



THE ISRAEL  
FORUM FOR  
AGRIVOLTAICS

# A Status Report on Agrivoltaics in Israel

2026

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## 01. Overview

This report details the activities of the Israeli Forum for Agrivoltaics and outlines Israel's key agrivoltaic (APV) trends in 2025. Designed for the public and decision makers, the report maps key stakeholders, reviews Forum initiatives, and forecasts strategic challenges and opportunities.

The Forum is a joint initiative of the Ministry of Agriculture and Food Security, PAI Fund, Yad Hanadiv, JCT, The Heschel Center for Sustainability – NZO Project, the Israel Innovation Institute, and GrowingIL. The Forum works to advance food and energy security, strengthen agricultural profitability, and safeguard open spaces, while establishing Israel as a global leader in research, development, and implementation of agrivoltaic solutions.

The Forum works to identify and remove key barriers, promote opportunities, practical solutions, and fosters collaboration among diverse stakeholders while promoting supportive policy. As part of its activities, the Forum established task forces with key representatives from government ministries, research institutions, the agricultural sector, and other industry stakeholders.

These task forces work together to advance the sector across four core focus areas:



The Ministry of Agriculture and Food Security activity focuses on creating a knowledge infrastructure, promoting research models, and ensuring implementation that preserves productive agriculture adapted to climate change. This includes developing multidisciplinary partnerships and establishing a sustainable regulatory framework.

The report's findings indicate significant potential for expanding Israel's agrivoltaics industry, highlighting its contribution to the agricultural sector, the national economy, and the environment. Key recommendations include strengthening collaboration between research, regulation, and industry; promoting models for applied research; continuing the development of supportive policies including clear economic incentives; and implementing a national potential map for Agrivoltaics. Furthermore, to strengthen the agricultural sector, the report recommends advancing incentivized work methods within the "optimal agriculture" assessments, as defined by National Outline Plan 1/24.



## Foreword



**Michal Levy (Ph.D)**

Chief Scientist, Ministry of Agriculture & Food Security

*Agrivoltaics presents a unique opportunity to integrate productive, sustainable agriculture with efficient, renewable energy production. This synergy represents a strategic move of national importance for the State of Israel as it navigates land scarcity, climate volatility, and the escalating need for food and energy security.*

*The Ministry of Agriculture and Food Security views the Israel Forum for Agrivoltaics as an innovative, collaborative model for promoting knowledge-based policy. By connecting diverse stakeholders, the Forum facilitates a professional discourse that bridges the gap between academic research, field execution, and regulatory frameworks. This broad collaboration is essential for building a shared knowledge infrastructure, mitigating barriers, and reaching informed decisions that balance the requirements of the agricultural sector, the energy industry, and rural communities.*

*This status report summarizes the state of the industry as of 2025, providing a comprehensive overview of policy and regulation, electrical infrastructure, international trends, and site mapping. It further includes an ecosystem map identifying the primary players within the Israeli agrivoltaic sector. The report has been published to increase industry transparency, strengthen the local market, and encourage strategic collaboration among all relevant parties.*

*The promotion of Agrivoltaics is an integral component of the effort to ensure a prosperous agricultural future. By preserving agricultural land and implementing cutting-edge innovation, we continue to serve the strategic needs of the state and provide for future generations.*



Credit: Photographed at Ma'ale Gilboa



## Yael Harman (Ph.D)

Head of R&D, the Chief Scientist Office,  
the Ministry of Energy & Infrastructure



*The field of agrivoltaics in Israel emerged from a simple yet strategic understanding: in a small, densely populated, and sunny country, we cannot afford to choose between food security and energy security, we must produce both.*

*Following the Government Resolution to expand renewable energy targets, the Ministry of Energy and Infrastructure and the Ministry of Agriculture and Food Security launched a pioneering inter-ministerial effort to advance agrivoltaics (APV) in Israel. From the outset, it was clear this was an emerging field even on a global scale, with scientific, agricultural, engineering, environmental, and economic knowledge still evolving and no proven model to replicate. Israel therefore chose not to wait for absolute certainty, but to move forward cautiously, learning through implementation and taking a calculated risk together.*

*What makes the Israeli approach unique is that APV has not been promoted solely as a renewable energy solution, but as a dual use model that preserves agriculture, protects open spaces, strengthens farmers' economic viability, and enables clean distributed energy generation.*

*However, for APV to function as a true dual use model, ongoing research is still required. In the energy domain, this includes advanced solar panel technologies, maintenance, dynamic shading, system optimization, and integrated energy and crop management. At the same time, agricultural and environmental research is needed to better understand impacts on crop yield, water consumption, soil health, biodiversity, and adaptation to different crops and cultivation methods. Only a combination of academic research, innovation, and commercial experimentation will allow APV to realize its full potential in both electricity generation and agricultural output.*

*Since 2020, the Ministry of Energy and Infrastructure has supported approximately 19 APV research projects in academia and industry, with total funding of around 10 million NIS, alongside a national pilot program comprising approximately 140 plots. In 2025 alone, the Ministry supported 6 projects, including quantum dot PV technology, PV cleaning solutions, robotics, PV systems adapted for Jojoba cultivation, and mobile APV systems. This reflects a clear understanding: without a local knowledge base adapted to Israel's climate, crops, electricity grid, and agricultural structure, APV cannot expand responsibly.*



The Ministry has also played a central role in shaping the planning and regulatory framework for APV in Israel, including the approval of National Outline Plan 24/1. The framework enables responsible nationwide deployment while preserving open spaces and agricultural land. It also introduced statutory mechanisms, including a requirement that 5 percent of commercial facilities larger than 100 Dunams<sup>1</sup> be dedicated to research areas, ensuring that commercial expansion continues generating public and scientific knowledge. The Ministry is also advancing planning easements for APV facilities, including joint ventures on agricultural land, conversion of ground mounted solar quotas into APV quotas, and expansion to grazing lands.

On the economic front, the Ministry's Sustainable Energy Division is leading efforts with the Ministry of Finance and the tax authority to establish exemptions and incentives for APV facilities, including a broad exemption from betterment taxes if active agricultural cultivation is maintained.

Early insights from the pilot and regulatory process point to a clear challenge: the transition from small pilot plots to large commercial facilities is expected to face infrastructure, regulatory, technological, and operational barriers. These include grid constraints, transformer limitations, limited connection points, panel maintenance above cultivated land, and the integration of agricultural machinery within APV systems.

APV is not just another solar niche, but a test of Israel's ability to manage land, agriculture, energy, water, and grid infrastructure in an integrated way. The next challenge is to move from POC to a scalable and sustainable model based on real world data, ongoing research, economic viability, and infrastructure capable of supporting broad deployment.

Because the field is still evolving globally, Israel has a real opportunity to lead. But leadership will be measured not by declarations or approved land area, but by the ability to establish long term systems that generate electricity, preserve active agriculture, integrate into the grid, and generate valuable professional knowledge. If research, regulation, planning, infrastructure, and entrepreneurship are connected effectively, APV can evolve from a pioneering initiative into a national model and a valuable Israeli knowledge asset on the global stage.

1. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

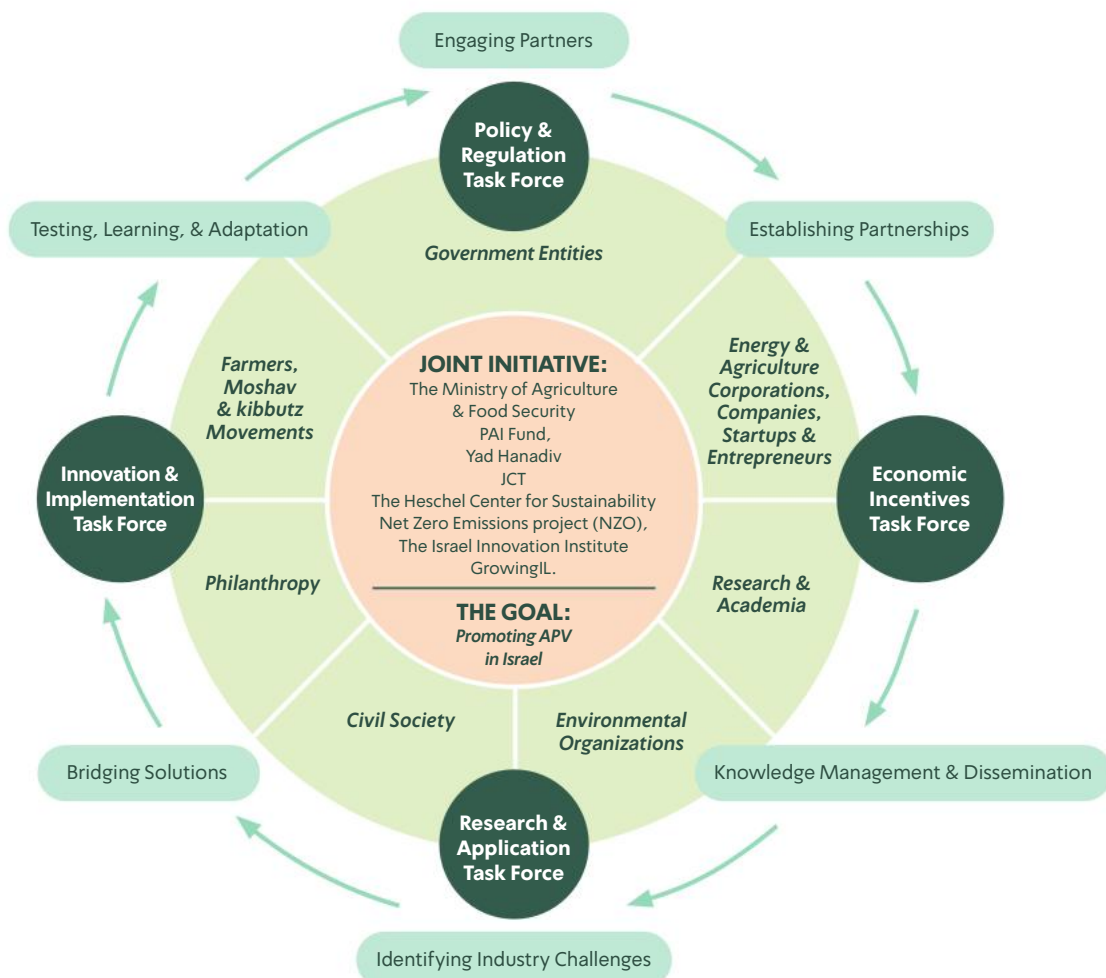
## 02. Background

### 2.1 The Israel Forum for Agrivoltaics

The Forum is a joint initiative of the Ministry of Agriculture and Food Security, PAI Fund, Yad Hanadiv, JCT, The Heschel Center for Sustainability – NZO Project, the Israel Innovation Institute, and GrowingIL. This partnership drives Israel's agrivoltaics sector by facilitating collaboration, sharing knowledge, and drafting supportive policies and methodologies. It focuses on creating the economic models and incentives necessary to integrate innovative technology into the agricultural landscape.

Successfully executing these objectives will optimize the sector's development while establishing Israel as a global leader in the field. This progress drives the transition toward renewable energy, enhances national food security and resilience, increases profitability for farmers, and ensures the conservation of open spaces.

From its inception, the Forum has conducted strategic planning, engaging a broad spectrum of stakeholders. This coalition includes key government entities such as the Ministry of Agriculture and Food Security, the Planning Administration, the Electricity Authority, and Noga (the Independent System Operator). Additional participants include active farmers, Farmers, Moshav & Kibbutz Movements, energy and agricultural corporations, technology providers, and third-sector. At the same time, the Forum operates in coordination with the The Israeli Presidential Climate Forum to advance and standardize professional expertise nationwide.





## Galit Cohen, Israel Director, Jewish Climate Trust

*The central breakthrough in Agrivoltaics is the development of a model that proves the possibility of integrating agriculture with the production of renewable energy, not at the expense of one or the other, but in a way that strengthens ecological systems while simultaneously enhancing food and energy security. A proven agrivoltaic model has yet to be established, either in Israel or elsewhere in the world. Developing such a model will require planning and implementation methodologies, evaluating different crops across diverse climate zones, and adapting agrivoltaic solutions to evolving agricultural, technological, and economic conditions. Philanthropy has a critical role to play in advancing agrivoltaics. It enables collaboration across sectors, supports initiatives in their early stages, and creates opportunities for learning, experimentation, and implementation. By doing so, it helps develop agrivoltaic models that can be implemented and replicated, serving not only Israel but also many countries around the world.*



Photo: Solargik

## 2.2 Background to Agrivoltaics

Climate change and rapid population growth are increasing the need to expand renewable energy production while strengthening agricultural systems. At the same time, the growing frequency of extreme weather events, combined with the loss and degradation of agricultural land, is placing increasing pressure on food and water security. These challenges highlight the need to accelerate the transition to sustainable, renewable energy while adapting agriculture to changing conditions, ensuring that food production can be maintained and expanded to meet future demand.

Ground-Mounted Photovoltaic (GMPV) systems are among the most cost-effective renewable energy technologies. However, compared to other renewable energy technologies, they require a larger land area to generate each kilowatt-hour (kWh) of electricity. Furthermore, conventional GMPV deployment reduces the land available for agricultural production and leads to the loss of fertile agricultural land, creating significant environmental, social, and agronomic challenges.

These challenges are particularly relevant in Israel, one of the most densely populated countries in the Western world, with one of the fastest growing populations. Growing development pressure on limited open land, combined with the impacts of climate change and the region's geopolitical complexity, poses significant challenges to preserving agricultural land and ensuring long term food and energy security.

A viable response to these constraints is the adoption of the dual use model, which facilitates continued agricultural cultivation alongside renewable energy generation. Agrivoltaics (APV) redefines land use efficiency beyond traditional GMPV standards.

Despite Israel's potential to lead this sector, large scale adoption is hindered by a lack of robust, evidence based research regarding the long term impacts on agriculture and the environment. This knowledge gap undermines trust among key stakeholders and leads to regulatory tightening, driven by concerns that the energy sector may be prioritized at the expense of agricultural integrity.



**Amir Shavit,**  
Chairman of the Electricity Authority

*I am hopeful that we can meet the 2030 renewable energy goals, with agrivoltaics playing a key role.*



Photo: Matan Glazovsky

## 2.3 Defining Agrivoltaics (APV)

APV systems utilize a variety of configurations to facilitate the dual use of land for agricultural cultivation and photovoltaic energy production. In the Israeli market, these installations are typically categorized by either overhead mounting (directly above crops) or inter-row positioning. Globally, the scope of APV often extends to integrated livestock management, incorporating sheep or cattle grazing within multi-functional agricultural models.

Current Israeli regulations do not classify energy installations on greenhouses or other agricultural structures as agrivoltaic systems. These installations are governed by a separate regulatory framework, a distinction deviating from the standardized practices of many international jurisdictions. As a result, system design and optimization must account for the following variables:



Lighting  
Requirements,  
Reaction to Shade,  
& Adaptation to  
Different Radiation  
Levels.



Changes in  
Temperature,  
Humidity &  
Evaporation.



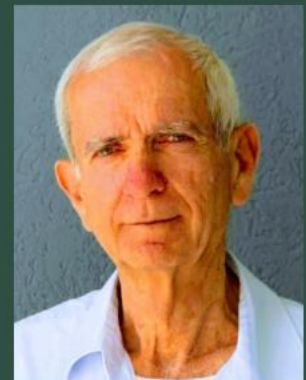
Adapting the  
Crops According  
to Photosynthetic  
Pathways that  
Hold the Optimal  
Potential.



Structural  
Considerations for  
Optimizing Solar  
Production: total Panel  
Area, Installation Angle  
in Relation to the Sun,  
Height, Panel Type.

**Dovi Miller,**  
Head of Energy Operations at  
Kibbutz Maale Gilboa

*When construction and energy coexist in agricultural land, a pathway opens for transitioning to more advanced and precise agriculture. The income from energy production mitigates risks and alleviates concerns regarding agricultural investments. Additionally, the combination of these elements creates a significant attraction for young farmers.*



## 2.4 Global Risks & Opportunities

The agrivoltaic sector holds significant potential to enhance Israel's agricultural viability, empower farmers, and advance both the energy sector and the rural landscape. However, this potential is accompanied by inherent risks and challenges that necessitate precision planning, supportive policy frameworks, and continuous iterative learning.

### Risks



Damage to  
Agricultural  
Productivity  
Without the  
Appropriate  
Planning.



Reduction in the  
Variety of Crops.



Damage  
to the  
Environmental  
Landscape.



High  
Construction &  
Maintenance  
Costs.



Requires  
Expert  
Knowledge &  
Management.

### Opportunities



Dual Use  
of Land -  
Electricity &  
Agriculture.



Shading &  
Decreasing  
Weather  
Damage.



Reduction in  
Emissions,  
Integrating  
Renewable  
Energy.



Stable  
Revenue for  
Farmers.



Water  
Efficiency.



Credit: Photographed at Ma'ale Gilboa

## 2.5 Agrivoltaic Potential in Israel – Insights from the Forum’s Key Activities

Within the framework of the Forum’s activities, extensive consultations were conducted to reach consensus among its many partners regarding core priority areas. These topics were structured around three primary pillars: opportunities, risks, and key barriers.

The following are the main outcomes of these discussions.

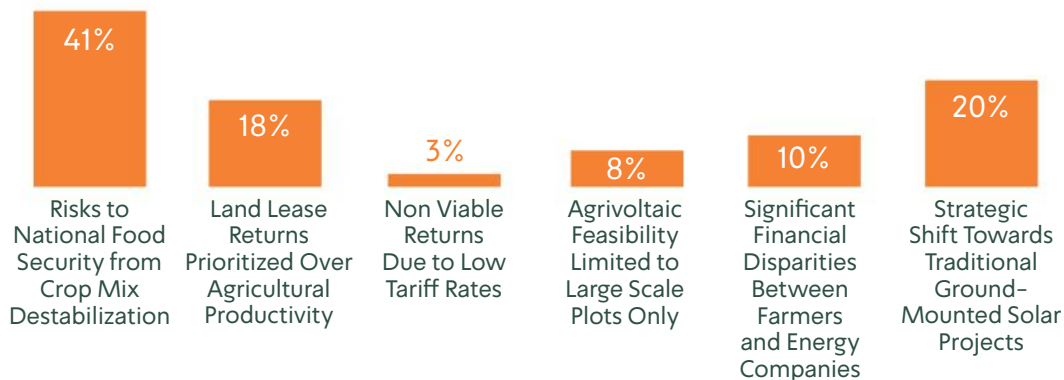
### Opportunities

**What are the Strategic Opportunities for AgriVoltaic Advancement in Israel?**



### Risks

**What are the Primary Risks & Threats Associated with Extensive Agri-PV Expansion in Israel?**



### Barriers

**Assuming genuine APV dual use is a desirable objective, what are the key barriers currently impeding the sector’s advancement in Israel?**



\* The data above was gathered from a questionnaire developed by the Forum for task force members.



Photo: agRE.tech

### 03. Key Global Trends

The implementation of Agrivoltaics (APV) for dual use energy production and agriculture is globally executed through diverse methodologies. Consequently, there are fundamental differences in the strategic approach of jurisdictions to APV projects. Policy, regulation, and legal frameworks directly influence the scale of deployment, operational execution, economic viability, and continued agricultural alignment. In the absence of dedicated legislation, the overlap between the energy and agricultural industries combined with existing land use regulations may complicate the licensing and construction phases.

On a broader scale, Agrivoltaics is gaining significant momentum, transitioning from localized pilot projects toward a mature, regulated market with substantial economic and agronomic potential. This evolution is supported by rapid technological advancement and increasingly clear regulatory frameworks, allowing the industry to become a cornerstone of national energy and agricultural strategies.

The global market capacity expanded from approximately 14 GW in 2024 to an estimated 18.4 GW by mid 2025. While a significant portion of this capacity still stems from the expansion of existing pilot projects, a growing number of countries, primarily in Southern Europe, East Asia, and select U.S. states now permit the establishment of commercial-scale agrivoltaic systems. This trend signifies a shift in global perception, a transition from a niche experimental solution to a viable, commercially feasible model that attracts interest from large scale investors, governments, and developers.<sup>2,3</sup>

2. **SolarPower Europe**. (2024–2025). Agrivoltaics and dual land use in Europe: Market status, policy frameworks, and implementation trends. SolarPower Europe . <https://www.solarpowereurope.org>

3. **PV Magazine International**. (2024–2025). Agrivoltaics: Global market developments, policy trends, and project deployment. PV Magazine. <https://www.pv-magazine.com/tag/agrivoltaics/>

### 3.1 Innovation

Technological advancements in the sector are categorized into two primary focus areas. The first addresses panel hardware and operations, including maintenance solutions, smart panels, and quality control systems designed to maximize energy yield while maintaining optimal light and shade conditions for crops. The second focuses on technologies designed to support agricultural activities beneath the panels. These include lightweight structural systems, as well as dynamic and tracking systems that provide operational flexibility, improve land-use efficiency, and ensure the continuity of agricultural activities by enabling access for agricultural machinery and routine field operations. Furthermore, Artificial Intelligence (AI) and machine learning are emerging as key technologies, enabling real-time system optimization and continuous performance monitoring.



Photo: Solargik



## Tech Companies Spotlight

# Solargik

Round A | Founded 2021 | Product Stage Released

**Solargik** develops smart solar tracking systems for agrivoltaics, enabling efficient solar energy generation while preserving productive, active agriculture.

**Experience** Israel, USA, India, South Korea, Italy, Germany, France

**Crop Type** Mango, Blueberries, Apples, Grapes, Lychee



**Gil Kroyzer,**  
Co-Founder & CEO

**Israel Kroizer,**  
Co-Founder & CTO

*Agrivoltaics is moving beyond experimentation into a more mature, infrastructure-driven phase. The next stage is not simply enabling solar and agriculture to coexist, but designing integrated systems that enhance agricultural productivity and resilience. The sector will only scale when solar is built around the needs of the land and farmers, not when farming is forced to adapt to energy infrastructure.*



\* The example presented is for illustrative purposes only and does not represent all stakeholders operating in the field.



## Investor Spotlight



**Founded** 2021 | **16** investments | **Investment Stage** Early stage

**ESIL** is a venture lab investing in early-stage climate related startups and technologies, founded by Bazan Group, EDF Power Solutions and Johnson Matthey.

### Active Investments in Agrivoltaics



**Amir Horowitz,**  
CEO, ESIL

*For the industry to become a significant channel for investment, it will require a transition from proving technological feasibility to proving a stable economic model, from both agricultural and energy aspects. Clear and supportive regulation, the capacity for standardization, and proven performance over time across a wide range of growing and environmental conditions will be critical. From our perspective as an investor in the industry, early connection to industry players such as EDF Power Solutions and the ability to integrate with large-scale projects are key to accelerating and transforming.*



\* The example presented is for illustrative purposes only and does not represent all stakeholders operating in the field.

## 3.2 Policy Regulation

Regulatory frameworks in the sector are evolving rapidly on a global scale. In Europe, there is a distinct trend toward strengthening the agricultural component of agrivoltaic projects, primarily through the establishment of specific criteria within agricultural policy frameworks, such as the Common Agricultural Policy (CAP). Alongside stricter regulations in countries like France and Italy, this trend reflects a transition toward APV models that prioritize agriculture and mandate evidence of dual use land efficiency.

In China, the sector is officially integrated into national strategic plans to strengthen rural energy security, with a targeted allocation of up to 10 GW by 2030. Similarly, in the United States, the Department of Energy (DOE) and the USDA launched a joint grants program to support soil conservation and tribal land initiatives.

These global developments mark a transition from localized pilot programs to structured, policy driven implementation. They emphasize that standardization and clear definitions regarding land designation, water allocations, and agricultural performance metrics are essential regulatory prerequisites for sustainable and scalable agrivoltaic projects.<sup>4,5</sup>



Photo: Solargik

4. **Sunhub.** (2025, September 11). Agrivoltaics in 2025: Scaling food and solar together. Sunhub Blog  
[https://www.sunhub.com/blog/agrivoltaics-2025-solar-farming/?srsltid=AfmBOor315BAoGzBNW7h4HsXOvr2K7Rz6RHzy2oTZ6IJC\\_q4nlg84dNf&utm\\_source=chatgpt.com](https://www.sunhub.com/blog/agrivoltaics-2025-solar-farming/?srsltid=AfmBOor315BAoGzBNW7h4HsXOvr2K7Rz6RHzy2oTZ6IJC_q4nlg84dNf&utm_source=chatgpt.com)

5. **International Energy Agency** – Photovoltaic Power Systems Programme (IEA PVPS). (2025). Dual land use for agriculture and solar power production: Overview and performance of agrivoltaic systems (Task 13 report). International Energy Agency.  
<https://iea-pvps.org/wp-content/uploads/2025/03/IEA-PVPS-T13-29-2025-REPORT-Dual-Land-Use.pdf>

## Global APV Trends- Incentives Regulation & Agricultural Safeguards <sup>6, 7, 8</sup>

### France

In France, APV was formally institutionalized under the 2023 APER law, establishing agriculture as the predominant land use. The 2024 regulations introduced robust criteria, including a 10% maximum yield reduction, making France's framework one of the most rigorous globally.

### Germany

In Germany, APV is guided by DIN SPEC 91434, which places agriculture as the primary land use, permits up to 15% reduction in agricultural usability, and requires maintaining at least 66% of conventional crop yields. While not legally binding, it has been integrated into national policy frameworks, including the Renewable Energy Sources Act (EEG), enabling APV projects to access grid priority and financial.

### Japan

Japan has nearly 2,000 APV farms covering about 560 ha, mostly small-scale systems under 0.1 ha, generating an estimated 500,000–600,000 MWh (around 0.8% of national PV output in 2019). APV adoption accelerated following the 2012 feed-in tariff, which drove a 76% increase in renewable energy supply by 2019.



### United States

In the U.S., although APV currently accounts for less than 1% of total solar capacity, momentum is building. In Q2 2025, California approved dual use solar zoning across more than 20,000 acres of farmland in the Central Valley, marking a major policy milestone. Other states advancing the field include New York, Massachusetts, New Jersey, and Colorado.

### Italy

Italy launched a €1.7B program to fund 2 GW of APV through its National Recovery and Resilience Plan.

### India

India added over 600 MW of APV through its KUSUM scheme, targeting solarization of pumps and fallow land.

### South Korea

South Korea passed a new APV ordinance allowing rice paddies and orchard farms to install PV without land use conversion penalties.

6. Tajima, M., & Iida, T. (2021). Evolution of agrivoltaic farms in Japan. AIP Conference Proceedings, 2361(1), 030002.

7. Sunhub. (2025, September 11). Agrivoltaics in 2025: Scaling food and solar together. Sunhub Blog

8. International Energy Agency – Photovoltaic Power Systems Programme (IEA PVPS). (2025). Dual land use for agriculture and solar power production: Overview and performance of agrivoltaic systems. International Energy Agency.

### 3.3 Knowledge & Research

Research on agrivoltaics is highly interdisciplinary. The energy sector accounts for the largest share of research, focusing on improving photovoltaic technologies and maximizing energy generation. Agriculture and life sciences focuses on the impact of agrivoltaic systems on crop yields, shading conditions, and the adaptation of agricultural practices. Additional research areas, such as engineering, environmental sciences, physics, and computer science, provide the technical framework necessary for the development, optimization, and large scale implementation of agrivoltaic systems.

In 2025, the International Energy Agency Photovoltaic Power Systems Programme (IEA PVPS) published updated reports to standardize definitions, performance indicators, and evaluation metrics for agrivoltaic systems. These efforts facilitate the development of evidence-based policy, market transparency, and international benchmarking, all of which are fundamental to the sector's continued global expansion.<sup>9</sup>

| USA                                                                                                                                                                                                                                                                                                                                                                   | Europe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Asia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>The United States</b> leads in agrivoltaic research in scope and impact and is a central knowledge base in the field. American research focuses on technological innovation, large-scale field trials, and examining the environmental benefits of Agrivoltaics systems.</p> |  <p><b>European</b> research is characterized by a multidisciplinary integration of technological, agronomic, and environmental variables. In <b>France</b>, research prioritizes sustainable agriculture through advanced photometric management and dynamic system modeling. <b>Italy</b> focuses on the integration of APV within specific crop varieties, evaluating the optimal synergy between agricultural productivity and environmental stewardship. <b>Germany</b> emphasizes engineering and technological optimization, whereas the <b>Netherlands</b> focuses on greenhouse applications, evaluating the impact of these systems on micro climatic conditions and crop performance.</p> |  <p><b>China</b> focuses on the large-scale deployment and implementation of APV systems, with a strategic emphasis on regions with high solar irradiation potential. In <b>Japan</b>, research centers on open field cultivation specifically rice, which represents a significant market share as well as greenhouse applications, evaluating system impacts on crop performance and micro climatic conditions. In <b>India</b> and <b>South Korea</b>, research is directed toward technological adaptations designed to enhance agricultural productivity and quality in accordance with localized environmental conditions.</p> |

9. Omer, A.A.A., Zhang, F., Li, M., et al. (2025). Understanding trends, influences, intellectual structures, and future directions in agrivoltaic systems research: A bibliometric and thematic analysis. World, 6(1), 2. <https://doi.org/10.3390/world6010002>



## **Dr. Doron Markel,** Chief Scientist, KKL-JNF



*Responding to the escalating climate crisis requires both adaptation to increasingly extreme climatic conditions and accelerated decarbonisation, including the protection of carbon sinks and expansion of renewable energy. In Israel, solar energy is expected to play a central role in the renewable transition, yet large-scale deployment raises two key challenges, energy storage and competition for scarce land resources, including pressure on open spaces.*

*One promising response is the principle of dual land use, integrating solar infrastructure with agricultural production. Agrivoltaics offers a pathway to advance national renewable energy targets while preserving open landscapes, maintaining food production, and strengthening agricultural resilience within the same land area.*

*Beyond energy generation, agrivoltaics also creates opportunities for innovation in agriculture by enabling more efficient use of technologies such as automation, robotics, and precision farming. To explore this potential, Keren Kayemet Lelsrael – Jewish National Fund (KKL-JNF) initiated a collaborative agrivoltaic pilot in a table grape vineyard at Ma'ale Gilboa, led by Ma'ale Gilboa Renewable Energy and the Doral Group, with research conducted by Northern R&D. The study's findings will support optimization of solar radiation distribution between photovoltaic panels and crops.*



Credit: Photographed at Ma'ale Gilboa

## 04. The Status of Agrivoltaics in Israel

### 4.1 Uses of Agricultural Land in Israel by Sector and Cultivation Type:

The total cultivated land dedicated to crop production in Israel currently stands at 4.2 million Dunams<sup>10</sup>. Agricultural production is characterized by a significant diversity in crop varieties, varying plot sizes, and distinct management protocols distributed nationwide. Consequently, the implementation of these systems necessitates tailored adjustments to crop types, farming structures, and irrigation practices, accounting for inherent regional and operational variability.

#### 1 | Segmentation of Land Use According to Rural Community Type

The following analysis categorizes agricultural land use by community sector, cultivation type, geographic distribution, and plot dimensions. This segmentation provides a quantitative framework for assessing the potential for agrivoltaic integration across Israel. These figures are derived from the Ministry of Agriculture's Geographic Information System (GIS) database, with data current as of 2024.

**Total Cultivated Land:  
4.1 Million Dunams  
(excluding grazing areas)**



Fig. 1. Agricultural land according to rural community type

\* Thousands of Dunams

The Kibbutz and Moshav communities collectively hold approximately 65% of Israel's agricultural land reserves. These lands are typically managed under long-term lease agreements with the Israel Land Authority (ILA), with land use regulations dictated by ILA policy. In contrast, the private sector, which includes independent agricultural towns (Moshavot), agro-industrial corporations, and private farmers – manages approximately 20% of total agricultural land. A significant portion of this category consists of privately owned land, to which ILA property-level decisions do not apply. Arab societies manage approximately 12% of agricultural land, which also includes a substantial volume of private holdings.

Regardless of land tenure status, whether privately owned or leased via the ILA, all cultivated land is subject to the statutory frameworks established by the National Planning Administration. Consequently, the National Outline Plan (NOP 1/24), which governs agrivoltaic projects, will apply universally across all land categories once it receives final approval.

10. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

11. In addition, there is an area of approximately 1.5–2 Dunams of grazing land, which as of the time of the drafting this report, has not been approved as an agrivoltaic interface

## 2 | Artificially and Naturally Irrigated Land

In accordance with ILA regulations and the National Outline Plan (NOP), the deployment of agrivoltaic systems is restricted to lands equipped with active irrigated crops.

Current data indicates that approximately 58% of total agricultural land (roughly 2.35 million Dunams) is classified as irrigated crops (Shalhin). The following diagram illustrates land segmentation by irrigation method (artificial vs. natural), alongside a distribution of irrigated land by community sector. This confirms that, at present, 42% of cultivated land is ineligible for agrivoltaic integration due to these specific regulatory and technical requirements.

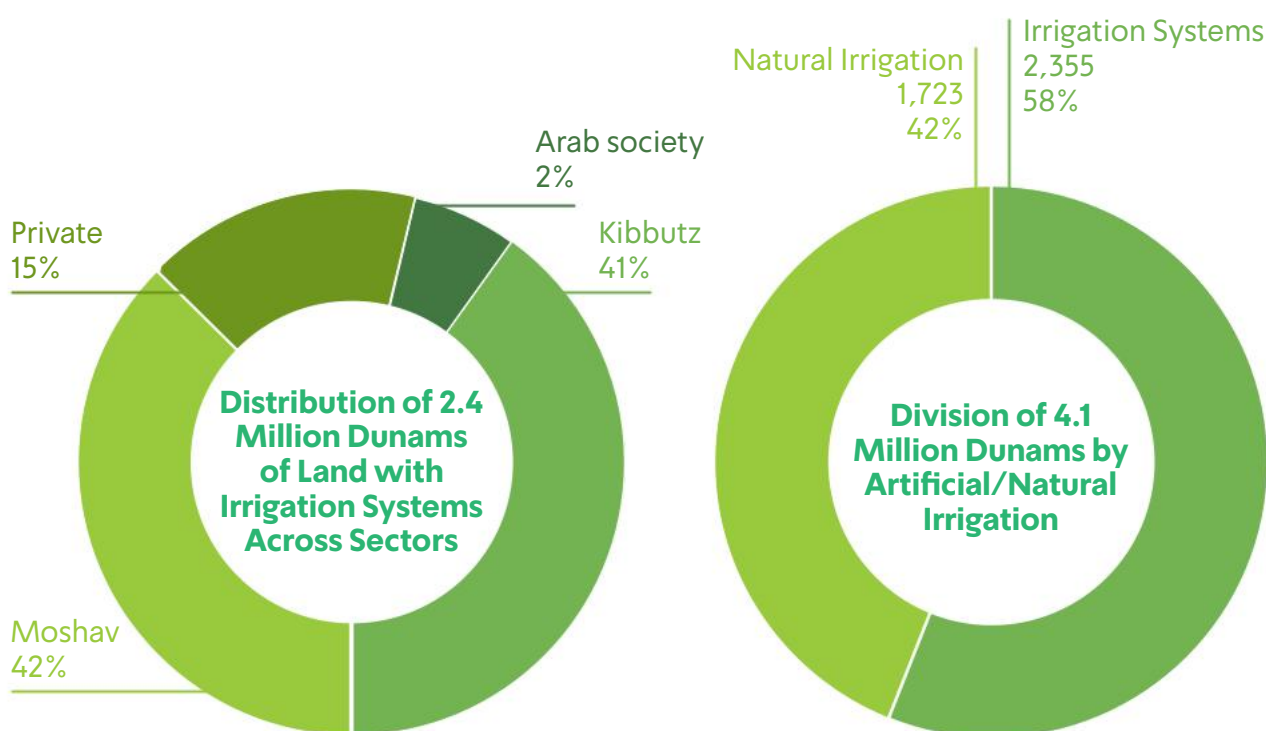


Fig. 2. Irrigation type for agricultural land by community sector

\* Thousands of Dunams

An analysis of irrigated land distribution reveals that 83% of all irrigated cultivation in Israel is concentrated within the Kibbutz and Moshav community sectors. The private sector accounts for 15% of irrigated activity, while 2% is managed by Arab societies. The remaining land is utilized for rain-fed agriculture (Dry-land farming). Without a significant upgrade to high-capacity water networks and irrigation systems, these plots will remain ineligible for agrivoltaic development under current regulatory frameworks.

12. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 hectare = 10 Dunams).

### 3 | Irrigated and Perennial Crop Distribution by Sector

Agrivoltaic systems vary according to crop type. Perennial crops, such as orchards and citrus groves, require taller mounting structures than those typically used for annual crops, such as open-field vegetables and field crops. Additionally, the design for perennial systems must ensure operational access for heavy agricultural machinery and include tailored adaptations specific to each crop's biological needs. Consequently, distinguishing between annual and perennial interfaces is critical for technical planning. The following analysis (Figure 3) illustrates irrigated areas only, segmented by community sector and current crop classification (annual vs. perennial).

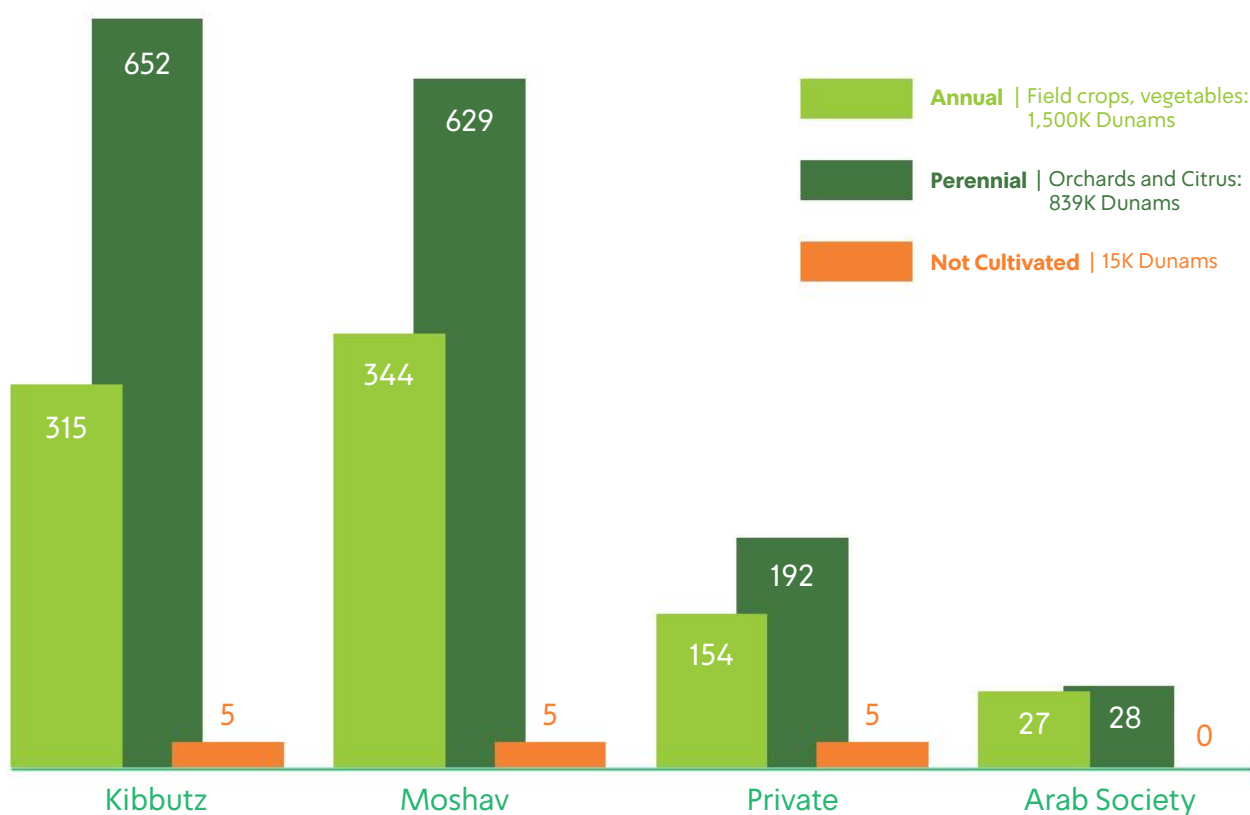


Fig. 3. Irrigation systems - Annual/Perennial - according to rural community sector

\* Thousands of Dunams

The data reveals that within Kibbutz and Moshav land holdings, the volume of annual irrigated cultivation is more than double that of perennial crops. In the private sector, the distribution is more concentrated, with perennials representing approximately 25% of the total irrigated area. Within Arab societies, irrigated land is distributed equally between annual and perennial crops.

13. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

#### 4 | Geospatial Distribution of Annual and Perennial Crops by Ministry of Agriculture District

According to findings by the Knesset Research and Information Center, the primary bottleneck for integrating new renewable energy installations is the limited absorptive capacity of the national transmission and distribution grid. This infrastructure deficit is particularly acute in peripheral regions, such as the Negev, Galilee, Golan, Hadera and the regional Valleys, where a significant portion of proposed capacity cannot be interconnected due to technical constraints. Consequently, the distribution of irrigated and perennial crops has been analyzed by Ministry of Agriculture districts to ensure the geographical alignment of agricultural potential with infrastructure readiness.

##### Annual Crops, Primarily in the Negev and the Valley Regions

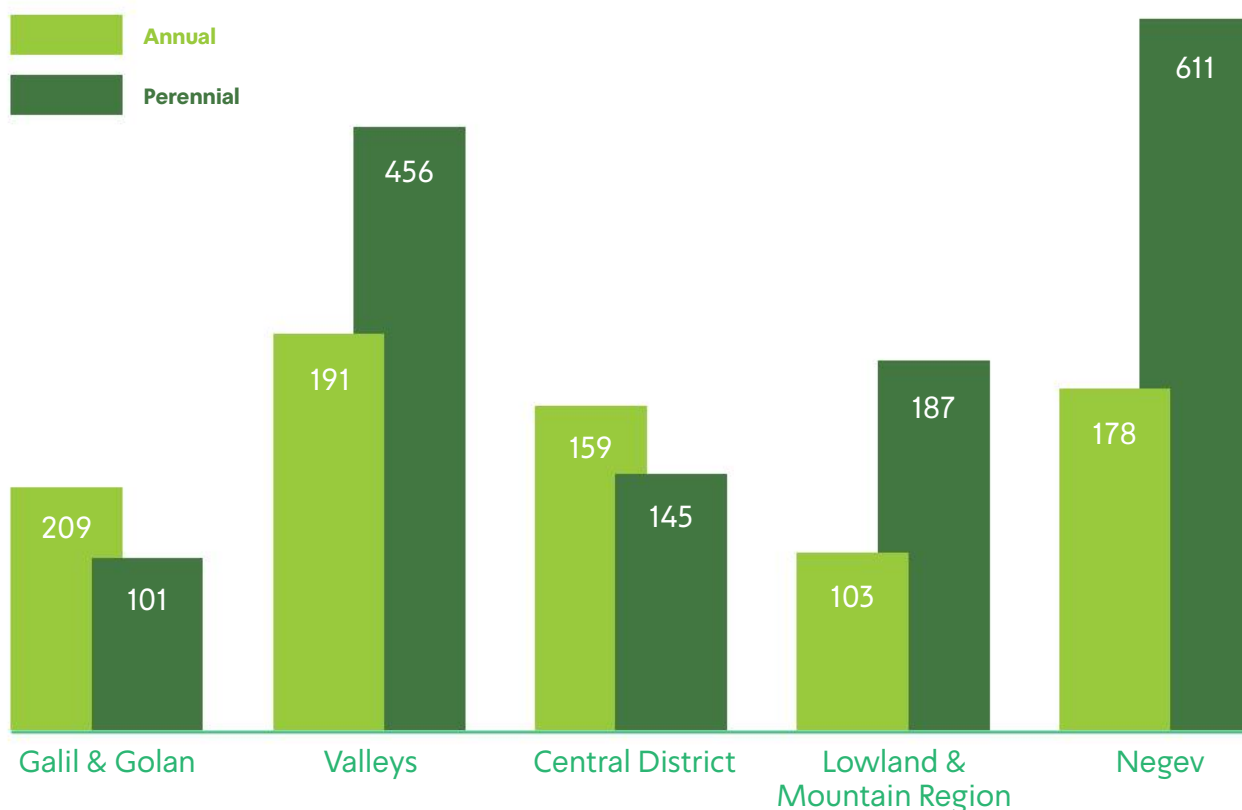


Fig. 4. Irrigation systems by the Ministry of Agriculture districts

\* Thousands of Dunams

14. Renewable Energy in Israel – Background and Issues for Discussion – Knesset Research Center Update, Chapter 4, 12/7/21

15. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 5 | Size of artificially irrigated cultivation plots by agricultural community sector

The following analysis quantifies the scale of irrigated plots within the agricultural sector, categorized by community type. It is important to note that these figures represent current cultivation footprints, plot configurations are subject to optimization based on specific crop requirements and future agrivoltaic technical specifications. This flexibility is particularly relevant for land under collective management or joint ownership, such as Kibbutz holdings, Plot A, Moshav plots (collectively managed lands), and consolidated private holdings. The data below (Figure 5) details the mean (average) plot size, median values, and statistical variance (standard deviation) across each sector.

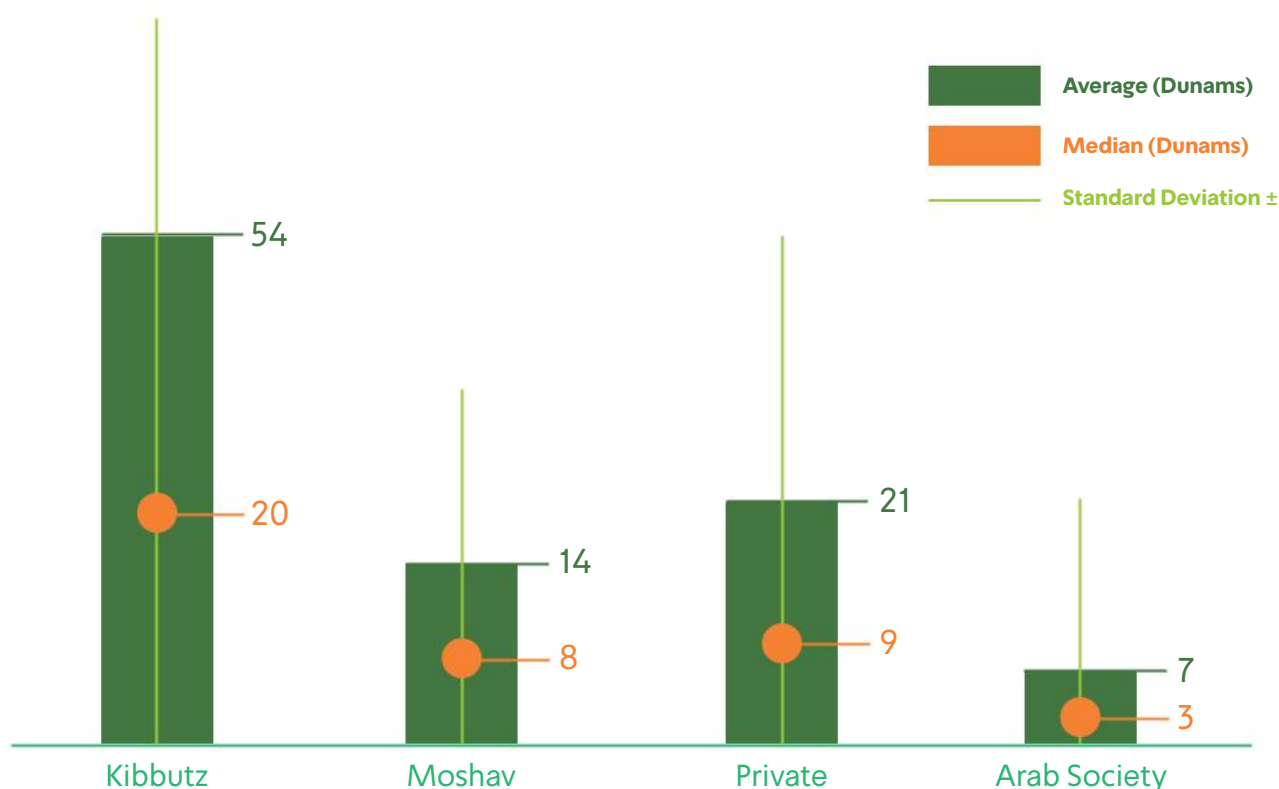


Fig. 5. Size of irrigated crops according to community sector

\* Dunams

The diagram indicates that Kibbutz communities possess the largest individual plot sizes, both in terms of median and mean values. Furthermore, the statistical variance within the Kibbutz sector is significantly higher, indicating the presence of exceptionally large contiguous land blocks.

In contrast, the Moshav and Arab Society sectors characterized by more granular family-based farming models exhibit smaller average plot sizes. As anticipated, the Arab Society shows the lowest mean and median plot sizes, with minimal variance between individual plots.

The private sector demonstrates a high degree of variance, while it includes significant plots managed by large-scale cultivation companies, smaller holdings remain prevalent. Overall, while large-scale plots are present in the private sector, the Kibbutz sector maintains the highest concentration of expansive, consolidated land blocks.

16. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 6 | Agriculture in Arab Society

Due to the unique characteristics of Arab Society, particularly regarding plot dimensions and access to irrigation infrastructure, the following analysis details the cultivation methods (irrigated vs. rain-fed) for annual and perennial crops.

### 126,000 Dunams of olive orchards for food & oil with natural irrigation

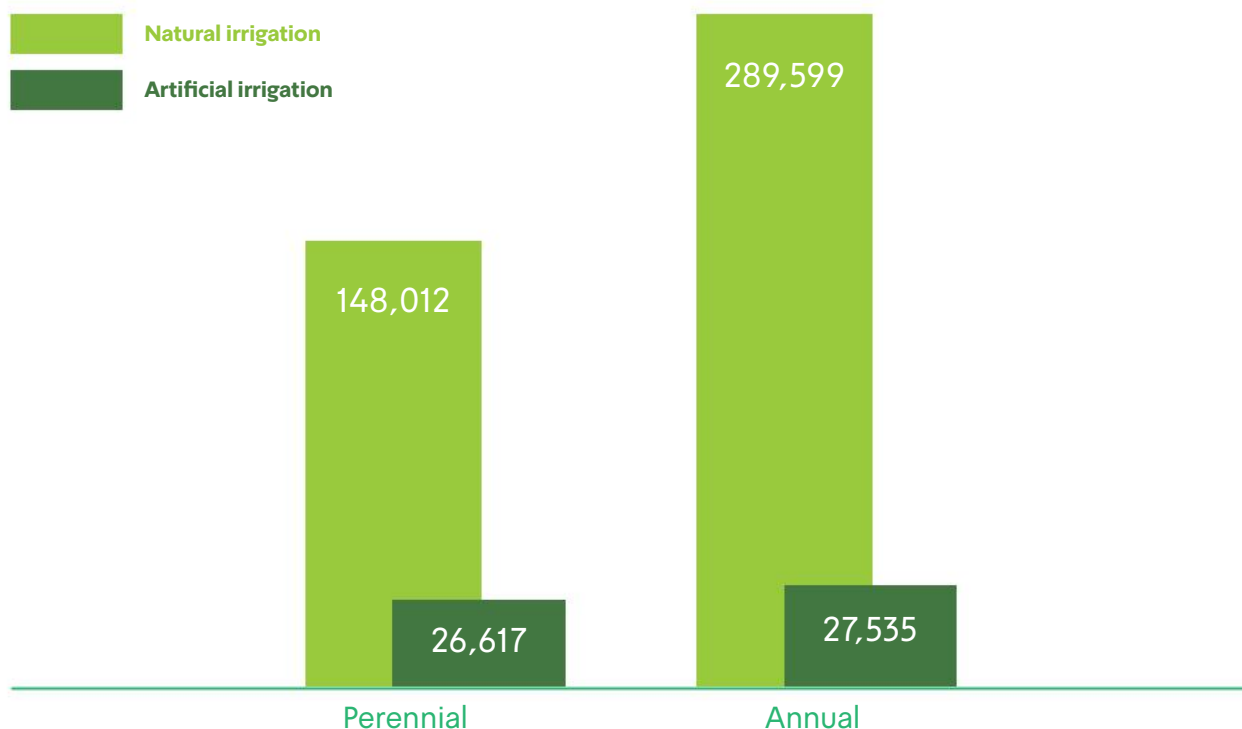


Fig. 6. Agriculture in Arab Society

\* Dunams

Agricultural land managed by the Arab Society accounts for 12% of the national total; however, only 2% of this land currently has access to active irrigation. Furthermore, the area dedicated to annual crops is nearly double that of perennial crops. It is important to note that the majority of non-irrigated perennial cultivation consists of olive groves, which are widespread across this sector, covering approximately 120,000 Dunams.

To promote agrivoltaic integration within the Arab society, it is essential to evaluate the expansion of irrigation networks in these regions. Alternatively, policy adjustments should be explored to permit agrivoltaic systems within rain-fed olive orchards. Such measures would ensure that the Arab Society is not disproportionately excluded from the economic and environmental benefits of the agrivoltaic sector.

17. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).



Credit: Photographed at Ma'ale Gilboa

## 4.2 The Development of Agrivoltaic Policy in Israel

Government policy regarding agrivoltaics is multi-layered, comprising several cabinet decisions and strategic policy documents. The regulatory landscape consists of three primary pillars: planning and construction regulations, land use policies (specifically Israel Land Authority decisions affecting the majority of the land base), and Electricity Authority tariff structures. The following describes the core elements of this policy:

Government Decision No. 465 (October 25, 2020) concerning the advancement of renewable energy within the power sector, includes a target requiring 30% of total electricity to be generated from renewable sources by 2030. Furthermore, it was decided to advance steps to encourage the establishment of renewable energy facilities in built up areas and dual use land. The initial policy governing agrivoltaics was characterised by a precautionary approach, dictated by the limited empirical data available at the time. In 2021, Government Decision No. 208 mandated the establishment of an inter-ministerial team including the Ministry of Finance and other stakeholders to formulate recommendations and regulations for agrivoltaic facilities.

In August 2023, a joint pilot program was approved by the Ministry of Agriculture and the Ministry of Energy to fund pioneering projects, financed through the Chief Scientist's budget. To facilitate commercial deployment, the National Planning and Building Council promoted National Outline Plan (NOP) 1/24, establishing the necessary statutory framework for commercial scale installations.

## Phase 1 | National Target & Strategic Framework

### Government Decision 465 | October 15, 2020

**Target:** 30% electricity generation from renewable energies  
Encouraging facilities in built areas and dual use of land  
**Agrivoltaics:** a new Sector <<< cautious policy

## Phase 2 | Knowledge Development – Pilot Programs

### Demonstration Sites Project (2023)

**Joint Initiative:** Ministry of Energy & Infrastructure | Ministry of Agriculture and Food Security  
**Funding:** Chief Scientist

#### Planning

140 plots for research  
Variety of areas and crops  
**Statutory Validity:**  
National Outline Plan 10/D/15 (≈ 2,500 Dunams)

#### Actual implementation

12 active plots only  
Gap between the scope of approval  
and implementation & research

## Phase 3 | National Planning Arrangements

### Israel Land Authority Legalities for Agricultural Land

#### Designated Allocation (2022):

Up to 500 Dunams per community,  
not at the expense of industrial or employment zones.

#### Procedure 7.3.14 (July, 2023):

**Project Term:** 24 Years

- No transfer of rights permitted
- Contracted directly with the community association
- Requirement for simultaneous agricultural land use.

**Oversight:** Ministry of Agriculture and Food Security.  
Right to terminate & breach sanctions

### National Outline Plan 1/24 – Agrivoltaic Facilities

Regulating photovoltaic electricity generation on agricultural land.  
Preserving significant and supervised agricultural cultivation

#### Milestones:

**Dec 2022** – Decision to prepare the plan amendment  
**May 2025** – Publication of the draft for public comment.  
**Nov 2025** – Review of public objections & District Committee feedback.  
**2026** – Approved by the National Committee and the Government.

### Restriction of joint ventures between communities

Joint ventures permitted exclusively within green line communities,  
**across the rest of the country** there is a de facto prohibition on  
collaborations between communities.

#### Gap between policy and reality:

Agriculture in Israel relies mostly on regional cooperatives,  
associations, and joint operational models.

### If the project fails to meet agricultural cultivation or yield standards, the Israel Land Authority reserves the right to cancel the transaction & demand the return of the land.

The sector is still in an experimental phase with a high probability of partial failures, yield volatility, and a need for long-term technical adjustments.  
**Implications:** Farmers are deterred from entering projects due to the perceived risk of losing rights to their land.

#### What is required?

- Adjusting the level of risk to development stage.
- Distinguishing between a legitimate experimental failure and a violation of land use terms.
- Flexibility in regional collaboration models.

### Complementary policy – Implementation on the ground

#### Agricultural Regulation – Ministry of Agriculture and Food Security

- Promoting APV research
- Developing a definition of optimal agriculture
- Routine supervision & control
  - Mandate to disqualify projects failing "APV" criteria

#### Local Law Contribution:

- Site Identification for Optimal location
- Proactive Institutional Leadership
  - Advancement of Local Policy Frameworks
- Upper Galilee Regional Council** – Writing policy principles & mapping council potential (Feb 2025)
- Hof Hacarmel Regional Council** – Approved strategic plan (Oct 2025)
- Gezer Regional Council** – Mapping council potential (Dec 2025)

18. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).



*Agrivoltaic initiatives hold immense benefits for the State of Israel – from prioritizing dual use through international innovation, to achieving the national renewable energy goals. However, agrivoltaic policy requires close monitoring of research and the protection of Israeli agriculture that will ensure food security for Israeli citizens in an era of a worsening climate crisis.*



Photo: agRE.tech

### 4.3 National Outline Plan 1/24

On 6 December 2022, following the submission of a comprehensive planning policy review, the National Planning and Building Council resolved to advance Amendment 24 to NOP 1. This amendment provides the regulatory basis for commercial-scale agrivoltaic facilities, permitting solar power generation on agricultural land provided that optimal and supervised cultivation is maintained throughout the installation's lifecycle.

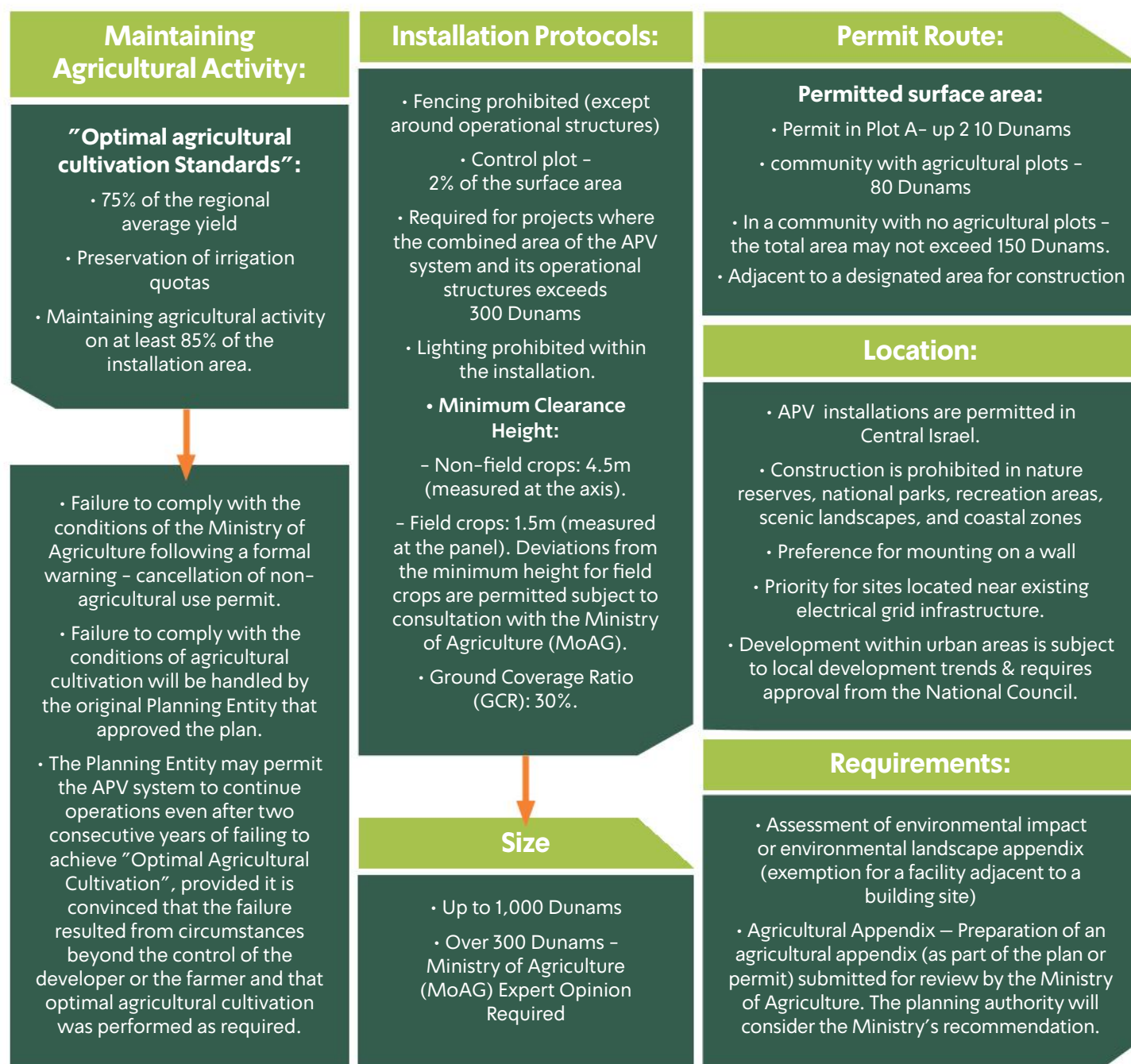
Following extensive work by the steering committee, the draft of NOP 1/24 was published for consultation in May 2025. This document established a formal planning framework for agrivoltaic facilities and marked a major milestone in the sector's development.

On 11 November 2025, a formal review was conducted to address feedback from District Committees and public objections to the amendment. This was followed by a decisive discussion on 30 December 2025, where the final recommendations were consolidated and forwarded to the National Planning and Building Council, which granted its official approval in January 2026. The resulting provisions of NOP 1/24 reflect the inherent friction that defined these discussions and which continues to shape the sector's implementation. This tension lies between the regulatory necessity to maintain high-standard agricultural output and the requirement for operational scope. Such autonomy is essential to allow the private sector to innovate and develop the agronomic expertise required to successfully integrate food and energy production on a single plot.



Photo: Solargik

## Principles of National Outline Plan 1/24



19. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

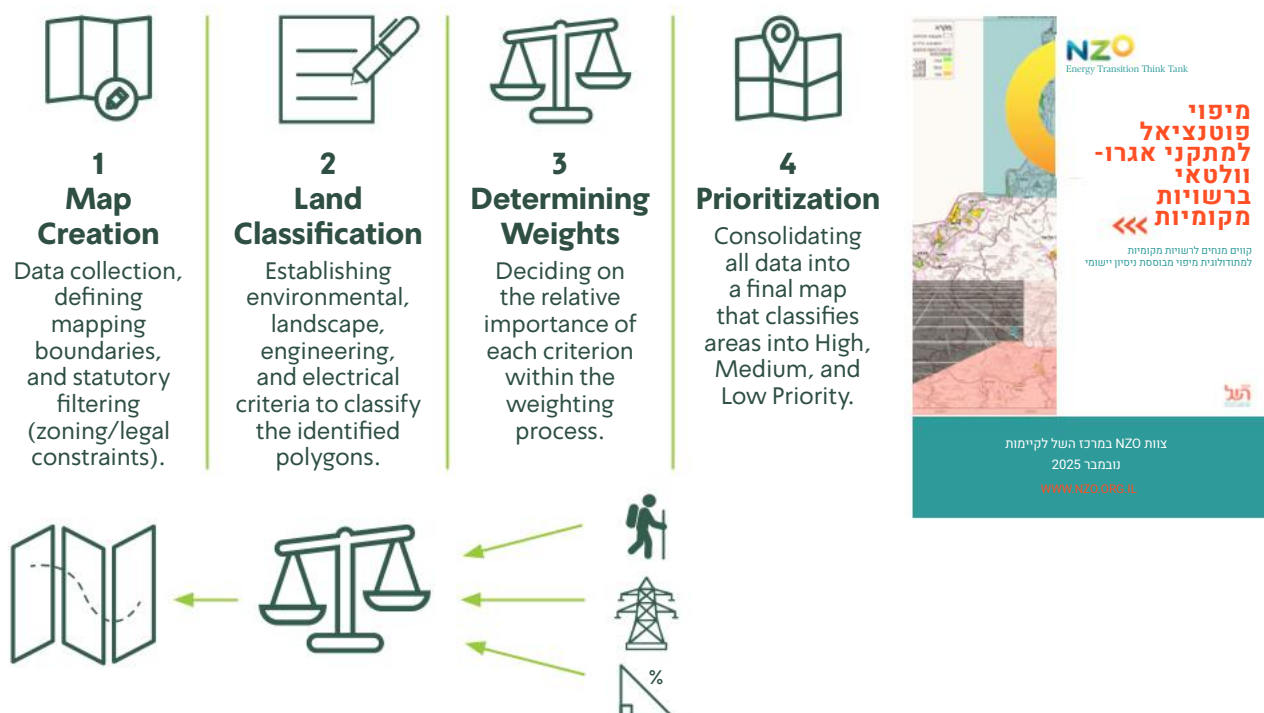
## 4.4 Mapping Agrivoltaic Potential in Local Authorities

Experience gained in the field highlights the need to translate national policies into practice at the local level. This necessity is driven by both planning committees and developers, who seek early identification of suitable locations. The absence of a clear planning framework often results in prolonged planning timelines, delayed responses from local committees, inefficient resource allocation, and increased uncertainty for all stakeholders.

In response, over the past three years, a professional planning team led by the Heschel Center for Sustainability has conducted a comprehensive mapping process of agrivoltaic potential across four regional councils. This mapping provides a geographical overview that enables system wide decision making based on established data, rather than isolated project reviews. This initiative accelerates the planning process and reduces uncertainty for developers, farmers, and local authorities by ensuring facility placement is based on technical, environmental, and landscape considerations while maintaining ecological continuity.

The findings indicate significant potential for implementing agrivoltaics at the local level, the surveyed regional councils identified thousands of Dunams with high-to-medium suitability for these facilities. These areas are situated outside protected zones and ecological corridors, ensuring minimal impact on natural assets, the landscape, and tourism. These findings highlight the value of mapping as an essential tool for practical planning. The full methodology, including the criteria used in the mapping process, is detailed in a [document](#) published in November 2025.

The requirement for a national mapping of agrivoltaic potential emerged during the Forum meetings, as noted in the recommendations section. The expertise gained during the regional mapping project served as the foundation for defining the methodology for national-scale mapping.

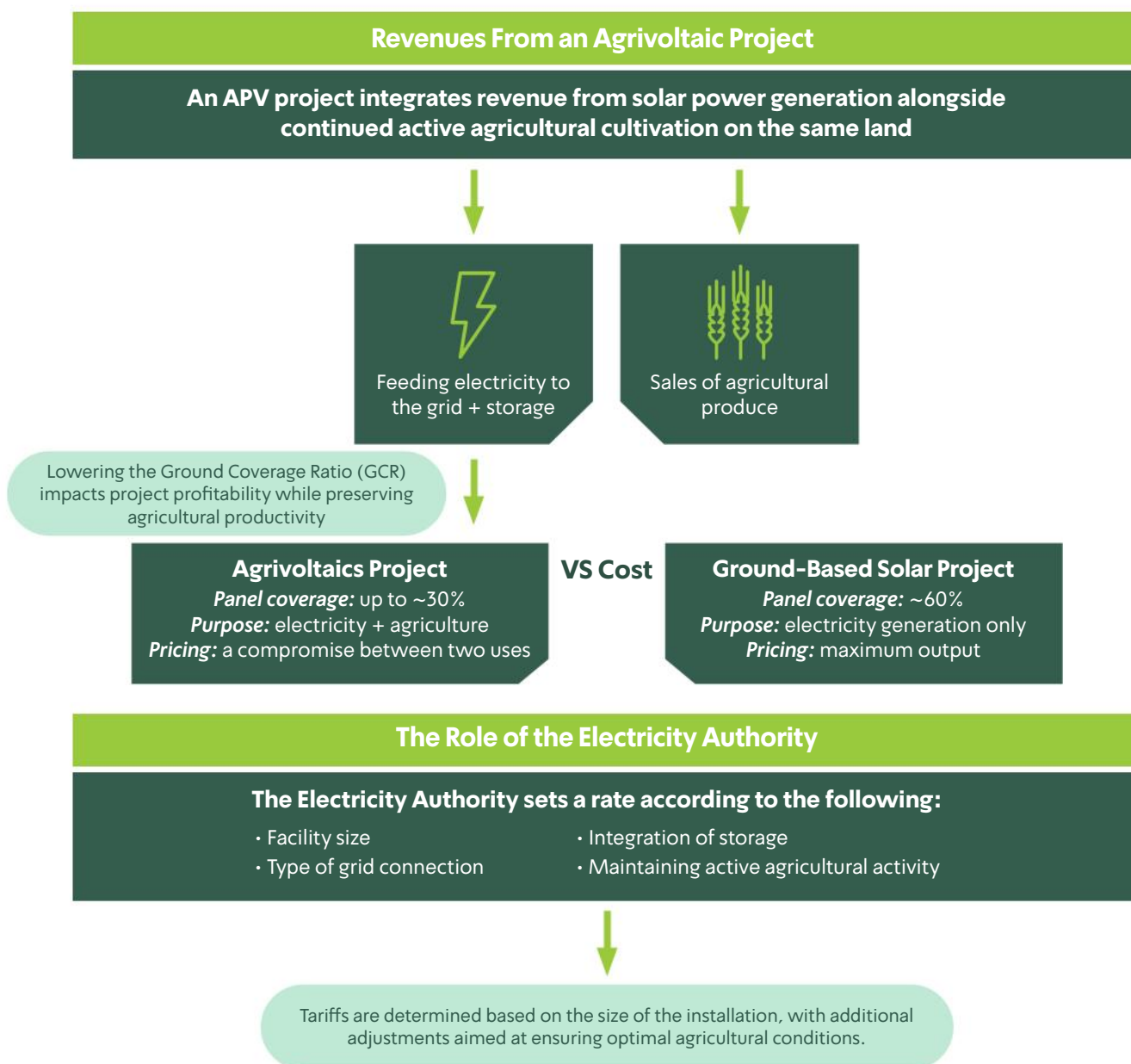


20. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 4.5 Economic Aspects of the Agrivoltaic Initiative

### 4.5.1 Dual-Revenue Model – Dual Use of Land

The revenue streams from agrivoltaic projects combine income from electricity fed into the grid with returns from the sale of agricultural produce cultivated beneath the solar panes. Agrivoltaic facilities are classified under the Electricity Authority's "dual use" category, which allows two economic activities to be conducted on a single plot: solar power generation and a secondary activity within the same complex (similar to solar rooftops, water reservoirs, or parking lots. For agrivoltaics, bespoke regulations have been developed to standardise these projects, with a clear emphasis on ensuring the continuity of agricultural activity.



The construction plan for an agrivoltaic project is determined by the planning authorities; aligned with NOP 1/24, a maximum coverage rate of 30% has been established. This distinguishes agrivoltaics from ground-mounted solar projects, which typically have a coverage rate of approximately 60%. While this reduced coverage alters the project's economic profile and projected revenue compared to ground-mounted solar, the ability to integrate energy storage enhances potential profitability despite the lower panel density.

The regulatory framework for agrivoltaic facilities (excluding 'Pilot' projects) is similar to that of ground-mounted solar, with an additional component designed to ensure optimal agricultural activity.



Photo: agRE.tech

#### 4.5.2 Rates for Agrivoltaic Facilities

The following is a concise overview (expanded in Appendix 3) of three relevant resolutions regarding Agrivoltaic installations (in addition to ground-mounted systems), alongside the protocols for maintaining optimal agricultural practices throughout the project's duration.

| Connection Route                                            | Typical Size of Facility    | Rates                                                                       | Suitable For                                           | Remarks Specific to Agrivoltaics                                                                              |
|-------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Distributed generation – up to 630kW (distribution network) | Approx. 12–15 Dunams        | A fixed, relatively high rate (approx. 36.5 agorot [12 US cents] per kWh)   | Farmers & communities with small to medium-sized plots | The rate reflects relatively high connection and operating costs; could be profitable even on a reduced scale |
| More than 630 kW – distribution network                     | Dozens of Dunams or more    | Market rate (similar to other facilities in the power distribution network) | Entrepreneurs & communities with larger areas of land  | There is no distinction in production technology; Agrivoltaics is subject to the same trading protocols       |
| Connection to the transmission network                      | Especially large facilities | Market rate / bilateral transactions                                        | Large scale projects                                   | The same as the rates of other manufacturers on the transmission network                                      |

#### 4.5.3 Benchmark 176c: (Amat-Mida, The Electricity Authority - Currently under public consultation): The Enforcement Mechanism

| Status of Agriculture at the Facility                                                        | Rate Impact                                                |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Optimal agricultural activity                                                                | Full rate in accordance with the connection route          |
| Failure to maintain optimal agricultural activity (according to the Ministry of Agriculture) | 20% discount on the rate                                   |
| A return to full agricultural activity                                                       | Cancellation of the discount and a return to the full rate |

21. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 05. Optimal Agriculture

Under National Outline Plan (NOP) 1/24, Appendix B establishes guidelines for optimal agricultural cultivation. Facility owners are required to maintain active and optimal agricultural production within the project area. Compliance will be reviewed by the Ministry of Agriculture and a newly dedicated oversight unit. To facilitate this process, clear evaluation criteria must be developed to assess whether optimal practices are upheld.

At present, empirical knowledge regarding cultivation techniques in agrivoltaic projects remains limited, both globally and in Israel. Consequently, optimal protocols are still in the developmental phase, and consolidated agronomic recommendations have yet to be established.

Given the complexity of defining and assessing ‘optimal agriculture’ within agrivoltaic projects, the Israel Forum for Agrivoltaics, in collaboration with the Ministry of Agriculture, is developing an ongoing evaluation framework for agricultural activity. The framework aims to balance regulatory simplicity with the operational flexibility required to manage complex agricultural systems. It is expected to incorporate both positive and negative incentives to encourage meaningful agricultural production throughout the project’s lifecycle.

### 5.1 Global Best Practices in Agriculture



#### France as a Case Study

Various nations are addressing the need to ensure that agricultural production remains optimal within agrivoltaic sites, preventing the neglect of land beneath the solar panels. To the best of our knowledge, France stands out as one of the countries where regulation is advancing. In April 2024, the French government passed Decree No. 2024-318, which ensures that solar installations do not compromise agricultural output. This government decree contains several key provisions:

- 1.** Agricultural output on a plot featuring agrivoltaic facilities must remain significant, maintaining at least 90% of the yield per Dunam<sup>22</sup> compared to a designated reference plot.
- 2.** It is mandatory to maintain a reference plot in close proximity to the facility, representing at least 5% of the total project area. This plot must remain unshaded and share identical soil and climate conditions, serving as a benchmark for comparative yield analysis.
- 3.** The decree restricts the reduction of the cultivated area to a maximum of 10% of the total agricultural land.
- 4.** Panels must be positioned at a height and frequency that facilitate standard agricultural practices, including the maneuverability of machinery and the movement of livestock. These requirements ensure that crop production and farming activities are not adversely affected by the integration of solar infrastructure.

22. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 06. Israel's Agrivoltaic Sector Landscape

The agrivoltaics sector in Israel is expanding and evolving, increasing the requirement for a clear and structured overview of the diverse stakeholders operating within this space. This landscape map is designed to characterize the sector, identify key players, and highlight various domains of activity along the industry value chain.

The map features representative examples and is not intended to serve as a comprehensive mapping of the entire ecosystem.. Its purpose is to provide clarity, introduce the various participants, and encourage the connections and collaborations necessary to strengthen Israel's position as a leading international hub for agrivoltaic research, development, and innovation in agrivoltaics.

In doing so, the map highlights the technological and business potential of the sector to improve resource efficiency and strengthen food and energy security, while contributing to sustainable economic growth in Israel. The integration of innovation and technology within the field of Agrivoltaics is a core component of the Forum's strategy, which seeks to advance the implementation of reliable research and professional expertise as a foundation for the industry's long-term growth.



The map highlights selected examples and does not represent the entire sector



## Benny Ruggill, Energy Manager, Kibbutz Movement



*The State of Israel possesses a set of unique qualities that can enable us to lead the global revolution in Agrivoltaics, just as we have led other revolutions in water and agriculture. Like previous revolutions, the promotion of Agrivoltaics requires that many parties take risks that rely on partial information. In the years to come, as in Europe, the emphasis will be on field crops, where the potential for causing damage and the benefits is generally more limited. With the consolidation of agricultural research on orchards and the respective reduction of risk, I am sure that we shall see the focus of Agrivoltaics return there.*



Credit: Photographed at Ma'ale Gilboa

## 07. National Mapping of Agrivoltaic Deployment

This chapter presents an up to date mapping of agrivoltaic sites in Israel, including research pilot programmes, active facilities, and initiatives in various stages of progress. The mapping is based on data gathered from private companies and R&D centres and is accompanied by a map of Israel showing the geographical distribution of these sites. The data allows for a comparative examination of crop types (orchards, field crops, and vineyards), facility dimensions, and the potential energy output of each site.

The mapping shows that agrivoltaics in Israel is transitioning from pilot projects to larger-scale developments, particularly commercial facilities. There is a noticeable concentration of sites in the geographical periphery, as well as a wide variety of crops, including orchards (olive, pomegranate, mango, and lychee), vineyards, field crops, and vegetables.

The analysis indicates a clear distinction between R&D sites characterised by relatively smaller areas, flexible planning, and varied agronomic experiments and large-scale commercial facilities, where the focus is on economic viability. Furthermore, Category A plots (individual family plots within Moshav society) are an emerging arena, though they currently lack regulatory and planning clarity. In light of the industry's key challenges, this mapping emphasises the need for a comprehensive framework to enable data comparison, collective learning, and the expansion of the industry while maintaining active and productive agriculture.

### 1 | Status of Site- Active

| Name of Entity                                 | Location of Pilot Site          | Type of Pilot                           | Size in Dunams  | Corporate Partner        | Expected Power Output- KWp | Type of Crop         | Type of Produce                                           |
|------------------------------------------------|---------------------------------|-----------------------------------------|-----------------|--------------------------|----------------------------|----------------------|-----------------------------------------------------------|
| Southern Arava R&D                             | Agricultural R&D Southern Arava | R&D                                     | 5               | Doral                    | 385                        | Field crops          | Corn, onion, butternut squash                             |
| Ramat Negev R&D                                | Ramat Negev                     | R&D                                     | 1               | Agrilight                | 100                        | Orchard              | Wine grapes                                               |
|                                                | Ramat Negev                     | R&D                                     | 1.4             | Agrilight                | 110                        | Orchard              | Wine grapes                                               |
|                                                | Ramat Negev                     | R&D                                     | 2               | Aryt Industries          | OFF-GRID                   | Field crops          | Potaotes, melons, chickpeas, cotton, etc                  |
|                                                | Yeruham Vineyard A              | R&D                                     | 1               | SolarVine                | OFF-GRID                   | Orchard              | Wine grapes                                               |
| Southern R&D                                   | Moshav Yesha                    | Conversion from ground-mounted to pilot | 16              | Enlight Renewable Energy | 1,230                      | Field crops          | Potatoes, wheat, watermelons                              |
| Triangle R&D Center                            | Kafr Qara                       | Pilot program (pioneer facilities)      | 1               | Agrisolarcom             | 16                         | Greenhouse           | Tomatoes, cucumbers, peppers, lettuce                     |
| Arava Institute                                | Ketura                          | R&D                                     | 0.5             | -                        | 1                          | Field crops          | Tomatoes, corn, beets, sweet potatoes, leafy greens, etc, |
|                                                | Ketura                          | R&D                                     | 0.05            | -                        | 4                          | Field crops, other   | Zucchini, kohlrabi, basil, chard                          |
| Kibbutz Ma'ale Gilboa                          | Ma'ale Gilboa                   | 4 official pilots                       | 150             | Doral                    | 10,000                     | Field crops          | Table grapes, lychee, mango, field crops                  |
| Kibbutz Revadim                                | Kibbutz Revadim                 | Land conversion                         | 150             | Doral                    | 10,000                     | Orchard              | 8 avocado varieties                                       |
| Kibbutz Gesher                                 | Gesher                          | Land conversion                         | 45              | Doral                    | 3,462                      | Orchard              | Avocados                                                  |
| Bar-Ilan                                       | Bar-Ilan University             | Post-research                           | Approx. 1 Dunam | Doral                    | 60                         | Field crops          | Field crops, pineapple                                    |
| Shamir Research Institute                      | Shamir Institute                | Pilot                                   | 8               | Doral                    | 615                        | Field crops/ orchard | Hydroponic vegetables/ open terrain, olive grove          |
| Ardom (in partnership with Southern Arava R&D) | Ardom-Yotvata                   | R&D                                     | 3               | Doral                    | 384                        | Field crops          | Field crops                                               |

\* Estimated Power Output is based on a ratio of 1 MW per 13 Dunams<sup>23</sup>.

23. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## 2 | Status of Site- In progress

| Name of Entity                                 | Location of Pilot Site                      | Type of Pilot                      | Size in Dunams | Corporate Partner           | Expected Power Output- KWp | Type of Crop          | Type of Produce                       |
|------------------------------------------------|---------------------------------------------|------------------------------------|----------------|-----------------------------|----------------------------|-----------------------|---------------------------------------|
| Central and Northern Arava R&D                 | Hatzeva                                     | R&D                                | 0.6            | -                           | 30                         | Greenhouse            | Peppers                               |
| Ramat Negev R&D                                | Ramat Negev                                 | Commercial                         | 1              | Aryt Sustainability Ltd.    | 144                        | Field crops           | Potatoes, melons                      |
| Northern R&D                                   | Mataim Farm, Upper Galilee Regional Council | Pilot program (pioneer facilities) | 10             | Galilee Development Company | 770                        | Orchard               | Avocados, plums, apricots             |
|                                                | Field crop Farm                             | Pilot program (pioneer facilities) | 10             | Galilee Development Company | 770                        | Field crops           | Wheat, corn, ground nuts, watermelons |
| Kibbutz Beit HaEmek                            | Beit HaEmek                                 | Commercial                         | 124            | Doral                       | 9,538                      | Orchard               | Avaocado varieties                    |
| Kibbutz HaGoshrim                              | HaGoshrim                                   | Land conversion - commercial       | 55             | Doral                       | 4,231                      | Vineyard              | Table grapes                          |
| Kibbutz Alumim                                 | Alumim                                      | Commercial                         | 160            | Doral                       | 12,308                     | Orchard               | Avaocado varieties                    |
| Kibbutz Eyal                                   | Eyal                                        | Pilot program (pioneer facilities) | 25             | Doral                       | 1,923                      | Orchard               | Avocados, persimmon                   |
| Kibbutz Beit Nir                               | Beit Nir                                    | Commercial                         | 234            | Doral                       | 18,000                     | Vineyard              | Wine grapes                           |
| Kibbutz Kfar Masaryk                           | Kfar Masaryk                                | Commercial                         | 245            | Doral                       | 18,846                     | Field crops           | Field crops                           |
| Ardom (in partnership with Southern Arava R&D) | Ardom-Yotvata                               | R&D                                | 3              | Doral                       | 231                        | Field crops           | Moringa                               |
|                                                | Ardom-Yotvata                               | R&D                                | 3              | Doral                       | 231                        | Orchards/ field crops | Filed crops, orchards                 |
| Kibbutz Yotvata                                | Yotvata                                     | Commercial                         | 60             | Doral                       | 4,615                      | Field crops           | Field crops                           |
|                                                | Yotvata                                     | Commercial                         | 60             | Doral                       | 4,615                      | Orchards              | Carobs                                |

\* Estimated Power Output is based on a ratio of 1 MW per 13 Dunams.

## 3 | Status of Site- Planning

| Name of Entity                  | Location of Pilot Site                | Type of Pilot                      | Size in Dunams | Corporate Partner        | Expected Power Output- KWp | Type of Crop               | Type of Produce                                            |
|---------------------------------|---------------------------------------|------------------------------------|----------------|--------------------------|----------------------------|----------------------------|------------------------------------------------------------|
| Ramat Negev R&D                 | Ramat Negev                           | Pilot program (pioneer facilities) | 18             | Shikun Binui Energy      | 600                        | Vineyard                   | Wine grapes                                                |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 20             | Shikun Binui Energy      | 800                        | Orchard                    | Mango                                                      |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 20             | Shikun Binui Energy      | 700                        | Field crops                | Kohlrabi, cauliflower and additional cole crops            |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 18             | Enlight Renewable Energy | 800                        | Field crops                | Wheat, clover, quinoa, cotton, Seed Watermelon, etc.       |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 18             | Shikun Binui Energy      | 900                        | Field crops                | Grains, sesame, quinoa, cotton, etc.                       |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 10             | Shikun Binui Energy      | 400                        | Orchard                    | Oil olives in high-density orchards                        |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 10             | Shikun Binui Energy      | 700                        | Orchard                    | Pomelit                                                    |
|                                 | Ramat Negev                           | Pilot program (pioneer facilities) | 18             | Shikun Binui Energy      | 700                        | Orchard                    | Jojoba                                                     |
| Southern R&D                    | Southern R&D, Eshkol Regional Council | Pilot program (pioneer facilities) | 15.5           | Ormath Investments Ltd.  | 1,100                      | Greenhouse, other, orchard | Wax flower, Ruscus, Hippeastrum                            |
| Emek HaMaayanot R&D - Eden Farm | Eden Farm                             | Pilot program (pioneer facilities) | 110            | Doral                    | 7,900                      | Field crops, orchard       | Wheat, corn, clover, watermelon, onion, sunflowers, olives |

\* Estimated Power Output is based on a ratio of 1 MW per 13 Dunams.

24. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## APV On the Map



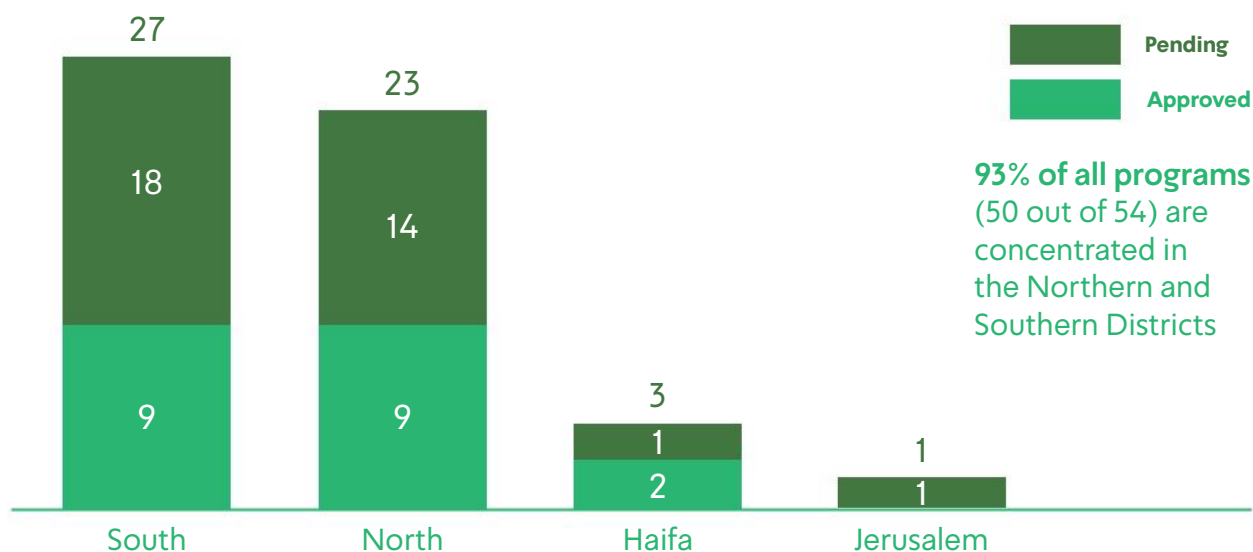
In addition to the current data, further plans are being advanced through various planning processes, including seven projects under the National Infrastructure Committee (VATL). Based on the Planning Administration's data (as of 12 January 2026), the distribution across different districts and the current status of these plans (approved vs. in progress) can be clearly observed.

## All Agrivoltaic Plans in Various Planning Stages

|                        |                       |                            |
|------------------------|-----------------------|----------------------------|
| <b>6,980</b><br>Dunams | <b>21</b><br>Programs | <b>Approved</b>            |
| <b>2,940</b><br>Dunams | <b>11</b><br>Programs | <b>Post- Deposit Stage</b> |
| <b>7,592</b><br>Dunams | <b>24</b><br>Programs | <b>Pre- Deposit Stage</b>  |

25. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## Number of APV Plans by Region and Status

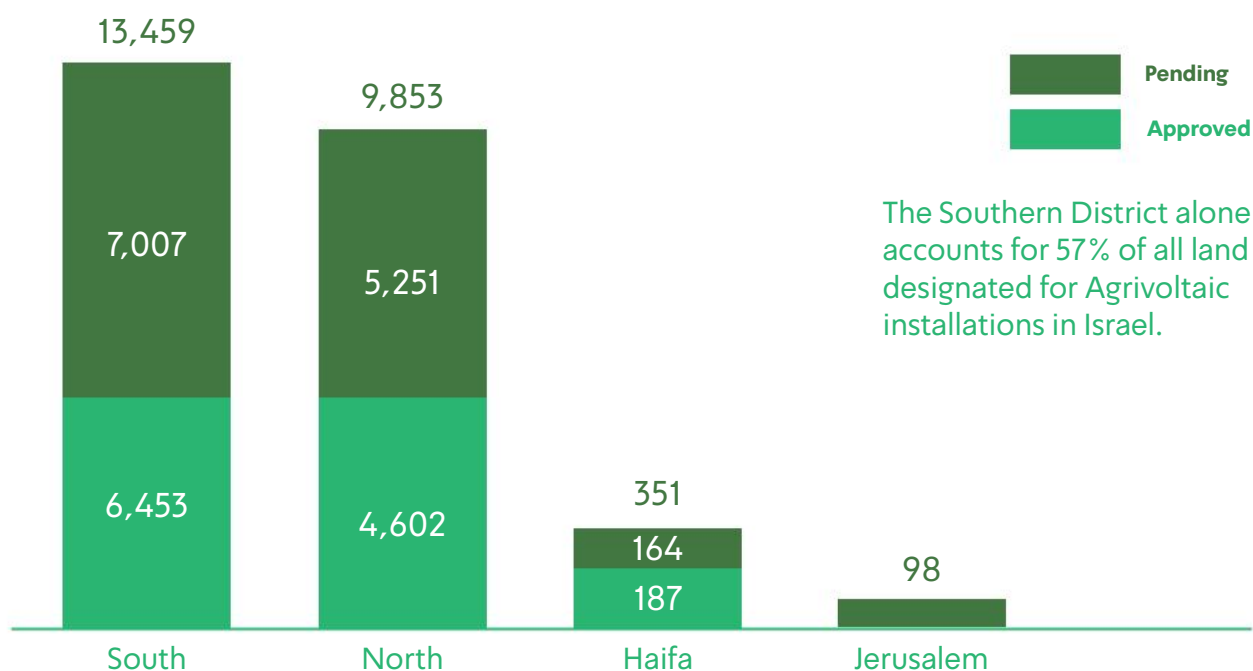


Breakdown of all plans by district (Approved and In Progress)

\* Number of Plans

As reflected in the distribution above, the potential for agrivoltaic activity in Israel is primarily concentrated in the Southern and Northern districts. Accordingly, the average planned land areas are as follows:

## Total Land Area (Dunams) by District & Status



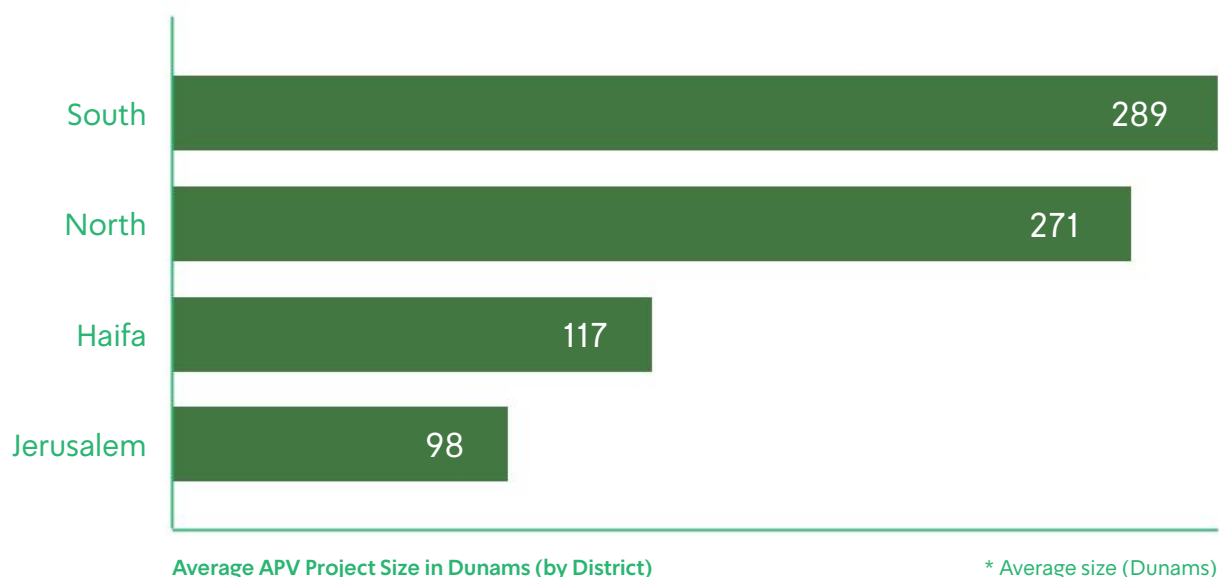
Average area scope for APV facilities by district breakdown

\* Total Dunams

26. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

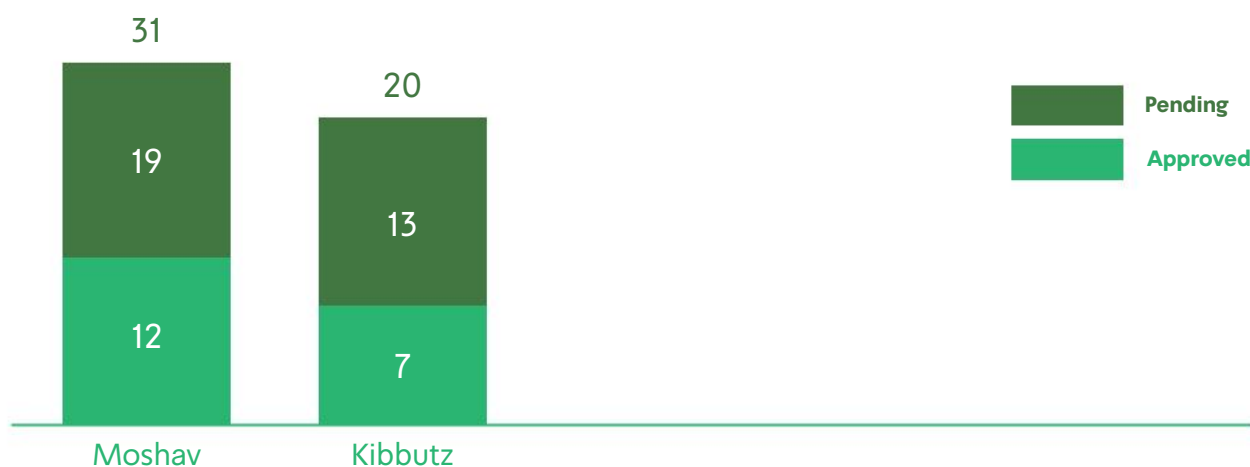
The data also indicates variations in the average size of installations across different districts. At present, the average installation size in the Southern and Northern districts is approximately twice that of the Haifa and Jerusalem districts. Under the current regulatory framework, the majority of approved plans have been located in the periphery. Following the approval of NOP 1/24, an increase in agrivoltaic initiatives is expected across the central region. The data further confirms that, as anticipated, both the volume of plans and the individual plot sizes in the Northern and Southern districts are significantly larger than those found in the central districts.

### Average Size of Facility (in Dunams) by District



Furthermore, there are clear distinctions between the kibbutz and Moshav communities:

### Distribution by status



Distribution of programs between kibbutz and moshav communities according to stage of program

27. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

And in the average installation size:

### Average Facility Area (sq.m)



Average APV System Size Kibbutz vs. Moshav

It is evident that, perhaps contrary to popular belief, there is extensive activity promoting agrivoltaic programmes within Moshav Society. This is true both in terms of the volume of initiatives and the average size of the plots involved. Promoting reliable, data-driven, and field-relevant research constitutes a core activity of the Israel Forum for Agrivoltaics. Recognising that broad adoption of this technology relies on applied research, the Forum develops various mechanisms for integrating academic and field-based findings. This is achieved by addressing the barriers facing pilot facilities, collaborating with R&D institutions, and systematically incorporating research into both existing and planned commercial sites. These efforts also include evaluating the implementation of facilities on Plot A plots, aiming to generate relevant expertise for a wide variety of agricultural models.

At the same time, the Forum is promoting the establishment of a national knowledge centre. This hub will consolidate findings, data, and field insights to serve as a professional foundation for decision-making, regulation, and the future development of the sector.



**Eric Benmeir Kozakow,**  
Regional Development Unit Lead at  
MIGAL Research Center

*From the viewpoint of MIGAL Galilee Research Institute, agrivoltaics is an agricultural and research process, not merely an infrastructure or energy solution. The integration of solar systems above crops creates unique microclimatic conditions that, in the context of climate change, hold significant potential to improve crop productivity, quality, and the economic stability of the agricultural sector. Realizing this potential requires applied, data based and long term agricultural research led by an independent R&D entity capable of generating reliable knowledge that is not driven by specific commercial interests.*

*MIGAL applies the living lab approach, which views farmers as key partners in generating knowledge rather than only implementers of projects. This approach brings together all relevant stakeholders including farmers, researchers, entrepreneurs, technology providers, funding bodies, and decision makers to enable effective learning and broad dissemination of knowledge.*

*At this stage of industry development, research can no longer rely solely on pilot programs and must be integrated into active commercial plots. This requires cooperation among all stakeholders, alignment of expectations and objectives, and agreement on the sharing and transfer of applied and operational knowledge to the agricultural sector.*

*Alongside its research activities, MIGAL promotes learning and knowledge exchange from Israel and around the world through participation in national and international research initiatives and through founding the international SunnySide Summit, which created a multidisciplinary platform for dialogue and helped strengthen agrivoltaic knowledge and practice at both the national and international levels.*



Credit: Photographed at Ma'ale Gilboa

## 08. Findings & Conclusions

This report indicates that the agrivoltaic sector in Israel is at a critical transitional stage, moving from research pilots and cautious policy toward a genuine opportunity for broad, regulated, and sustainable national implementation. Experience accumulated in recent years, alongside accelerating global trends, underscores the significant potential of the sector while highlighting the necessity for continued systematic, coordinated, and data-driven efforts.

### Key Conclusions

#### 1. Agrivoltaics is of National Strategic Importance

The combination of agriculture and the production of renewable energy provide a unique solution for the fundamental challenges facing the State of Israel: land scarcity, climate change, food security, and energy security. Agrivoltaics is of great systemic value, not merely a niche or technological solution.

#### 2. Knowledge Gaps are a Major Barrier for the Sector's Development

Despite regulatory and planning advancements, the lack of long-term agronomic data, tailored cultivation protocols, customized farmer training, and agreed-upon success metrics continue to challenge decision-making, project financing, and broad implementation in the field.

#### 3. Regulation is Progressing but the Mission is Not Yet Complete

The National Outline Plan 24/1, the policies of the Israel Land Authority, and the tariff regulation by the Electricity Authority have created a significant foundation. However, uncertainty surrounding the maturation of "optimal agriculture" mechanisms and supervision and incentive frameworks, along with the incomplete pilot program, hinder commercial-scale implementation.

#### 4. Regional Councils Play a Key Role in Promoting the Sector

Proactive steps taken by regional councils demonstrate that structured local policy increases certainty, enables informed planning, and promotes quality projects tailored to the characteristics of the land and local agriculture.

#### 5. Cross-Sector Collaboration is Essential for Success

The activities of the Israel Forum for Agrivoltaics illustrate that promoting the sector requires integrated efforts from government, research, farmers, entrepreneurs, and philanthropy, while creating a common professional language and trust among the players.



Photo: Solargik

## Looking Ahead - Operational Recommendations

Looking ahead, it is clear that the agrivoltaic sector does not offer a singular “magic” solution; its success depends on a continuous process of learning, adaptation, and responsible implementation alongside the integration of innovation. The coming years represent a critical window of opportunity to shape the Israeli Model, one that maintains agriculture and open spaces as core values while increasing renewable energy production in a manner that bolsters rural communities and the local economy.

Continued multi-sector collaboration, grounded in evidence-based research, will facilitate the realisation of the sector’s inherent potential and position Israel as a global pioneer in agrivoltaic expertise. Within the framework of the Israel Forum for Agrivoltaics, several operational action channels have been developed for the immediate future.



Credit: Photographed at Ma’ale Gilboa

The key channels are as follows:



### **Establishing a National APV Knowledge Center**

- Accelerating the advancement of the pilot program and expand it to include research in active commercial plots.
- Developing long term agricultural research based on data driven models.



### **Advancing Research & Innovation**

- Accelerating the pilot program & expanding it to integrate research within active commercial plots.
- Developing long term agricultural research driven additional research models by data across.



### **Developing "Optimal Farming" Mechanisms**

- Formulating flexible, tiered, and clear criteria for assessing the existence of significant agricultural activity.
- Integrating incentives alongside control mechanisms, while maintaining regulatory simplicity and practical feasibility.
- Adapting the mechanism to a wide variety of crops, geographic regions, and climatic conditions.



### **National Mapping & Planning of APV Potential**

- Advancing data driven mapping of agrivoltaics potential, accounting for statutory and planning aspects, electricity grid constraints, environmental & landscape considerations, soil types & crop varieties.
- Using mapping as a planning tool for government and local authorities, serving as a foundation for policy making & electricity grid development planning.



### **Knowledge Sharing & Fostering Collaborations**

- Promoting training and the adoption of research insights.
- Conducting professional conferences and field tours at active sites.
- Deepening international collaborations and knowledge sharing among leading countries in the field.
- Further strengthening the Forum as a platform for coordination, learning & policy formulation.

## 09. Appendices

### Appendix 1 | Members of the Israel Forum for Agrivoltaics

**Eran Ettinger** – Consultant in Agriculture, Environment, and Climate.  
Former Deputy Director General for Environmental Resource Management at the Ministry of Agriculture and Food Security.

**Dr. Taniv Rophe** – Economist and Regulation Expert.  
Formerly a Deputy Director at the Ministry of Agriculture and Deputy Director at the Electricity Authority.

**Yonit Tzor** – GrowingIL, the Israel Innovation Institute.

**Dana Kedar** – GrowingIL, the Israel Innovation Institute.

**Alon Segall** – NZO, Heschel Center for Sustainability.

**Yuval Tamar Hefler** – NZO, Heschel Center for Sustainability.

**Maureen Friedman Guttman** – NZO, Heschel Center for Sustainability.

### Appendix 2 | Acknowledgments

We would like to express our appreciation to everyone involved and to the members of the task forces who contributed to advancing the Forum's activities. Special thanks to those listed below for their direct contribution to the formulation and writing of this report:

**Raanan Amoyal** – Ministry of Agriculture and Food Security.

**Dr. Gaya Loren** – Ministry of Agriculture and Food Security.

**Hagai Snir** – Ministry of Agriculture and Food Security.

**Aviram Jonson** – Ministry of Agriculture and Food Security.

**David Markovich** – Ministry of Energy and Infrastructure.

**Shirley Levy** – Electricity Authority.

**Doron Geva** – Ardom.

**Daniel Baron** – Energy.Com, Israel's Energy Innovation Community.

**Bar Weiss** – APV Expert.



Credit: Photographed at Ma'ale Gilboa

### Appendix 3 | Regulatory Expansion

**Israel Land Authority Policy (ILA):** In 2022, the Israel Land Authority approved a dedicated allocation of 500 Dunams for agrivoltaic projects per community. This area is entirely excluded from the community's employment land quotas. Furthermore, in July 2023, principles regarding the regulation of agrivoltaic projects on agricultural land came into effect (under Procedure 7.3.14).

**The following are some of the primary principles:**

1. The transaction will take place with the Agricultural Settlement Association and the area in question will not be deducted from the agricultural community's contract slot.
2. The project period will be 24 years, including the time used for construction and dismantling.
3. Transfer or sub-leasing of the rights of the agrivoltaic project is not permitted.
4. In areas other than the Negev and the Galilee, the furtherance of a detailed plan and/or approval of a transaction may take place only in areas that are not expected to serve as a reserve for development and subject to the approval of the head of the regional authority's administration.
5. For communities in the Green Line area, the quota for an agrivoltaic project for each community can be obtained until December 31, 2028, through a joint venture with nearby communities. A joint venture can take place for a total area of up to 1,500 Dunams.
6. Agrivoltaic projects are permitted alongside irrigated crops or orchards. The criteria for defining concurrent agricultural use will be determined by the Ministry of Agriculture.
7. Supervision and control over the existence of concurrent agricultural use, in accordance with this decision, will be carried out by the Ministry of Agriculture.
8. Should the Ministry of Agriculture notify that the project has ceased to function as an agrivoltaic venture, the ILA reserves the right to cancel the transaction and demand the return of the agricultural land. Until the land is returned or the breach is corrected, the rights holder will be charged full usage fees (including entrepreneurial profit) based on an individual assessment, without eligibility for National Priority Area discounts. ILA management is authorized to establish additional rules for enforcing cultivation obligations and requiring collateral to secure these terms.
9. The rights holder is not permitted to change the land designation of the project site or utilize it for any purpose other than agricultural cultivation.

## Appendix 4 | Tariff Regulation

The regulation applicable to agrivoltaic facilities (excluding “pilot” facilities) is similar to that of all ground-mounted solar installations, with the exception of an additional component intended to ensure the maintenance of Optimal Agricultural Activity within the projects. This component (as detailed below in Section 4) is currently undergoing a public hearing, and the Electricity Authority has not yet reached a final decision on the matter. The following is a concise overview of the three relevant decisions for agrivoltaic facilities, as well as the hearing regarding the maintenance of optimal agriculture:

### 1. Distributed generation up to 630 kW (Distribution Grid)

In the distributed generation tracks for facilities up to 630 kW, these are relatively small installations covering an area of approximately 12–15 Dunams. The tariff in this track is higher than market-model pricing, as it accounts for the relatively high infrastructure, connection, and operational costs which do not benefit from the economies of scale of larger facilities. The proposed tariffs are currently set according to the facility size as defined in the Dual Use Regulation (as of 2025) and can be profitable even for relatively small plots. A facility up to 630 kW AC is eligible for a tariff of approximately 36.5 Agurot/kWh.

### 2. Above 630 kW (Distribution Grid)

This involves the direct sale of electricity to suppliers and regulates integration and accounting rules. This decision stipulates that the electricity tariff for the project will be identical to the tariff received by other projects feeding into the distribution grid, without distinguishing between power generation technologies.

### 3. Facilities Connected to the Transmission Grid

Electricity sales via bilateral transactions or through the System Operator will receive the same electricity tariff as other producers connected to the transmission system.

### 4. Standard 176C (Hearing Stage) – Tariff Reduction for Lack of Agricultural Activity

To preserve the dual use essence of these projects, the Authority published a **draft for Standard 176C** for public hearing (September 30, 2024) – a tariff reduction mechanism for agrivoltaic facilities.

Under this mechanism, if active agricultural activity (“Optimal Agricultural Cultivation in an agrivoltaic Facility”) is not actually taking place, based on the Ministry of Agriculture’s determination, the project’s tariff will be reduced by 20% from the fixed rate. According to the hearing, the Electricity Authority found that a 20% reduction would incentivize project owners to integrate solar production alongside agricultural activity, while still allowing the facility to operate during a temporary breach, providing an incentive to return to full agricultural activity.

Upon receiving confirmation from the Ministry of Agriculture that full agricultural activity has resumed, the tariff will be restored to the market rate. This hearing has not yet matured into a final decision, pending the conclusion of discussions with the Ministry of Agriculture regarding the definition of “Optimal Agriculture.” Currently, the Ministry of Agriculture, in collaboration with the Israel forum for Agrivoltaics, is working on defining criteria and creating incentives for optimal agricultural cultivation.

28. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

## Appendix 5 | Data Sources for Chapter 7 – Mapping of Locations

Table 1

|                                             | District |       |           |        |
|---------------------------------------------|----------|-------|-----------|--------|
|                                             | North    | Haifa | Jerusalem | South  |
| <b>Number approved programs</b>             | 9        | 2     | 0         | 9      |
| <b>Number of programs in progress</b>       | 14       | 1     | 1         | 18     |
| <b>Number of planned Dunams approved</b>    | 4,602    | 187   | 0         | 6,453  |
| <b>Number of planned Dunams in progress</b> | 5,251    | 164   | 98        | 7,007  |
| <b>Total Dunams</b>                         | 9,853    | 351   | 98        | 13,459 |
| <b>Average size of facility</b>             | 271      | 117   | 98        | 289    |

Table 2

|                                       | Kibbutz | Moshav |
|---------------------------------------|---------|--------|
| <b>Number of programs</b>             | 20      | 31     |
| <b>Number of approved programs</b>    | 7       | 12     |
| <b>Number of programs in progress</b> | 13      | 19     |
| <b>Average size of facility</b>       | 306     | 274    |



Credit: Photographed at Ma'ale Gilboa

29. In line with standard practice in Israel, all land area figures in this report are provided in Dunams (1 Hectare = 10 Dunams).

# Israel's Agrivoltaic Sector Landscape

## Startups & Companies



## Ecosystem Players



## Agriculture & Energy Corporations



## R&D Centers & Research Institutes



The map highlights selected examples and does not represent the entire sector

