“ISRAEL 2020”
MASTER PLAN FOR ISRAEL IN THE 21ST CENTURY

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Prepared for:

PRIME MINISTER’S OFFICE
MINISTRY OF INTERIOR
MINISTRY OF HOUSING & CONSTRUCTION
ISRAEL LAND AUTHORITY
THE JEWISH AGENCY
MINISTRY OF FINANCE
MINISTRY OF AGRICULTURE
MINISTRY OF ENVIRONMENT
MINISTRY OF TRANSPORTATION
MINISTRY OF EDUCATION
MINISTRY OF ENERGY & INFRASTRUCTURE
MINISTRY OF DEFENSE
WATER COMMISSION

Our plans miscarry because they have no aim. When a man does not know what harbor he is making for, no wind is the right wind.
Seneca (B.C. 3-65)
The Need for Comprehensive Planning for the 21st Century

"Israel 2020": The Master Plan for Israel in the 21st Century, is the most comprehensive planning research enterprise ever carried out in Israel.

For over six years, more than two hundred and fifty leading professionals and members of the academic community in Israel, along with well-known international experts, collaborated on this large scale planning project. The project was jointly initiated by the Israeli Architects and Town Planners Association and the Faculty of Architecture and Town Planning at the Technion - Israel Institute of Technology. It was further developed under the joint aegis of ten government ministries, as well as the Jewish Agency, the Israel Lands Administration and the Water Commission.

"Israel 2020" is an integrated economic, social and environmental plan for the development of Israel in the 21st century including implementation policies for its realization.

Since the establishment of the state of Israel, there has always been a need for national long range planning, yet the rationale for this has varied immensely over time. During the early years, long range planning was essential for the state, in order to meet the national challenges of absorbing immigrants, dealing with the needs of an increasingly growing population, establishing governing institutions, and setting up an economic infrastructure. At that stage, planning was perceived as an issue of national security; the country was deemed "poor" and "empty", and undeveloped areas were considered as "wastelands", signifying backwardness and eligible for conquering. The national planning strategy was expressed in the famous saying: "We shall clothe the land in a robe of concrete."

At the onset of the 21st century, long range planning in Israel is still essential, but no longer because the country is "poor" or "empty". Indeed, the opposite is true. Nowadays, a rise in living standards and spatial density threatens the country's natural resources, defining a new imperative for long range national planning. The planning system is confronted with three central challenges: Israel has become one of the most densely populated countries in the western world. Moreover, the population in Israel continues to grow at a greater rate than that of most western countries, a trend that is expected to continue in the coming decades. Israel’s population growth is a factor of high natural growth, as well as immigration of Jews from around the world, under the Law of Return. Meanwhile, standards of development are rising, since the Israeli economy is striving to close gaps with the developed economies of the west.

Thus, Israel will be required to engage in unprecedented development efforts, in order to satisfy the demands of its growing population, to enable the continuation of the immigration of Jews, to intensify economic activities and to promote welfare standards.
There are, therefore, various planning issues to be resolved, which may be summarized as follows:

- **How can Israel’s mammoth development take place without depleting its natural resources to the point of no return, irrevocably destroying the environment?**
- **How can we prevent the collapse of the national infrastructure systems and ensure an equitable distribution of the fruits of development between various socio-economic groups?**
- **How can we reconcile between the prevailing "business-as-usual" ethos, subjected to "market forces" and local, sectoral short-range pressures, and the imperatives of comprehensive, consistent and long range planning concepts?**
The Planning Environment of Israel in the 21\textsuperscript{ST} Century

"Israel 2020": The Master Plan for Israel in the 21\textsuperscript{ST} Century has developed three orientation scenarios that predict the major "external" influences that may define the planning context for the country in the future.

These scenarios were developed by multi-disciplinary teams, applying techniques such as brainstorming, simulation and role-playing, in order to envision future trends and at the same time identify opportunities for realizing cardinal national goals using sophisticated planning components.

The scenario of \textit{Israel in the Path of the Developed Countries} establishes the country’s trends and rates of development using a comparative analysis with occurrences in twenty-four developed countries during the past four decades. The analysis demonstrates that Israel will be able to close its current gaps with the most developed western countries, without having to bear the heavy social and environmental cost paid by some. It also argues that Israel's enormous development rates should not necessarily be seen as a burden, but rather may become the main springboard for the country's progress. However, in order to undergo the transformation into an equitable and prosperous post-industrial society, Israel's growing population must harness its forces for the building of sufficient and qualified human capital via an education system, and the promotion of a positive immigration balance. This transformation will also depend on the building of a modern, environmentally conscious infrastructure and the organization of an economy based on relative spatial advantages. Israel potentially possesses a great advantage in that most of its infrastructure in the 21\textsuperscript{ST} century will be entirely new. If it will also be innovative and technologically sophisticated, then Israel, more than most countries, will acquire a built up form that will serve the requirements of the 21\textsuperscript{ST} century.

The scenario of \textit{Israel and the Jewish People} anticipates that in the coming generations, Israel will become the demographic gravity center of the Jewish people. Forecasts conducted within the framework of "Israel 2020" indicate that for the first time in two thousand years, nearly half of the Jewish people will be living in Israel, including two thirds of the young generations. Under such circumstances, Israel will attain an increased responsibility for the education of the younger generations of the Jewish people, and strengthen its importance within the Diaspora network. Israel will be the sole center capable of promoting relations among all Jewish communities. Israel's ability to protect the Jewish people is derived from its being a political entity, committed to assisting Jews, ready to offer them immediate citizenship under the Law of Return. National planning must ensure the country’s ability to embrace future surges of immigration by preserving extensive land reserves. Israel's ability to maintain cultural ties with all Jewish communities in the Diaspora is based on its heterogeneous social fabric: it is committed to honor the heritage of all streams and movements in the Jewish world. The congruence of the national boundaries and the "Holy Land" heightens Israel's responsibility to preserve the collective memory of sites and landscapes that hold a place in the history and culture of the Jews, particularly in light of the clash between preservation efforts and the intensification of development.

The scenario of \textit{Israel in an Environment of Peace} assumes that during the horizon of the Master Plan, peace treaties will be established between Israel and its Arab
neighbors, and economic links will be forged. Under these circumstances, fundamental changes in the prevailing planning environment and the embedded conceptions for the organization of the national space will be necessary. In an era of peace, borders will be opened and Israel will no longer function as an "island" in a hostile environment. It is very likely that the Israeli economy, with its modern services and expertise in knowledge-intensive industry and technology, will become a regional center for business and financial services. However, while external conflicts may succumb, internal strife in the social fabric of the Israeli society may intensify, due to two central processes: An inequitable distribution of the economic benefits of peace coupled with a decline in the solidarity that characterized the Israeli society when it was under siege. The National Planning Agenda will therefore have to deal with new challenges: mainly, how to strengthen peripheral border regions, and connect them to the country’s center by improving their infrastructures and initiating cross-border planning. In addition, it will be necessary to monitor the negative environmental impacts, which are sure to arise with the opening of the borders. It will therefore be necessary to draw environmental treaties with the neighboring countries, so as to prevent cross-border damage, and establish regional recycling policies.
The Range of Options for the Future Spatial Organization of Israel

"Israel 2020": The Master Plan for Israel in the 21st Century defines the range of multi-dimensional options for the future spatial organization of the country.

In order to focus on the range of options for Israel's Master Plan, five principle alternatives were developed. All five alternatives share a common premise derived from the scenarios of its future, that is: "Israel is a developed country which offers a national home for all Jewish people, and maintains peaceful relations with its neighbors in the Middle East." Yet, on this equal basis, each of the planning alternatives was developed to achieve, to the extremity, different goals, while remaining within the limits of reason. Thus, the alternatives define the options’ space, presenting a wide range of planning options for Israel. From this range, the attributes of an optimal mix were selected. This is the National Spatial Plan: the comprehensive national long-range plan for Israel in the 21st century.

- **The "Business as Usual" Alternative** is positivistic in nature and assumes that the existing trends of development will continue, with no major planning interventions influencing the expected outcome of market forces and other motivations dominating the Israeli society. This is a "default alternative" exemplifying the outcomes of the lack of consistent planning in the coming decades.

  The other four alternatives are normative in nature, each maximizing a specific set of planning goals: The two economic alternatives endeavor to promote economic independence and stability over time in order to ensure maximum growth, in light of the potential for the mobilization of financial capital, human capital and other resources. The other two alternatives advocate social equity and support environmental values.

- **The Economic Alternative** highlights industry endeavors, directed at achieving growth by the promotion of knowledge intensive industries.

- **The Economic Alternative** highlights service endeavors, achieving growth by promoting productive services, coupled with research and technological development.

- **The Social Alternative** advocates the value of "quality of life for all", suggesting mediation strategies between opposing social groups and alleviating existing gaps in the Israeli society.

- **The Physical - Environmental Alternative** supports sustainable development in face of increasing spatial density, and the depletion of land resources. It concentrates on the need to preserve the scenic and environmental uniqueness of various regions of the country.
Multi-disciplinary planning teams developed the five alternatives, each yielding a variety of solutions for the principle issues. These issues relate to:

- priorities for economic development;
- comprehensive land use;
- concentration versus dispersal as guidelines for development;
- the spatial balance between population and employment;
- spatial distribution of wealth;
- metropolitan roles;
- the reciprocal relationship between built and open spaces;
- the role of the government in the planning system.

Each of the solutions for a given alternative was held consistent with its rational and thus is different, for most of its components, from other alternatives.

When the alternative plans were fully consolidated, they were evaluated by experts from different disciplines. The evaluation addressed 32 criteria, covering issues of economics, socio-economics, sociology, education, spatial layout, environmental sustainability, natural resources, transportation, security, implementation and foreign relations. The resulting data was analyzed using different analytical tools in order to find the reciprocal relationships between the different criteria with regard to the planning objectives. The findings formed the basis for the final Master Plan, called the **National Spatial Plan**, based on a synthesis of the preferred characteristics of each of the normative alternatives. Upon completion, the resulting Master Plan was evaluated by the same criteria as the alternatives. The results indicated that the **National Spatial Plan** was more disparate from the "business as usual" alternative than any other alternative. It was therefore concluded, through the process of methodological planning, that it is indeed possible to realize an optimal plan, which fulfills most of the national goals. However, since it is opposed to the market forces, this realization will not occur by itself. Sophisticated intervention will therefore be essential if the chosen **National Spatial Plan** is to become a reality.
The Vision of the Future - The Spatial Organization Plan for Israel

The National Spatial Plan directs the future spatial organization development of Israel according to principles of Concentrated-Dispersal: on the national level development is dispersed, whereas on the regional level it is concentrated. The plan seeks to direct development to the northern, and particularly to the southern peripheral regions of Israel, in order to decrease socio-economic disparities, and preserve the open space in the central region. Development within each region is concentrated in order to materialize the benefits of urban agglomeration, associated with economies to scale; high-level services and infrastructure, and high standards of spatial equity between different population groups.

The following are implementations of the principle of Concentrated-Dispersal, within the country’s division into seven regions:

- **Three "Urban Regions":** These regions are located in the north, center and south, covering 20% of the country’s area and at present 80% of its population. These regions are characterized by high population density, a hierarchy of cities, towns and rural areas and the presence of employment centers, services and infrastructures.

- **Two "Intermediate Regions":** These regions serve as buffers between the urban regions. At present they maintain a spatial equilibrium, balancing 14% of the country’s area with 12% of its population.

- **Two "Open Regions":** These regions are located in the northern and southern peripheries, possessing a high concentration of natural resources and scenic areas. They include 66% of the area of the country and a meager 8% of its population.

This division of the country into regions enables the formulation of clear planning guidelines for their future development. Furthermore, these guidelines are coordinated so that each region will function within the national framework. The Master Plan also adapts general guidelines to unique locations, such as heritage sites and natural reserves.

**The Urban Regions** are differentiated by their special character and functions in the national arena. Transportation systems are planned so as to establish a "Region of Choices" that promotes diversity and spatial specialization. **The Urban Region** model includes clear boundaries that are intended to concentrate future development, thus preventing "overspill" and "suburban sprawl" into adjacent regions. These measures dictate the location of economic activities upon the corners and along the edges of the urban regions, while at their center, a large open land reserve area called a "green heart" is planned, easily accessible to the surrounding population.

**The Intermediate Regions** combine existing rural areas and sites, chosen as worthy of preservation. Planning efforts in the intermediate regions are geared to prevent suburban sprawl and metropolitan overspill between urban centers. The Intermediate Regions model reinforces urban activities along the main traffic routes and intersections, while preserving the open spaces that separate them.

**The Open Regions** are areas that span over extensive natural environments. The model of Open Regions promotes preservation, limiting urban development to the
intersections of the main roads, where the centers of the highly scattered rural communities are located. Towns, villages and infrastructures are planned so as to be compatible with natural forms, and special care is given to their perception by passing traffic.

In addition to the seven planning regions, the plan proposes a parallel division of "Protected Open Regions for Preservation and Nurture". The planning model for these regions is to expand the scope of environmental protection around concentrations of distinctive sites, such as nature reserves, scenic areas, national parks, groves and forests. The demarcation of the sites meriting protection is based on a comprehensive, nation-wide evaluation of environmental attributes (such as concentrations of bas-relieves, rocks, flora, fauna, historic buildings etc.), according to a complex range of criteria (such as the potential for preservation, rarity of attributes and their cultural, scientific and economic value). The results of this evaluation serve as guidelines for development in each region, thus promoting uniqueness and diversity on a nation-wide scale.

_The National Spatial Plan expresses a fundamental shift away from the prevailing territorial conflict between different population groups in the country, towards a new concept of shared interests and spatial balance._ The plan promotes equality between Jews and Arabs, between residents of the central cities and residents of their outskirts, and between those living in the heart of the country and those living on the periphery. These goals are obtained by emphasizing the relative advantages of each planning region, and by respecting the cultural distinction of each social group. Integration of population groups is also supported by well-designed neighborhoods in a hierarchy of cities, towns and villages.

One of the main principles of the Master Plan “Israel 2020” is the policy of preserving land and water resources and ensuring their quality. This concept has been internalized in the national spatial organization plan and the preservation of open spaces. The efficient use of natural resources is promoted by efficient land use models for the various planning regions. These include implementation policies for increasing the efficiency of land use by the public sector, intensive land use patterns for the private sector and plans for recycling inefficiently used land. The plan promotes the perception of land resources as a three-dimensional entity, that should be utilized in innovative and creative ways.

"Israel 2020": The Master Plan for Israel in the 21st Century establishes two central principles for spatial organization. First, the increasing demand for development can be satisfied parallel to conservation objectives, while protecting precious natural resources in all designated regions of the country. Secondly, a new planning perception, backed by substantial public consent, is imperative, in order to ensure that high standards for quality of life in Israel in the 21st century are maintained. That is to say, preservation of open spaces must be seen as equally valuable as development, and every spatial organization plan must accommodate this duality as the basis for the quality of life that accommodates the objectives of the 21st century.
"Israel 2020": The Master Plan for Israel in the 21st Century - has been presented to the general public in a series of 18 reports. These reports include:

- An analysis of the unique planning issues facing Israel, as well as the opportunities they hold as the basis for long range planning;
- A description of the planning methodologies utilized;
- Forecasts of the planning environment in the 21st Century and definitions of the national planning goals;
- A set of Planned Alternatives for the future spatial organization of Israel and their evaluation;
- The synthesis of an optimal Master Plan, and a detailed discussion of its principles and implementation policies.

The National Spatial Plan is the comprehensive achievement of this methodological planning process. It is a spatial organization plan for Israel, providing rational solutions to the Country's unique planning problems, while suggesting methods for transforming problems into advantages, so that they promote the economic, societal, and environmental goals of the country.

The National Spatial Plan is not a forecast and will not come about of itself. If market forces are left uncontrolled and trends from the past continue to dictate future processes, the country will find itself threatened by economic recession, due to a collapse of the physical infrastructure, a deterioration of natural resources, and an aggravation of conflicts within the Israeli society.

For this reason, the planning process was not restricted solely to the delineation of an ideal National Spatial Plan, but rather developed implementation methods as well, including policy guidelines that suggest the schedule and order of implementation, starting from the present time. A set of policy documents for "Israel 2020" clearly point to those actions that must be carried out immediately, and to those that must be avoided. They indicate how the government can intervene in order to remedy market failures, by initiating the planning and building of national and regional infrastructures.

The creation of "Israel 2020" has been a far ranging venture, gaining momentum as it progressed, and having an enormous impact on planning thought and practice. Originating from a small group of architects and town planners, it drew an increasing number of adherents that participated in its creation, and joined to advance the causes that it promoted. In "Israel 2020", leading planning professionals and representatives of thirteen government ministries worked together and cooperated in a fruitful partnership. Each group contributed its strengths and talents to create an integrated plan, which is both visionary and practical. At the end of this process, the outputs were delivered to the decision-makers, who are responsible for the implementation of the plan.
"Israel 2020" has provided a pioneering example for comprehensive long range national planning, in its successful involvement of governmental institutions, that have traditionally been left outside the planning process. In opening the planning process to the participation of these institutions, the "Israel 2020" team has shown that crucial national interests are represented in the decision-making process. It also encourages collaboration between government institutions, thus strengthening the implementation prospects of the plan.

"Israel 2020" has been the driving force for the recent practice of governmental institutions drawing comprehensive statutory plans at the national, regional and metropolitan levels. "Israel 2020" has inspired these plans with its vision of the National Spatial Plan, and served them with a wide and coordinated knowledge base, that enables detailed elaboration of the principles set forth in the Master Plan.

"Israel 2020" has focused public opinion on the urgency of national planning, and defined the need for the reorganization of governmental powers to steer this complex endeavor. The Prime Minister’s Office has recently been declared as the authority responsible for national planning. Hopefully, this act will promote national planning efforts, while enhancing collaboration between public authorities.

*The future is probably beyond the horizon of our vision but not beyond the range of our control.*

*Robert F. Kennedy*
The tasks of comprehensive long range national planning do not end with these accomplishments. There is a pressing need to continue the venture of long range national planning and extend its scope beyond the coming decades. In view of the Peace Scenario, there is also the need to plan for the changing role of Israel in the region.

Although we do not know in detail the outcome of the peace process, or when and how it will finally materialize, it is becoming clear, in broad terms, that an independent Palestinian entity will eventually be established alongside the state of Israel. Mutual cooperation will be a necessity for both nations, as the space between the Mediterranean Sea and the Jordan River is a single geographical zone. With this in mind, a new planning view of Israel is in need, upon a strong regional base, rather than a nation that is located at the outskirts of Europe.

The S. Neaman Institute for Advanced Studies in Science and Technology at the Technion, has recently launched several long term activities intended to set the basis for developing national policies in areas where sciences, technology, economy and society interact. As an independent policy research “Think Tank”, it established itself over more than two decades ago as the home for several multi-disciplinary teams of experts from academia, industry and government. They are concerned with researching and developing alternatives for national policies in a variety of fields, such as advanced industry, environmental policies and infrastructure and evaluating their socio-economic implications. During the past two years a major assumption of these researches is that cross border planning is crucial in view of the major political changes that are currently shaping our region.

A corner stone within this context is the continuation of the “Israel 2020” project within the framework of the S. Neaman Institute, into its second phase, for the second Jubilee of Israel, with an extended horizon to the year 2050.

The “Israel 2050” project at the S. Neaman Institute will draw upon the strengths of the Institute as a multi-disciplinary policy research institute with an established record of successfully bringing together experts from a variety of organizations and disciplines, to develop new concepts and issues of national significance.

The “Israel 2050” project will employ experts from the S. Neaman Institute, experienced planners of the “Israel 2020” project, as well as recruit new participants. The “Israel 2050” plan will analyze regional goals in planning and formulate principles that will coordinate the various national interests, in order to develop an effective policy for the target year. Thus, long term plans will be developed for the emerging reality of peaceful interaction and cooperation between Israeli and Palestinian entities.
Final Reports

Summary Report
Adam Mazor with the Senior members of the Project team

A National Spatial Plan
Adam Mazor and Michelle Sofer

The Range of Options
Adam Mazor and Erez Sverdlov

GENERAL POLICY GUIDELINES
The Implementation Process and Land Policies
Rachelle Alterman

Spatial, Economic and Municipal Aspects
Arie Shachar, Dafna Schwartz, Raphael Bar-El and Eran Razin

THE MICRO SCENARIOS
Israel in the Path of the Developed Countries
Adam Mazor, Jona Bargur and Tamar Trop

Israel and the Jewish People
Anat Gonen and Smadar Fogel

Israel in the Environment of Peace
Raphael Bar-El, Shlomo Gazit, Adam Mazor and Nuritte Corren

THE RANGE OF OPTIONS
The “Business as Usual” Scenario
Jona Bargur and Amnon Frenkel

Economic Focused Alternatives
Arie Shachar, Raphael Bar-El, Dafna Schwartz and Daniel Felsenstein

A Socially Focused Alternative
Naomi Carmon

A Physical and Environmental Alternative
Arie Rahamimoff and Amos Brandeis

SECTORIAL POLICY
Transportation and Telematics
Ilan Salomon, Yehuda J. Gur and Eran Feitelson

The Education System
Elad Peled

Open Spaces
Motti Kaplan and Oren Dayan

The Energy Economy
Jona Bargur and Erez Sverdlov
Directions for Sustainable Development
Eran Feitelson, Uri Marinov and Motti Kaplan

National Security and Considerations
Erez Sverdlov and Amiram Derman

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