-licensing, securities, prevention of embezzlement and fraud, and prevention of bribery and corruption



## Business continuity

Mekorot works continually to maintain functional and business continuity, so that it can ensure a continuous supply of high-quality water. The Company is prepared to respond to emergencies that may affect the security of the water supply, such as war, earthquakes, epidemics, cyber attacks, tsunamis, severe weather events, and water source contamination and poisoning.



The management of the Company performs situational assessments and acts to allow continuous operation and business continuity, with an emphasis on the integrity and quality of the water supply. Management examines the potential impacts of the Covid-19 outbreak, from time to time, and acts according to four key goals established when the pandemic began:

- > Maintaining continuous functioning and business continuity.
- > Protecting employees' health and safety.
- > Maintaining resilience through occupational security and care for the individual.
- > Continuing to execute development plans.

At the publication of this report, the Covid-19 has no material effect on the Company's output, and there have been no material changes or disruptions of business operations at Mekorot. Mekorot adjusts Covid-19 guidelines for its employees and contractors in accordance with the up-to-date guidelines of the Ministry of Health and the Israeli government. As a highly essential company in the Israeli economy, Mekorot adheres diligently and strictly to these guidelines.



# Ethics and prevention of corruption

**A**s a national company, working to secure the water sector in Israel, Mekorot has the obligation and responsibility to conduct its business in a values-driven, moral manner. The code of ethics of Mekorot, first formulated in 2010 and renewed in 2020, presents the system of values, standards, and principles that guide the Company in all of its actions. The code establishes the vision, mission, and behaviors expected of all employees at the Company, and is designed to guide Mekorot employees and management to appropriate values-driven conduct in their interactions with all stakeholders. The guiding values of the Mekorot code of ethics include the national mission, a quality available water supply, professionalism and reliability, cooperation and mutual respect, and sustainable development.

## Instilling and publicizing the code of ethics

The code is available to all stakeholders on the Company's website. The code is also accessible to Mekorot employees through the organizational portal; employees periodically receive communications on this subject, with the contact information for the ethics committee. Every new employee joining Mekorot reads the code of ethics and signs a commitment to act in accordance with the code. All new employees participate in training on this subject as part of their orientation days. Ethics issues discussed by the ethics committee are also communicated through newsletters.

The ethics supervisor, who heads the ethics committee, and ethics trustees are at employees' disposal. The ethics committee is charged with promoting and cultivating ethics at the Company, among managers and employees. The committee initiates, encourages, and drives ethics discourse at the Company, including through discussions of ethics dilemmas, primarily brought to it by employees, and suggestions for resolutions based on the code of ethics. Human-resources managers at the districts and the Human Resources Department at the headquarters of the Company are authorized as ethics trustees and charged with instilling and cultivating ethics at the Company.

## Mechanisms for reporting and addressing ethical issues

The Corporate Secretary is the head of ethics for the organization and the head of the ethics committee. Employees can contact the head of ethics, openly or anonymously, through a designated email inbox<sup>29</sup> posted on the Company's website, in the code of ethics, and on the organizational portal. There are also physical mailboxes at the Company's sites and headquarters where messages can be submitted. Messages are handled based on ordered mechanisms, according to topic. Where there is no existing mechanism for a topic, the message is examined with the Internal Auditor of the Company.

In 2021, **4** inquiries regarding ethics were received compared to **5** inquiries in 2020

In 2021, approximately **64%** of the employees of the Company completed a tutorial on the prevention of fraud and embezzlement, bribery, and corruption, and specifically the prevention of conflicts of interest

No incidents of embezzlement by employees were discovered in 2021

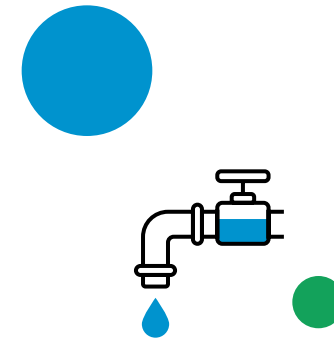
<sup>29</sup>The Ethics mailbox, at [ethics@mekorot.co.il](mailto:ethics@mekorot.co.il)



## Preventing bribery and corruption

Mekorot is a government company that conducts extensive business operations, and is committed to upholding the law and sound practices. The Company performed a survey of embezzlement and fraud risks to examine and assess risk factors in this area. A compliance plan in the areas of embezzlement and fraud, bribery, and corruption was formulated and approved by the board of directors. The plan, which includes a set of procedures, guidelines, and work processes, is designed to ensure that the Company takes the necessary active measures to secure compliance by all employees of the organization with the provisions of the law in the areas of embezzlement, fraud, bribery, and corruption.

The plan emphasizes the Company's zero-tolerance policy for breaches in these areas, and specifies mechanisms for instilling the relevant guidelines and oversight systems. The Risk Management Unit also applies financial controls in various processes, including examination of the separation of roles in authorizations to access critical systems. In the event of suspected embezzlement and/or a bribery and corruption incident, several reporting channels are available to employees, in accordance with the enforcement plan: an anonymous hotline contacted via email, or a message to their personal supervisor, the Internal Auditor, or the Compliance Officer, who is responsible for this program.



## Future goals

- To send the code of ethics to employees, who will read and sign it annually, as part of the process of familiarization with the Company's new code.
- To formulate a new tutorial on the code of ethics and distribute it to employees.
- To translate the code of ethics into English and post it on the Company's website.
- To gain greater insight on the prevention of bribery and corruption through a dedicated tutorial for employees.

## Compliance with regulation

**T**he policy of Mekorot is to comply with all legal provisions, laws, guidelines, regulations, compacts, and standards that are in effect, and to strive to attain standards beyond the required level, to the extent possible and appropriate.

As a government water company, Mekorot is required to comply with a series of rules applicable to the entire supply chain of water for residents of the State of Israel, in every core area of its activity, as well as with binding rules for the protection of employees and stakeholders of the Company. Regulatory requirements vary over time, and generally tend towards stricter standards. To meet these requirements, the Company is aided by and develops the best feasible technologies in professional, economic, environmental, and safety terms. For further information, see Note 24 to the Periodic Report of Mekorot for 2021. As part of its routine operations, Mekorot makes essential use of hazardous materials, to restore water drilling sites, in water treatment plants, and in disinfection. The use of toxic substances may cause hazardous events and environmental harm; Mekorot therefore operates in accordance with the Hazardous Materials Law, and stores and uses hazardous materials according to a toxic substance permit. Each district, the Jordan region, the central laboratory, and the Shafdan Unit have valid toxic substance permits, and work to comply with the terms stated in the permits and renew the permits regularly.

**As of 2021, no sanctions or fines have been imposed on Mekorot for failure to comply with environmental rules and regulations.**



# Responsible supply chain

**M**ekorot, as a government company, conducts its purchasing processes in line with the requirements of the law and of the Tender Regulations. Purchasing and tenders are primarily managed by the Goods Procurement, Logistics, and Inventory Unit and by the Services Procurement and Tenders Unit. Purchasing at Mekorot is principally designated for development activity and projects, as well as for routine maintenance and operations activities: pipeline and drilling equipment, pumps and pumping equipment, engines, transformers and electrical equipment, taps and valves, electronics and computers, software, measurement equipment, filters, quality improvement materials, and more. **In 2021, goods purchased reached approximately NIS 650 million.**

The Mekorot code of ethics is sent to service providers and suppliers, in every contractual engagement; they are required to uphold the code and the values that guide Mekorot: professionalism, reliability, transparency, integrity, and mutual respect.

Mekorot regularly applies controls to examine the quality of manufacturing, products, and purchased goods received.

## Promoting a responsible supply chain

- › **Supplier preference** – In accordance with the Required Tender Law, Mekorot grants precedence to domestic purchasing (made in Israel), and regularly examines its threshold conditions to enable small and mid-sized businesses to participate in its tenders. Mekorot also prioritizes businesses owned by women.
- › **Green purchasing** – In procurement and tenders, the Purchasing Unit examines green criteria aimed at minimizing the environmental impacts of the Company's operations. Key parameters examined include the energy efficiency of electrical products such as pumps and vehicles, to reduce consumption of electricity and fuels at the Company, thereby reducing air emissions.







- **Employment conditions oversight** – As part of its responsible supply-chain management, Mekorot occasionally conducts reviews of its suppliers to ensure that contractors operate in line with the requirements of the law and maintain ethical conduct, and that all rights of contractor employees are protected. As part of these reviews, internal payroll staff examine payroll data for security guards and cleaners; if a staffing contractor is found to be in breach of legal requirements, the Company terminates its engagement with the contractor. Mekorot also conducts surprise inspections at activity sites to ensure that the work is in compliance with procedures.
- **Prevention of bribery and corruption in the supply chain** – Before issuing a tender, Mekorot examines the economic structure of the transaction to estimate the prevalent cost of the service. Within due-diligence testing of suppliers and contractors, Mekorot examines the identity of the owner of the account receiving the payment. In addition, the Company has its major suppliers sign a statement declaring that they have no prior convictions. In all public tenders, contractors submitting a bid must declare that they have no convictions, have no conflict of interest, comply with labor protection laws, protect workers’ rights (in security guard and cleaning tenders), maintain work safety and hygiene, and more. Mekorot is committed to acting ethically and preventing bribery and corruption incidents throughout its supply chain. Accordingly, every contract between the Company and a supplier has a clause requiring the contractor to be familiar with the code of ethics and referring the supplier to read the code. The new code of ethics, released in 2021, has an expanded section on suppliers and a new chapter, “Relationships with suppliers and contractors.” In engagements involving material monetary amounts, the code of ethics is sent directly to the suppliers, who must report reading the code by return email.

## Promoting shared value in the supply chain

Within its promotion of a "shared-value" policy, Mekorot promotes many engineering initiatives with its suppliers throughout the supply chain. Our goal is to help entrepreneurs develop a quality product that is also aligned with the Company's needs.

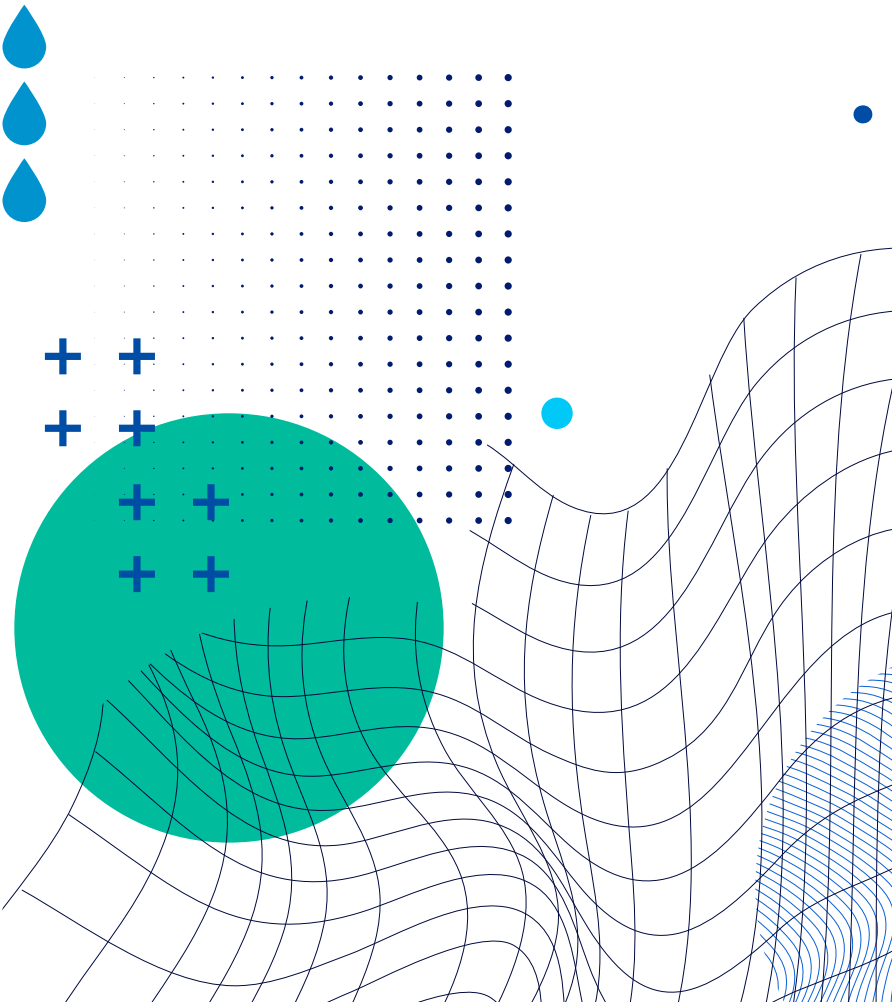
**Promoting entrepreneurship** – As part of the activity of the Innovation Unit, Mekorot releases lists of its needs. Entrepreneurs submit proposals for solutions and collaborations based on the list. After a rigorous screening procedure, accepted proposals are tested at Mekorot sites with the required experiments. At the conclusion of this process, the solution may be used by Mekorot, or alternatively the supplier may market it as a solution for the international water industry. This initiative offers the supplier/partner continuous unmediated contact, which shortens the experimentation phase for the project and raises its chances of success in the international water sector, and at Mekorot specifically.

**Water quality improvement** – Within the activity of the Water Quality Unit at Mekorot, the Company performs quality tests for suppliers of chemicals. Based on the findings, the suppliers implement various recommendations of Mekorot to improve the quality of the chemicals and adjust them to regulatory requirements.

**Sustainable development** – Laying infrastructure for pipelines involves the use of steel, which has a long lifetime of decades, but is fully recyclable. When digging to lay pipelines, Mekorot aspires to use local materials to cover the dig site, minimizing mileage and transport of imported materials.

**95%** of orders placed in 2021 were "Blue and White" purchasing (made in Israel)

**8%** of orders placed in 2021 were categorized as "green purchasing"



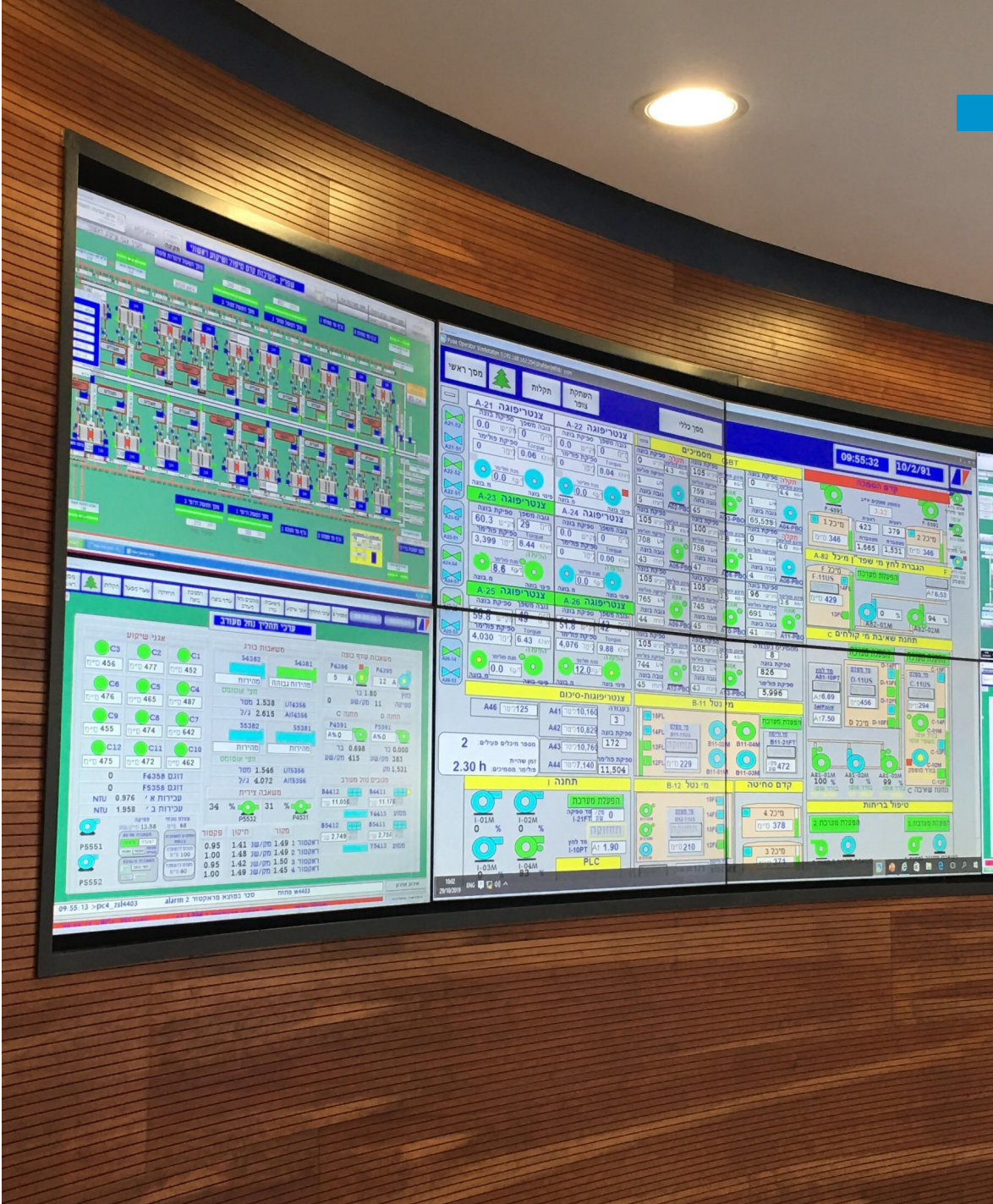


# Information security

Mekorot, as an infrastructure company, operates information systems and command and control systems deployed nationwide, at its facilities and control centers, and uses administrative information systems to support its routine operations and the achievement of its objectives. These nodes pose a risk of damage to information security by hostile parties, which could harm the routine activity of the Company. Mekorot protects its systems against such threats, which have mounted in recent years, and works to improve and enhance its defenses and information security, on several levels, including the establishment of a national cybersecurity center to monitor and address cybersecurity incidents on the Company's networks; raising the level of information security in critical systems; implementing advanced solutions and technological tools; acting to continually publicize and raise awareness of this issue among employees; and more. As a government company, Mekorot receives assistance for its control systems from the Israel Police and the Israel National Cyber Directorate. Mekorot also operates in accordance with an information-security policy and invests extensive resources in mechanisms for backups, information security, and electronic and physical defense of its sites. The Company operates DPR alternate systems and backups for its communication systems, to allow operational continuity during a shutdown. Pursuant to regulatory approval, Mekorot plans to develop its cyber defense and implement an information-security program at a cost of approximately NIS 10 million per year, over a period of five years.

**In 2021, Mekorot was in compliance with the ISO 27001 standard for information security and cyber defense.**

- Initiatives for defense against information-security threats:**
- Raising awareness among employees.
  - Preparing and practicing procedures.
  - Installing technological means and information-security systems to improve cyber attack discovery, identification, and prevention capabilities.
  - Expanding SOC (system and organization controls) capabilities.
  - Enforcing password and authorization policies.
  - Conducting Internal and external audits.
  - Replacing information systems used over a long period with new systems aligned with needs, according to the guidelines of the Israel National Cyber Directorate.



## Future goals

- To raise awareness of cybersecurity risks through training, certification, lectures, management drills, phishing drills, etc.
- To run resilience tests on new and renewed applications.
- To provide information-security guidelines for new projects, purchases, and development.
- To write and update information-security and cybersecurity procedures.
- To expand SOC (system and organization controls) capabilities.





# GRI and ESG Index

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# GRI index

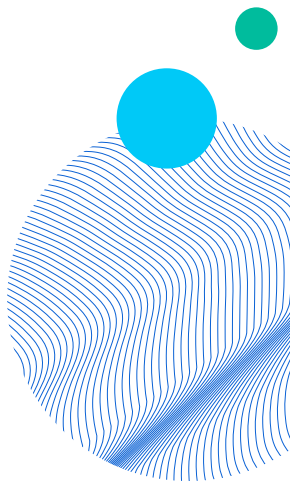
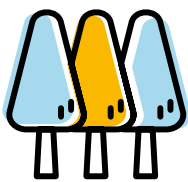
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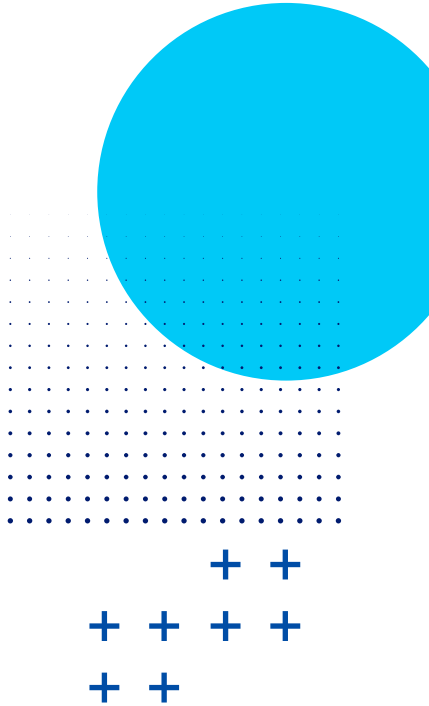
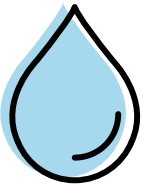
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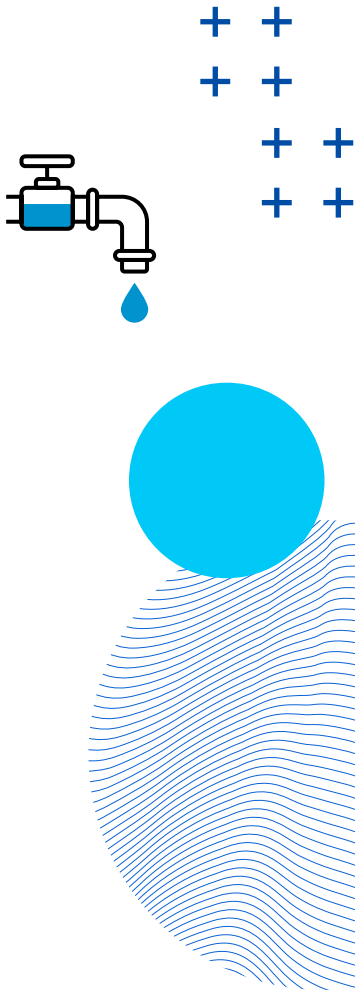
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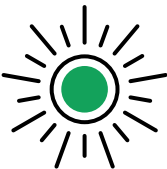
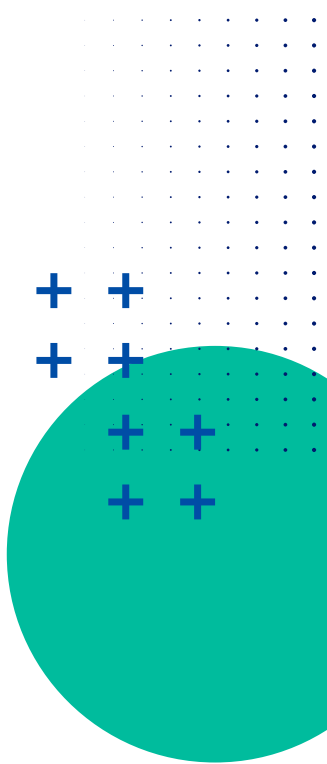
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	306-4	Waste diverted from disposal	N/R
	306-5	Waste directed to disposal	N/R







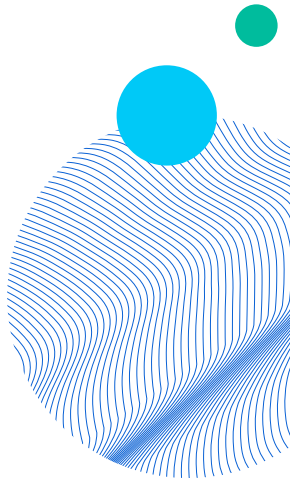
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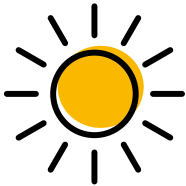
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# Numerical Data Annex

## Environment

Parameter examined	2019	2020	2021
Production and extraction <sup>30</sup>			
Total water supplied (MCM)	1,637	1,659	1,792
Quantity of freshwater supplied (MCM)	1,213	1,246	1,347
Quantity of brackish water supplied (MCM)	144	143	143
Quantity of effluent water supplied (MCM)	280	266	303
Quantity of desalinated water acquired (MCM)	679	613	559
Electricity production from renewable sources (MWh) <sup>31</sup>	9,008	15,920	14,688 <sup>32</sup>
Energy and emissions			
Consumption of self-produced green energy (MWh)	9,177	18,912	17,886
Consumption of electricity from private electricity producers (MWh)	6,342	963,100	906,952
Total electricity consumption by Mekorot <sup>33</sup>	2,041,800	2,262,400	2,409,800
Gasoline consumption for transportation (L)	1,000,000	808,315	822,282
Diesel fuel consumption for transportation (L)	2,000,000	1,845,730	1,784,643
Diesel fuel for generators (L)	285,743	316,341	396,500
Total fuel consumption by Mekorot	3,285,743	2,970,386	3,003,425
Ratio of fuel consumption to quantity of water supplied (MWh/MCM)	1.17	1.24 <sup>34</sup>	1.24

<sup>30</sup> Data are reported excluding data on the Shafdan, in line with the data for 2021

<sup>31</sup> Data refer to solar-power systems and hydroelectric turbines

<sup>32</sup> A decrease occurred in these figures in comparison to data reported in 2020, due to a decrease in the operation of turbines as a result of a malfunction in Kfar Yehoshua, which has been repaired

<sup>33</sup> Changes in electricity consumption result from variations in water sources (the ratio supplied from the Kinneret Sea, groundwater, or desalination). The data do not indicate a change in trend; they are consistent with expected cyclical variation in energy consumption (usually correlated with annual precipitation quantities)

<sup>34</sup> The increase in 2020 resulted from growth in water production from the Kinneret Sea following rainy years, which requires high energy consumption



Social

Parameter examined	2019	2020	2021
Employee data			
Number of employees	1,574	1,576	1,576
Employee turnover (%)	3	1.8	1.8

	Women	Men	Women	Men	Women	Men
Sick days	5,228	7,623	2,101	5,056	3,954	9,356
Vacations	5,577	18,652	4,493	17,530	7,267	22,060
Reserve military duty	15	949	56	643	8	756
Personal events	170	495	130	434	173	701
Deceased employees	0	2	0	2	0	0
Total	10,990	27,721	6,780	23,665	11,402	32,873





Economic – corporate governance

Parameter examined	2019	2020	2021
Economic value of the Mekorot Group (at the end of the reported year)			
Revenues	4,651	4,665	5,030
Cost of sales and works	(4,146)	(3,949)	(3,980)
Net profit	61	209	386
Total assets	16,784	17,659	19,492
Salaries, labor wages, and related expenses	785	741	729
Payments to the government – tax expenses (income)	37	63	54
Employee benefit liabilities	718	696	698
Scope of development projects	1,422	1,465	1,687
Scope of development projects by added property each year	673	1,102	1,057





## Disclaimer

This ESG report does not constitute part of the financial, immediate, or periodic reports of Mekorot. This report contains forward-looking statements (pursuant to the Securities Law, 1968), including expectations, forecasts, objectives, goals, estimates, and plans pertaining to the activity of the Company.

The statements presented in this report reflect the assessment and statement of intent of Mekorot during the period in which the report was written, and are subject to changes and updates. All of the information and data presented in this document reflect data regarding the activity of the Company as at the date of publication and to the best of the Company's knowledge. This document may contain estimates, omissions, generalizations, errors, and/or inaccuracies.

In any case of conflict or discrepancy between the information presented in this report and the information appearing in the public financial statements of the Company posted on the website of the Israel Securities Authority and the Tel Aviv Stock Exchange, the information in those publications shall prevail.







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