MINISTRY OF CONSTRUCTION AND HOUSING

Israel National Report for Habitat III

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Contributors to this report

- National Focal Point: Nethanel Lapidot, senior division of strategic planing and policy, Ministry of Construction and Housing
- National Coordinator: Hofit Wienreb Diamant, senior division of strategic planing and policy, Ministry of Construction and Housing
- Editor: Dr. Orli Ronen, Porter School for the Environment, Tel Aviv University
- Content Team: Ayelet Kraus, Ira Diamadi, Danya Vaknin, Yael Zilberstein, Ziv Rotem, Adva Livne, Noam Frank, Sagit Porat, Michal Shamay
- Reviewers:

  Dr. Yodan Rofe, Ben Gurion University; Dr. Emily Silverman, Hebrew University; Noam Segal, Israel Energy Forum; Merav Malul-Horev, JDC; Dr. Gal Hagit-Romano, Ministry of Interior
- Israel Bureau of Statistics
- Ministry of Construction and Housing
- Ministry of Environmental Protection
- Ministry of Foreign Affairs
- Planning Administration, Ministry of Finance
- Ministry of Interior
- Ministry of Transport and Road Safety

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Forward

This report is prepared in response to resolution 24/14 of the UN-Habitat Governing Council - "Inputs for and support to the preparatory process of the third United Nations Conference on Housing and Sustainable Urban Development (Habitat III)". The Council invited Member States to prepare national reports which consider the implementation of the Habitat II agenda, as well as new challenges, emerging trends and a prospective vision for sustainable human settlements and urban development, as a basis for the formulation of a "New Urban Agenda".

The report presents urban development in Israel between 1996 and the present, covering almost twenty years of rapid growth and significant challenges.

Israel is one of the most rapidly growing countries in the world, both in population and in GDP. In 1996, 5,157,700 people lived in Israel. By 2016, the population rose to 8,462,000, including over one million new immigrants. Most Israelis, over 90%, live in urban communities, where they have lived for the past twenty and more years.

The New Urban Agenda presents an opportunity to embrace cities and create a comprehensive urban vision, utilizing the country's enormous potential and creativity to ensure "no one is left behind".

Method for preparing the National Report

The Ministry of Construction and Housing (MoCH), in coordination with the Israel Planning Administration, the Ministry of Interior, the Ministry of Environmental Protection (MoEP), and other state agencies, is leading Israel's preparations for Habitat III. This undertaking is organized as a multi-stakeholder process, reflecting the varied interests and different voices, needs and understanding of development that form the new Urban Agenda.

The Israeli process was a broad initiative, bringing together government, local government, civil society, academia, Parliament and varied professional organizations. In 2015, they established the Israel Urban Forum and together with the Ministry of Construction and Housing, organized the First Convention on Urbanism, in the city of Acre. More than a thousand people attended the convention, taking part in discussion groups, round tables and spontaneous exchange of ideas and know-how. At the convention, MoCH launched the **National Urban Committee**, a broad-based venture for delineating a new Urban Agenda for Israel. Partners to the venture include representatives of national and local government, alongside representatives of civil, academic and business sectors, as described below:

Government;

Ministry of Construction and Housing

Ministry of Energy and Infrastructure

Ministry of Environmental Protection

Ministry of Finance

Planning Administration, Ministry of Finance

Ministry of Foreign Affairs

Ministry of Interior

Ministry of Social Equality

Ministry of Transportation and Road Safety

Ministry of Welfare

Local Government;

Forum of 15 Independent Cities

Municipality of Jerusalem

Municipality of Tel Aviv Yafo

Union of Local Governments Israel

Academia;

Bezalel Academy of Art and Design

Ben Gurion University

Hebrew University

Sami Shamoon College of Engineering

Tel Aviv University

Technion – Israel Institute of Technology

Civil Society;

Bat Yam Center for Mediterranean Cultures and Urbanism

Heschel Center for Sustainabiity Israel Urban Forum

Jerusalem Institute for Israel Studies

JDC – Jewish Distribution Committee, Israel

Merhav - Movement for New Urbanism

Society for Protection of Nature

UNESCO Israel

A six months process followed, defining the principles and tools for an Urban Agenda for Israel. Around 200 people participated; attending at least four meetings each, and compiling a set of over 120 recommendations, amendments and tools for advancing sustainable urban development in Israel.

The National Report was written in congruence to the work on the National Urban Agenda, overseen by the National Urban Committee, through the direct responsibility of the MoCH. A professional team, organized by the MoCH, compiled the report, which was sent for comments to all steering committee members (see chapter VIII for details).

Data for the report is based mostly on surveys and compilations of the Central Bureau of Statistics of Israel.

Signed,

Dr. Orli Ronen,	Nethanel Lapidot,	Hofit Wienreb Diamant
Porter School for the	head of senior division of,	senior division of, strategic
Environment Tel Aviv University.	strategic planing and policy, MoCH.	planing and policy, MoCH

CHAPTER I **Urban Demographic Issues**

1. Managing rapid urbanization

8,296,900 people lived in Israel at the end of 2015, with a yearly growth of 1.8%. By 2025, population is expected to number around 9.8 million people, reaching 11 million by 2035.

Israel is highly concentric and urban. Over 91% of the population live in cities, with more than 55% concentrated in and around the capital (Jerusalem) and the business capital (Tel Aviv-Yafo).

Fig. 1: Urban population in Israel; 1996, 2006, 2015 (Source: CBS, Statistical Abstract of Israel)

	2015	2006	1996
%	91%	92%	90%
Rural population	725,800	585,800	600,300
Urban population	7,571,100	6,531,200	5,157,700
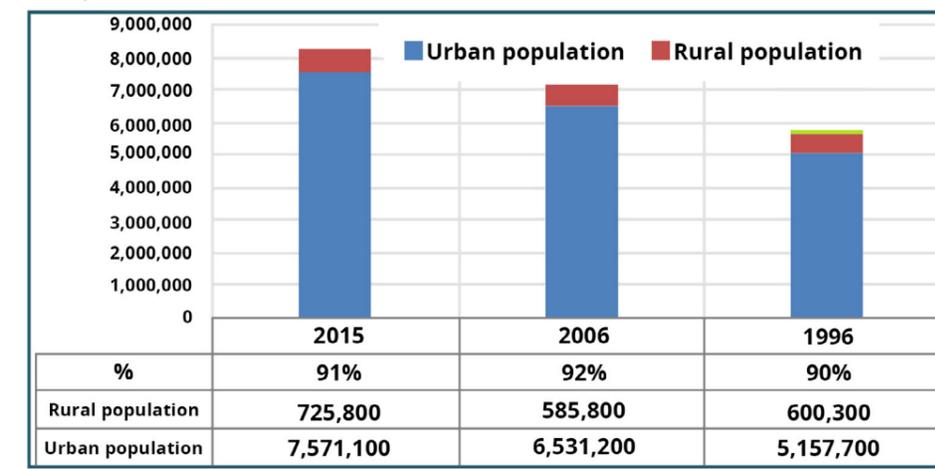
Israel's central cities are growing and thriving, offering a standard of living similar to other OECD countries. While the center is surging ahead, the periphery, already at a disadvantage in 1996, is still weak. However, in the last decade, the government has made significant investments, especially in the south, creating economic drivers for employment and development. These are gradually affecting the standard of living and access to new opportunities for the population.

Increase in population is due mainly to natural growth, with an additional contribution, in the Jewish sector, due to immigration. While the 1990's were distinctly immigration years, when more than one million Jews moved from the USSR to Israel, the last decade is stabilizing around 14% international immigration out of total growth.[1] Israeli population is comprised of two major groups (as can be seen in Table 1).

Table 1: Ethnic groups; 1996, 2006, 2015 (Source: CBS, Statistical Abstract of Israel)

	Total	Jews	Arabs
1996	5,757,900	80%	18%
2006	7,116,700	76%	20%
2015	8,388,100	75%	21%

Superimposing these two categories, Israeli society is extremely diverse with numerous sub-groups.

Israeli society is also relatively young. Children between the ages of 0 to 14 comprise 28% of the population .At the other end of the scale, the proportion of people who are 65 or older is

[1] CBS; National demographics, sources of population growth, 1996-2015.

much lower than other OECD countries.[2][3]

Israel's development trends are challenging for a small country. High economic development together with high population growth of 1.8% annually, generate a growing demand for more and better amenities, services, housing and infrastructure. While, land and natural resources are extremely limited and decreasing (see chapter III for more) creating an ever-growing scarcity in natural resources.

In 1996, density in Israel was already among the highest among developed countries, 260.9 people per square km. This figure includes the wide arid expanses of the Negev. Excluding these, density rises much higher. In 2014, there were 366 people per square km., while in the Tel Aviv metropolitan area the density averages 7,841 people per square km, rising to 24,214 people per square km. in the ultra-religious town of Bnei Brak.

Israel is divided into six regions and four metropolitan areas. The metropolitan areas are home to 69% of the population and comprise about 9% of the area.

The Tel Aviv region together with the central region comprise the Dan/Tel Aviv Metropolitan area, home to more than 40% of Israelis. The other metropolitan converge is spread around the large cities of the regions:

• The Haifa Metropolitan area – 9%

• The Jerusalem Metropolitan area – 14%

• The Beer Sheva Metropolitan area – 6%

Table 2: Demographics of the four Metropolitan Cities (Source: CBS, Special Report on the Large Cities of Israel, 2015)

	Jerusalem	Tel Aviv	Haifa	Beer Sheva
% Growth 2010-2014	2.4	1.8	1.4	0.9
Internal immigration balance	-6.7	-0.9	-1.1	-0.8
Density square km	6,003	8,233	4,293	1,712
Median age	23.7	35.3	38.1	33.6

2. Managing rural-urban linkages

91% of Israel's inhabitants live in cities and towns, while 85% of the territory is under the jurisdiction of Regional/rural Councils, administrating small rural communities. A geographical zone will include two types of local government, regional and urban, distinguished mainly by size; communities of under 2000 inhabitants belong to a regional authority; larger ones have an independent local government. Israel has one of the highest ratios of municipalities per capital, as each metropolitan area or functional urban space is divided between a relatively large number of local and regional councils.

Since the early 90's the government, especially the Ministry of Interior (until 2014 the ministry was responsible both for planning and local government, since, the Israel Planning Administration was moved to the Ministry of Finance) instigated several initiatives to consolidate smaller communities and to create linkages and co-dependency between the local and the regional governments. Co-dependence and functional cooperation has already proved successful in environmental issues and tourism, where sharing resources and expenses is efficient and attractive. There are over 50-shared environmental units responsible for environmental quality,

24 sewage corporations, and about 20 varied tourism corporations. Pooling their resources together, supplemented by dedicated government support, enables these cooperative ventures to build facilities, share campaigns, develop regional marketing and internet sites, and organize tourism attractions and festivals.

Migration from rural to urban areas and vice versa is minimal. Growth - both urban and rural - is mostly organic, reflecting scarcity of land in rural areas and concentrated development in urban areas.

The exception to this trend are the Bedouins, mostly in the Negev region. In the past decades, the government instated numerous plans to settle the Bedouin nomads in permanent settlements. In 1980, only about 13% of the Bedouins in the Negev were living in permanent urban settlements. By 2014 over 60% are living in seven permanent settlements, totaling around 160,000 people - with one third living in Rahat, the only Bedouin city in Israel and the second largest Arab city.[4]

Israel is a small, geographically diverse country, with the mountainous Galilee in the north, the dense plain and hills in the center, and the Negev desert in the south. These also constitute the center and the periphery. The Ministry for the Development of the Negev and the Galilee was established primarily to strengthen the periphery and improve the linkages, between urban and rural communities. Recently the ministry and the local authorities (for more see chapter V) adopted cluster strategies, designed to connect urban and rural businesses, and to develop regional strategies for tourism, transportation, and economic development.

Through the national planning system, the National Planning Administration, which is part of the MoF, has created mechanisms that compound both geographical and functional regions, linking de facto urban and rural authorities. The National Masterplan Plan 35 , recently reaffirmed by the National Planning Board, (see more chapter II) transcends the local and municipal levels by designating planning regions, including the four metropolitan areas. The planning regions are composed of both urban and non-urban "fabrics", which are governed together. The directives of the plan, create regional planning committees that oversee and direct the planning linkages between the different statutory entities in a region.

While most of the urban-rural linkages are traditionally institutional, recent technological opportunities, and a growing sense of community, are bringing new actors into these arenas. Farmers are connecting directly with consumers in the city, and environmental NGO's are sharing agendas and activities.

3 Addressing urban youth needs

92% of Israeli young adults are urban, slightly more than the rest of the population, with an additional over-representation in Jerusalem and Tel Aviv-Yafo. Israeli youth, both male and female are unique in their life course, due to the mandatory military service[5] that postpones employment and higher education by an average of two to three years.

In general Israeli young adults are postponing entering adulthood in terms of education, employment, leaving the parental home and marriage. The number of Young Adults living with their parents (among the 22-28 age group) has risen since 2005, while the rate of marriage has declined.[6] These trends even out though in older age groups, so by the age of 35-40 young Israelis and older Israelis show similar characteristics.

[2] "Population growth, OECD". OECD. 2012.
[3] "Society at a Glance 2014 Highlights: ISRAEL, OECD", OECD, 2014.

[4] Regulating Bedouin Settlement in the Negev, the Israeli Parliament Center for Research and Information, 2013.
[5] Excluding Arab youth and Ultra-religious youth.
[6] The Young and the Restless – Organizations working with Young Adults, an Analysis, Midot, 2015.

There has been great progress over the last decade with regard to recognition of the Young Adult status. Whereas previously the term was hardly used, now it has a significant presence within the government, municipalities, and civil society organizations.

On the state's behalf, the MoCH is is very much invested in supporting young adults as change-makers, the ministry initiated a country wide intervention of establishing and supporting 117 young adults communities in the periphery, and 50 youth development centers. This nation-wide effort was joined by Ministry of Social Equality who launched additional 40 centers.

In the past twenty years, Higher Education has become more prevalent in Israel, with the change in legislation in 1993 that recognized non-research institutions such as academic colleges. In 1996 there were only seven colleges in Israel with 3,508 graduates. The total number of graduates, including university graduates, was 22,432. By 2014, there were 64 Academic Colleges in Israel with 33,106 college graduates, in addition to 41,952 university graduates, totaling 75,058 - a rise of more than 300%. Higher education in the Arab sector is specifically showing an impressive gain in the last two decades, particularly among women.

Fig. 2: BA Nominees 1996-2014 (Source: CBS, Statistical Abstract of Israel)
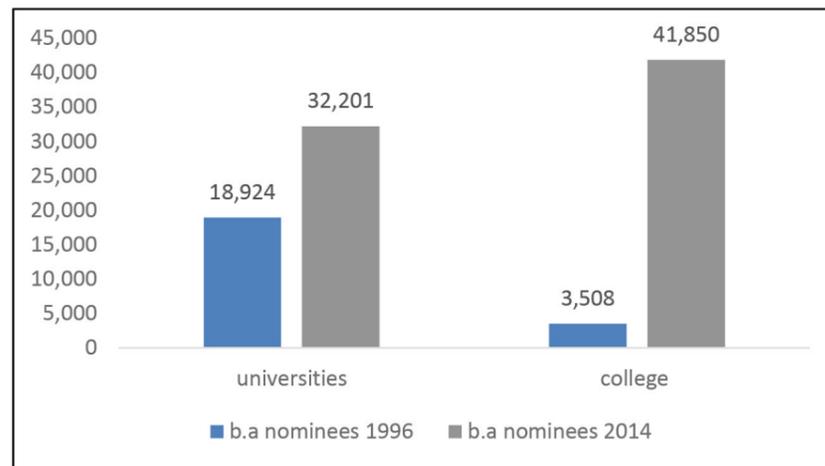
The employment market has remained relatively stable and rising in the last decade, among all age groups (see Fig. 3). Young adults are increasing their share in the workforce, this is true across the board but in particular among sectors who were underemployed in the past. Employment of Young Arab Adults is rising significantly, more so among young women. State investment in education and capacity building, especially for Arab women, has increased considerably.

Fig. 3: Employment rate by age groups; (Source: CBS, Statistical Abstract of Israel)
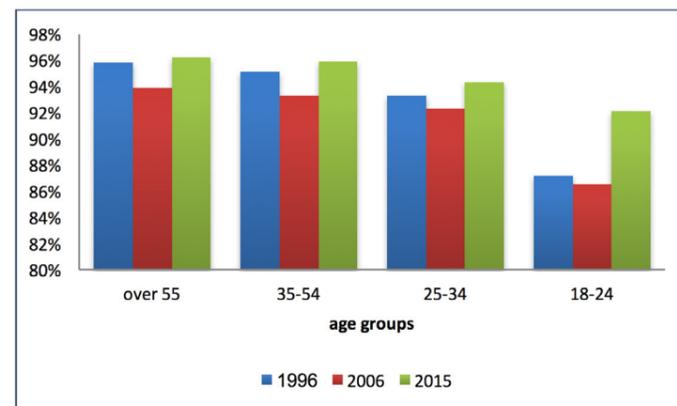
Cities also realize that young adults can be a tremendous boost for urban wellbeing and development. They are offering rent subsidies, opening hubs and innovation centers, and expanding higher education. With leading mayors under the age of 40, and most city councils including members representing young adults, cities are becoming the focal point of meaningful engagement for young citizens.

4. Responding to the needs of the aged

In 2006 the Israeli government established the Ministry for Senior Citizens,[7] acknowledging that this age group is predicted to grow more than any other age group in the coming decades, from 11% of the population (2014) to close to 15% by 2035= over 1.5 million people.

Fig. 4: Life Expectancy 1996-2014 (Source: CBS, Statistical Abstract of Israel)
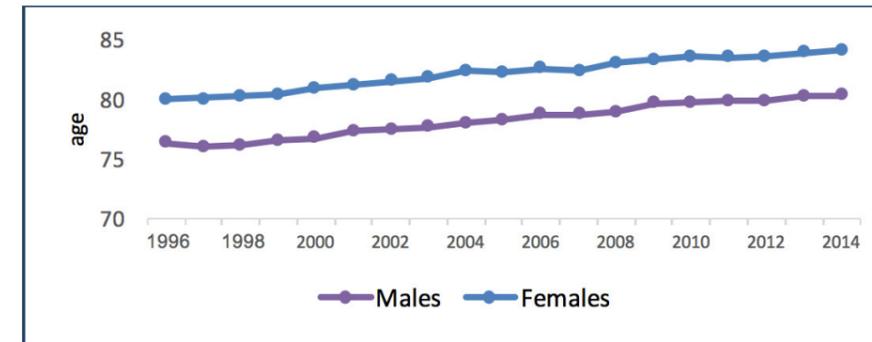
Life expectancy in Israel is one of the highest in the world, women live till **84.5**, while men live till **81.1**. According to the 2016 wellbeing indicators,[8] the elderly, when compared to other age groups, are the least satisfied with their wellbeing. Nonetheless, 81% indicated they are satisfied or very satisfied. A potential contributor to their sense of wellbeing is probably the fact that over 97% live, within the community, this is relatively high in comparison to other developed countries.

Senior citizens are among the most vulnerable members of society, as they become more dependent on the state and community for their subsistence and wellbeing. While there has been some progress in improving the living conditions of the elderly, the poverty rate among them is still high, especially among those with no pension savings.

The basis for care and rights for senior citizens is anchored in the Senior Citizen Law which defines the retirement age - 67 for men, 64 for women - together with a series of benefits and discounts in public services, including 50% discount on public transportation, medicines and property tax. In line with the basic framework set by the law, a strategic framework was devised for advancing the quality of life of seniors, executed by the MoSE through numerous programs and projects:

Enhancing quality of life:

"Tuesday in Suspenders" – a series of free cultural programs and activities held on

Tuesdays across the country.

"Here Live Together" – a joint program with the MoCH and the National Students

Association, encouraging students to cohabit with seniors.

Senior Employment – dedicated employment centers and an online portal offering employment opportunities for seniors, also a recently launched pilot project expanding employment of civil servants beyond retirement .

Substantiating basic rights – advocating and expanding state support mechanisms to ensure seniors are aware and have access to their legal rights.

Expanding voluntarism – 100,000 volunteers registered in 2014.

Adult Learning – enabling seniors to continue studying.

Healthy Life – operating special fitness programs designed for elderly citizens, including specific facilities for sports such as table tennis and Pétanque.

Most Israeli seniors live in cities, with over-representation in the larger central cities, like Bat Yam and Haifa, where 20% of the population is over 65. The state is encouraging municipalities to develop a strategic master plan for senior citizens. These outline four intervention areas; local policy, public awareness, physical urban space, and community organization, 62 plans are already completed. With the implementation of all these plans, 45% of Israel's Urban Senior Citizen will have access to improved living conditions and wellbeing.[9]

5. Integrating gender in urban development

At the end of 2014, there were 3,042,900 women aged 15 and up living in Israel. Women 65 years old or older constituted 12% of the total female population, compared to 9.6% among the male population.

Gender equality is enshrined in Israel's 1948 Declaration of Independence implemented through law and public policy, starting with a landmark piece of legislation known as the Equal Rights for Women Law of 1951, followed in 1996 the Equal Pay Law.[10] Through the years, advancements in the institutional, civic and private spheres were made to substantiate these rulings. Institutional representation for Gender Equality is widespread, the Israeli Parliament established a permanent Gender and Equal Rights Committee in 1993, and in 1998 Israel's Authority for the Advancement of the Status of Women was legislated and established within the MoSE, followed by mandated Women's Rights Consultants in every government office. In 2014 the Israeli government adopted Decision 2331 for the promotion of gender equality and gender mainstreaming and committed itself to establishing an inter-ministerial committee to formulate a comprehensive action plan to promote gender equality in Israel. In 2000, the Municipal Women's Rights Consultant law was passed, requiring each local authority to nominate a dedicated staff person for this position. In the area of employment, the Equal Employment Opportunities Commission acts as an ombudsman in cases of workplace discrimination against women and minority groups. The Commission has the authority to investigate complaints of discrimination on the grounds of gender, pregnancy, fertility treatments, and parenthood and to bring legal action against employers who violate anti-discrimination laws. While the discussion of women's rights and gender equality may be widespread and mainstreamed, application is less commendable. Gender inequality is still prevalent as can be seen in the following table:[11,12]

Table 3: Gender Inequality - Key Indicators (Source: Adva Center, 2014)

	Female	Male
Average wage 2014	nis 7,439	nis 11,114
Management positions in Academia	32.2%	67.8%
High-tech	36.2%	65.8%
Part Time Employment	33%	13.5%
Parliament members	22%	78%
Cabinet members	4	23
Local Council members	367	2423
Mayors	3	252

Gender inequality is most prevalent amongst Israel's two main sectorial groups – the ultra-orthodox Haredi sector and the Arab sector, especially regarding participation in the workforce. The state invests substantial efforts and resources to the advance both Arab and Haredi women.

In the last decade, there was a significant increase in the number of Arab women entering higher education frameworks, especially in the regional colleges located near their places of residence, and today they make up a majority of the Arab student population. There has been a parallel increase in high school graduates among Arab female pupils.

The same trends characterize Haredi (Ultra-Orthodox) women. In 2005, 54% of ultra-orthodox women participated in the workforce while 2013 showed an impressive increase to 68%. While workforce participation rates are relatively high, the range of occupation options for Haredi women is limited. The majority of them work in education, holding part time and low paying positions. These positions give the Haredi women the opportunity to take part in the workforce while staying within the confines of their community and strict religious life style.[13]

Several government ministries and institutions are working today to integrate the Haredi population in the work force; the Ministry of Economy and Industry, the MoCH, the JDC (Joint Distribution Committee, Israel), the Ministry of Education, the Council for Higher Education and the army.

While institutional Gender inequality is recognized, and inroads made, Spatial Gender Equality, specifically in urban areas, is just emerging as a planning concern. The Parliament Research Department published a preliminary survey on the issue in 2005, outlining key topics, including transportation, accessibility for municipal services, sense of security and participation in planning processes. In 2013, the Gender Equality Committee of the Parliament held a special meeting on Spatial Equality, attended by government and civil society representatives. The committee recommended integrating gender requirements into the planning process, specifically in relation to urban public space and urban green spaces.[14]

6. Challenges Experienced and Lessons Learned

Management of rapid urbanization

In 1996, more than 90% of population already lived in urban communities, (rising to nearly 92% by 2015). Most of these, around 50% live in communities smaller than 50,000 residents, with over 900 communities of less than 20,000. In the last twenty years, the ratio of urban versus suburban residents has not changed, while the quantity of smaller communities has almost doubled. New suburban development is accessible and more lucrative than urban regeneration

[9] Master plans for Senior Citizens, Senior Citizens Conference, Ministry for Senior Citizens, 2014.
[10] Mfa 2016.
[11] Changes in the status of women in government offices, Steinberg, P., Van Leer Institute, 2012.
[12] 10 Facts You Probably Didn't Know About Women in Israel, Adva Center, 2014.

[13] Employment of Women, the Israel Parliament Center for Research and Information, 2015.
[14] Gender aspects in urban planning, the Israeli Parliament Center for Research and Information, 2015.

or rehabilitation, leading to wider dispersion, with high reliance on roads and private means of transportation. The National Master Plan 35 - was instated as a key instrument for curtailing these trends. Curbing expansion is one side of managing sustainable urbanization, making cities more attractive is the complementary action. Joining these two tools together can turn suburbanization to urbanization.

Urban-rural linkage

Linking cities with their rural hinterland and urban environs requires recognized mechanisms and institutional structures, promoting and reflecting common values and needs. This understanding is evolving in the last decade, promoted to a large part by the Ministry of Interior. There is wide discussion of alternative or supplementary frameworks; from Metropolitan Municipalities to economic clusters.

Varied economic linkages, are growing, both in the four metropolitan areas and in the two rural areas of the Galilee and the Negev, this is supported by key strategies:

*   Development of Economic Clusters

*   Organizing regional tourism efforts

*   Establishing joint regional environmental units and associations

Addressing urban youth needs

Youth and young adults are the backbone of a thriving city, yet they are also most liable to migrate and leave home. Cities across the country should strive to become attractive to the younger generation, not only in terms of housing costs but also in terms of general wellbeing. The center offers opportunities suited for young adults, mostly education, employment and cultural stimuli.

Civic engagement is lower among young adults than the rest of the population. However, there are successful and inspiring social and environmental initiatives led by younger Israelis, such as Urban Kibbutzim, Youth Centers and Urban Cooperatives. These promising beginnings can be scaled up and replicated, by both state and municipal support. The MoCH has already initiated a country wide intervention of establishing and supporting 117 young adults communities in the periphery.

Public participation is less prevalent among the younger population, who tend to shy away from formal institutions. There are several successful leadership and internship programs, incorporating young adults within these systems, creating more opportunities, and reducing mistrust.

Focused attention to weaker sectors, especially to the younger population, has increased considerably, both for Arab and Ultra Religious youth, already showing increase in opportunities and employment.

Responding to the needs of the aged

The population is getting older, although less so than populations of other developed countries. As it is getting older, it is also becoming urban. "Empty Nesters" are moving back to cities, away from the single-family suburbs. This is a twofold reality: it can become an opportunity for urban regeneration, as well as a growing demand on city services. Until the past few years, addressing

the needs of the elderly has always been perceived as a welfare issue and not an urban or a development issue. This is beginning to change, as reflected by frameworks such as City Master-plans for the Elderly and Multigenerational Housing projects.

Integrating gender in urban development

Gender equality is well established in legislation and all formal manifestations. However, it is less established in employment, or spatial planning. The unique aspects relating to women and children in cities need to be recognized. These include transportation, accessibility for municipal services, sense of security and participation in planning processes.

There is also a need to recognize the unique needs of women in the Arab and Ultra-Orthodox sectors, creating safe and understanding environments for them to pursue educational and have access to employment opportunities.

CHAPTER II Land and Urban Planning

7. Ensuring sustainable urban planning and design

Israel's planning system is a complex hierarchy of planning committees, starting with local authorities, all the way up to the Planning Administration, the National Planning and government ministries that have spatial responsibilities such as; Housing, Transport, Environmental Protection and Infrastructure (see chapter III for more).

The National Masterplans superimpose this hierarchy. They direct national planning in a series of themes, ranging from infrastructures through open spaces, tourism and beaches to earthquakes. Recently the Planning Administration began to unify all outline plans into one comprehensive national masterplan,(ie: TAMA1) aiming to generate cohesion and common language.

On the local level, the City Council acts as the planning committee with additional representation of relevant stakeholders: government ministries, professionals and academics, and representatives of environmental organizations. This is a result of the unique 2002, "Organization Representation Law", guaranteeing places for environmental representatives in all committees throughout the planning hierarchy.

Currently, Masterplan 35 is at the top of the hierarchy. This integrated masterplan for planning, development and preservation was promoted by the Planning Administration, ratified by the government in 2005, and reaffirmed in 2016. The plan aims to respond to the country's development and building needs, while preserving open spaces and land reserves for future generations. Additional plans govern specific aspects of spatial development such as:

National Masterplan 13 – Coastal Masterplan

National Masterplan 22 – Forestry Masterplan

National Masterplan 23 – Railway Masterplan

However, as noted above, the Planning Administration is now promoting the approval of a unified National Master Plan no. 1 (TAMA 1) that will contain (and replace) many of the existing National Master Plans (13, 22 and 23 among others.)

Planning Guides

Alongside these masterplans, the spatial planning system utilizes varied tools, with differentiated levels of regulation – from direction and recommendation to legislation and supervision.

The MoCH published guidelines for planning works as early as the 1970s. The guidelines contribute to the setting of binding standards for planning and execution of projects in both public and private building frameworks. The guidelines are intended for planners, entrepreneurs and different planning and construction entities.[15] They do not limit the planner's latitude, but rather define the framework and expand possibilities, so as to assist in addressing planning challenges. Thus far, 19 planning guidelines were published, on a variety of issues, including:

- Guideline for runoff preserving planning and building (2004)
- Planning brief for public spaces (2001, currently being updated)
- Guiding principles for sustainable neighborhoods and localities (2007)

- Guidelines for city streets (2009);
- Guidelines for public parks (2012).

The Ministry of Environmental Protection (MoEP) and the Israel Planning Administration also publish guidelines for planning on diverse issues. Recent publications by the MoEP include: "Brief for Environmental Planning – Guidelines for the integration of environmental aspects into planning processes" (2016), a guide for preparation of plans for water for rivers (2016), and presently an update is being conducted to the guidelines for planning and management of open spaces in cities. Concurrently, the Planning Administration has updated the guidebook of allocating space for public needs, such as mixed use of public services and commercial uses, higher building for schools, and a wider approach and determination of green and public spaces. Also in 2015 a guide was published for planning and management of open spaces by the Center of Regional Councils, local authorities also publish planning guidelines, for instance, the city of Jerusalem, published guidelines to street planning and a city-wide ecological policy for nature (2013).[16]

8. Improving urban land management, including addressing urban sprawl

Planning is a time-based process; directives may take time to mature as an overlaying mechanism, controlling all plans. This is the case with the National Masterplan 35 (NMP35), advocating preservation of land resources and converging into cities, limiting sprawl and increasing urban density, but not necessarily able to contain all sub-urbanization .

In line with NMP35, the state developed additional tools for urban renewal, and additional construction in built-up areas, via a range of tracks: site density, compensated relocation plans and building expansions while strengthening buildings from earthquakes (in the framework of NMP38).

In 2015 and 2016 the Planning Administration promoted several amendments and unpdates to NMP35, which were ratified by the Government. These amendments, validate the plan, in line with it's original principals, and intreduce a periodic update mechanism.

Fig. 5: The 5 Textures of NMP35 (Source: Ministry of Interior: NMP35)

As of 2012,[17] about one million families in Israel live in suburban neighborhoods and localities; while in urban localities about 33% of new buildings are detached;[18] 35% of the population is

[16] Guideline to street planning, Municipality of Jerusalem, 2010.
[17] MIU Movement for Israeli Urbanism.
[18] "Residential Building Pattern in Israel", MoCH data, 2011-2015.

[15] Guidelines for planning work – Ministry of Construction and Housing, 1998.

dispersed over some 70% of the residential built up area.

These trends, while they might enable a higher standard of living per person, generate an increasing burden on infrastructures, primarily a growing demand for roads.

Lifestyle considerations are not the only generator of advanced urban sprawl. Paradoxically, it is actually the aspiration to supply affordable housing fast that resulted in creating new suburbs. Despite the appeal of suburban development, in the last few years the Israeli MoCH has promoted several significant programs to counter the situation and promote urban regeneration. Neighborhood Regeneration plans were introduced in 2015, 27 of these are already in motion, integrating built and planned environs. The "Frame Agreements", between the MoCH and local municipalities are a supplementary tool to strengthen urban regeneration. These are financial support parcels that local authorities receive from the government in order to facilitate the construction of public services, utilities and infrastructures. In 2016 two additional mechanisms were added:

• Establishment of the Urban Regeneration Authority, an independent professional body with the authority and funding to initiate and manage urban regeneration projects.

• Approval of Municipal Urban Regeneration Administration, to be instated by municipalities with dedicated government support.

Although these initiatives are new and recent, they are powerful and have the full support of the government so as to significantly improve urban land management.

9. Enhancing urban and peri-urban food production

On the supply side, Israel has a well-established food system, combining both locally grown and locally manufactured food with imported goods. Local farmers, on about 15% of the land, produce all fruit and vegetables, and most of the milk and poultry products. Due to technological development and innovation, as can be seen in table four, less land produces higher yield, and as farming needs are met, pressure is mounting to redirect land use.

Table 4: Aspects of Cultivated Land (Source: CBS, Land uses and cultivation patterns)

	Productivity (nis)	% of Total Land	Cultivated Land
1996	11,831	20.09%	4,218
2000	14,096	20.02%	4,204
2006	20,988	13.58%	2,851
2013	29,845	13.92%	2,923
2014	29,931	14.75%	3,098

Competition for land use is severe in Israel. The National Masterplan 35 designated development fabrics and defined restrictive measures on urban sprawl and on annexation of agricultural land. However, since agriculture is changing, former farming patterns are no longer economically feasible. Farming settlements are looking for alternative means of livelihood, including renting out their land for small businesses and industries - especially in areas close to Metropolitan Centers. The Kibbutzim are an outstanding example of this dilemma. Once the mainstay of Israeli agriculture, most of them have been privatized. Close to 90% of their members are no longer working in agriculture, instead commuting to work in neighboring urban centers and pressuring the planning authorities to transfer more agricultural land to development, thereby creating a network of suburbs in place of peri-urban rural farms.[19] This type of pressure is not restricted to rural communities. Cities are also active in annexing open and agricultural land for urban development.

On the other hand, cities have not been active protagonists in influencing the local food systems. Presently, the rising cost of living is triggering, a growing interest in facilitating lower food prices, and encouraging and supporting urban production.

The concept of urban agriculture is still new to Israel but growing rapidly, engaging very diversified sectors; from new emigrants from Ethiopia and former USSR, to Arab women, young students, families and senior citizens. The Ministry of Agriculture established a steering committee of stakeholders in order to compile a more comprehensive policy on the subject.

Table 5: Typology of gardens (Source: Community Gardens in Israel, 2016)

Typology of Gardens	Number
Community Gardens	178
Allotment Gardens	6
Community Gardens in public institutions	59
Community Farms	2
Therapeutic Gardens	46
Private land under community care	20
Unique Gardens/Municipal Nature Sites	4
Community Forest	15

While the first phase of urban farming, at the end of the 1990s, was led and funded by civil society groups, coming from both environmental and social NGO's, the second phase is municipal. Cities are now beginning to take an active role in promoting Urban Farming, although it is still regarded as a community activity and only marginally as a business initiative. Many municipalities already have a designated community gardens coordinator, who is the liaison with the residents, providing tools, guidance, seeds and general support. Two additional farming activities in cities are urban rooftop farms and farmers' markets. Farmers and consumers are exploring new ways to bypass big marketing networks. Direct marketing of farm produce is gaining more and more popularity.

10. Addressing urban mobility challenges

Well-developed public transport supports the development of cities; connects cities in the periphery to the metropolitan centers; and responds to challenges of accessibility, air pollution and safety. Over the last decade, the government of Israel has been conducting essential changes to its transport system. These include implementing mass transit systems and new railway routes; increasing public transportation budgets by billions of NIS and initiating policy processes and reforms, such as a new tariff policy in public transportation, changes to taxation with regard to Electric and Hybrid cars, reorganization of the Dan (Tel Aviv) Metropolitan area public transportation system, introducing ticketing and information technologies and improving the level of service.

Mobility as a comprehensive vision, which includes both biking and walking, is also evolving as a planning principle. In 2012, the MoTRS together with the Ministry of Finance, launched a strategic plan, outlining the public transportation system for the upcoming 25 years:[20]

• Israel Railways – in 2003 the Israel Railways five-year development plan was dispatched, followed by an expanded plan in 2010. The plans propagate the capacity of the main intercity network and develop new peripheral routes, with investments estimated at about nis 30 billion.

• Light Rail – The first light rail train in Israel was opened in Jerusalem in 2011, traversing the city

[19] Haklay, R., Amdor, L., Economic Considerations and Employment in Rural regions of Agriculture, 2014.

[20] Public Transportation Development Policy, Ministry of Transport and Road Safety.

from west to east, serving about 140,000 travelers a day. The second line is being constructed in the Tel Aviv metropolitan area, traversing from Bat Yam in the south to Petach Tikva in the east. It is planned to begin service in 2021, serving an estimated 250,000 travelers a day. Seven additional lines with a total length of some 200km are in stages of planning (two of the routes are planned as BRT).

• Bus Rapid Transit (BRT) – the first system was set up in the Haifa metropolitan area in 2013, with 3 lines that connect cities of the metropolis, serving around 90,000 travelers a day. Additional BRT lines are in planning for Beer Sheva in the south and the Sharon area in the east, part of the Dan metropolitan area.

Over the last decade, the perception that bicycles can be a significant means of transportation started to become commonly accepted in Israel, primarily in city centers. However, in order to implement this concept in practice, there is need for networks of designated lanes that would enable bike riders to travel safely. The governmental budgets allocated to assist local authorities in constructing lane networks is increasing gradually. Tel Aviv has already constructed a network of bicycle paths, which includes approximately 150 km of paths or marked lanes on roads and sidewalks. Bicycle infrastructures are also being established and upgraded in additional cities, leading to an increase in the extent of usage.

Image 1: Tel Aviv-Yafo Bike rental station (source: Tel Aviv-Yafo municipality)

## 11. Improving technical capacity to plan and manage cities

The professional capabilities of planning and management agencies are critical for success in national and urban sustainable development. Israel is blessed by a relatively large number of professionals in fields of architecture and planning, including seven academic institutions that train architects and city planners, and additional nine institutions that train civil engineers.

Amendment 101 to the Planning and Building Law, which was approved in 2014, constitutes a revolutionary reform in the realm of planning, licensing and building. The power of the local level was significantly enhanced, both in terms of planning and licensing. Professional local committees can now address local needs, and special local committees can also direct urban regeneration without referring to regional committees. In terms of licensing, an "accessible licensing system" was developed, which is an online system for submission and treatment of requests for information and building permits.[21] The system serves applicants, licensing authorities and additional bodies, and accompanies them through the stages of building licensing and the execution of building works. It contributes to enhanced efficiency, simplification and improvement of licensing and building processes, and enables the lifting of barriers and bureaucracies by operating a unified, transparent online procedure. The system interfaces with different bodies, including the local committees, information providing agencies, the Land Registry and others. It constitutes a substitute to the historic paper permit submissions, enabling management of advanced follow-up and archiving - thus shortening procedures and improving the services

provided to citizens, professionals and bodies that partake in the licensing processes.

Fig. 6: Requests for building information and requests for building permits within the 'e-permit building system'. (Planning Administration data)
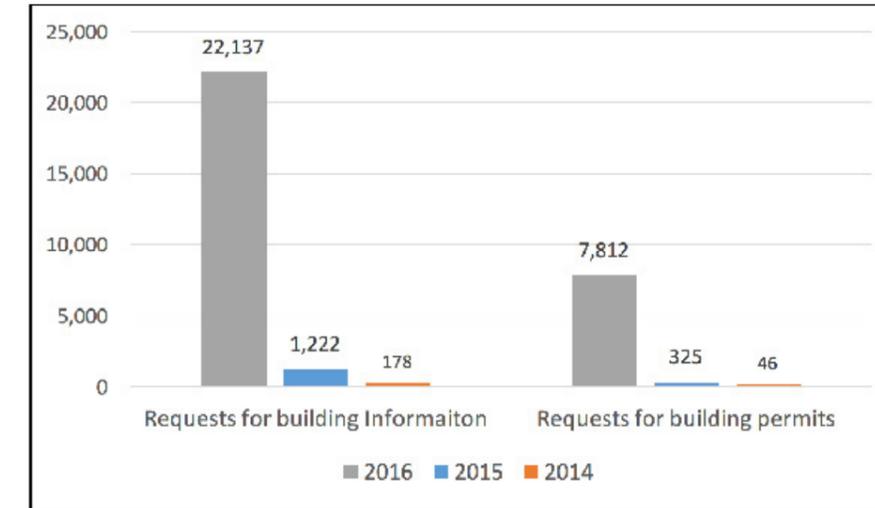
"Digital Israel" is a governmental initiative established in compliance with a government decision from 2013, striving to leverage the opportunities made available by the digital revolution and the advancement of communication and information technologies for accelerating economic growth. It aims to make governance smarter, faster, and more citizen-friendly, and to promote Israel as a global leader in the digital sphere.

An interesting third sector initiative for Improving public information is the **"Public Knowledge Workshop"**, established in 2011. The workshop is a not-for-profit, volunteer based organization, acting to promote transparency and accessibility of information and civic involvement. The workshop promotes accessibility to information by means of building "open code" technological tools, websites and applications. Thus far, tools include "Open Knesset" showing the legislative process and voting by Members of Knesset; "The Budget Key", presenting the allocation of national budgets; "Open Local Zoning Plan" that enables easy access and updates on town zoning plans in local authorities and more.

12. Challenges Experienced and Lessons Learned

Ensuring Sustainable Urban Planning and Design

Sustainable urban planning requires a solid planning framework and a comprehensive vision of sustainability. The Israeli planning system is undergoing reform, decentralizing authority to lower levels and unifying thematic masterplans to a comprehensive vision, in accordance with the National Master Plan 35. There is a strong sense of sustainable urban development and land use in MP35, resonating at the local leve; through a constant and increasing process of preparation of local plans. These are Comprehensive Plans, addressing city and citizens' needs and giving a framework for the future devlopment and growth of the cities, notionwide. The Sustainable Cities concept is gaining impetus, with initiatives such as the "Working City" framework (developed by the MoEP), and the work of the National Habitat Committee. The Committee, set up by the MoCH, headed a broad multi-stakeholder process to outline an agenda for Urbanism in Israel, according to the seven themes of the HABITAT Urban Agenda. The ministry also developed the Sustainable Neighborhoods Measuring Tool for incorporating sustainability considerations in the planning of new neighborhoods. On the local level, Sustainability is becoming a recognized

municipal framework, with actions ranging from planning and building, climate mitigation, community engagement, business enterprises and education. Sustainable Urban Development is gradualy being mainstreamed as a guiding concept for development, national and local, validated in directives, guidelines, authority and budgets.

Improving urban land management, including addressing urban sprawl

Twenty years ago, Israel's prime concern was to provide housing for the influx of one million new immigrants- building cities from scratch and expanding existing cities with new neighborhoods. The urgent development, succeeded in supplying housing but also created a more dispersed and sub-urban population. Conversely, this was also the window of opportunity for urban regeneration, many of the large cities, have already succeeded in turning their cities from declining rundown communities to vibrant growing cities.

Enhancing urban and peri-urban food production

Agriculture is changing; former farming patterns are no longer economically feasible. Farming settlements are looking for alternative means of livelihood, including renting out their land for small businesses and industries - especially in areas close to Metropolitan Centers. Farming policies are guided by the state, both in terms of local supplies and exports, local governments are less involved in food production. However, there is a growing interest in facilitating lower food prices, and encouraging and supporting urban production. Cities are beginning to develop food policies, including limited Urban Agriculture and peri-urban food production.

Addressing urban mobility challenges

Sustainable urban development is rooted in sustainable mobility, giving priority to pedestrians, biking and public transportation over the private car. A sustainable mobility system connects cities in the periphery to the metropolitan centers; and responds to challenges of accessibility, air pollution and safety. Over the last decade, the government of Israel has been conducting essential changes to its transport policies; building a network of connected modes of travel, from Heavy Rail, through Light Rail, BRT systems and biking lanes.

Non-motorized transport is beining to gain recognition as fully-fledged means of transport, both in planning and regulations. Walkability is one of the determinants of urban well-being; creating walkable streets is becoming a priority-planning framework, for local and national policies.

Improving technical capacity to plan and manage cities

Technology is vastly improving the institutional capacity to plan and manage cities. However, it cannot stand alone, a strong solid understanding of sustainability and city making is essential. There is indeed, a relatively large number of professional training platforms in fields of architecture and planning, including seven academic institutions that train architects and city planners, and additional nine institutions that train civil engineers. However, the concepts of sustainability and urbanism are restricted to higher education institutes, they are not yet part of a broad public understanding and discussion. The government, local and national, together with education entities, is seeking to broaden the scope of sustainable urban education, supporting varied and broad dissemination platforms, utilizing Israel's advantage in innovation and creativity to expand awareness and know-how of Urbanism, Planning and Local Government Administration.

CHAPTER III Environment and Urbanization

13. Climate – status and policy

Israel is located at a climatic intersection, in a region where many weather fluctuations are evident. The Intergovernmental Panel on Climate Change (IPCC) reports maintain that climate change will have substantial impacts in the Mediterranean Basin,[22] primarily an increase in number of draught years; frequency and intensity of heat waves; and quantity and frequency of precipitation. These changes might have substantial impacts on various economic sectors, with an emphasis on the water economy, the health sector, biodiversity and urban building. In fact, changes are already apparent, both in the intensity of draughts[23] and in duration.[24]

Fig. 7: Temperature anomalies in Israel 1951-2011 (Source: Meteorological Service, MoTRS 2011)
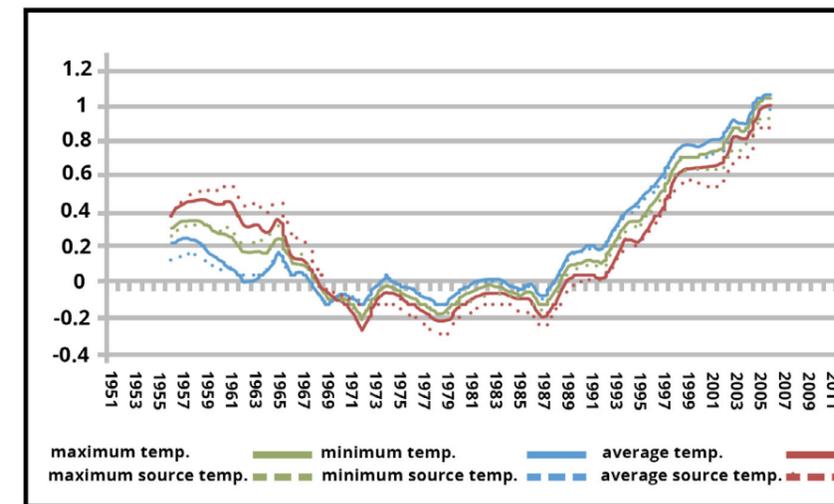
During the first decade of global climate negotiations, Israel was defined as a developing country in the framework of the Kyoto Protocol ("non-Annex1"), and was not required to deliver mitigation targets. Following the Copenhagen Climate Conference (COP15) Israel had adopted a reduction target of 20% from a Business As Usual (BAU) scenario by 2020, in relation to 2009 (GR no. 2508). A national plan was devised and 2.2 billion NIS were allocated for its execution, with significant parts of it intended for implementation in local authorities. The government decision had started to generate changes in the market, primarily in the fields of energy and construction, but in 2014 the government cancelled the plan. Later, in preparation for the Paris Climate Conference (COP21), new mitigation targets were adopted, through a inter ministry cooperation, which resulted in a government decision on GHG emissions reduction and energy efficiency. The decision (GR no.542) established an economy-wide target of reducing GHG emissions in Israel to 7.7 tCO2e per capita by 2030, in comparison to 10.2 tCO2e per capita under the BAU scenario – a 26% reduction below the 2005 per capita level. In parallel, initial steps have begun toward establishing a national MRV system for measuring, reporting and verifying GHG emissions.

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[22] Report 1, Israel Climate Change Information Center, 2011.
[23] The draught of 1999-2001 was the most severe since documentation began.
[24] The 2004-2011 draught had been the longest since documentation began.

| 17% Energy efficiency in electricity use | **+** | 17% Renewable Energies | **+** | 20% Transportation Reduction | **=** | 25% GHG Reduction |

Sources of Emissions in Israel

The majority of energy in Israel comes from non-renewable sources, divided between electricity and transportation. The energy policy focuses on three axes of activity: energy efficiency, shifting to renewable energies, and mitigating transportation. Presently less than two percent of energy sources in Israel are from renewable sources.[25]

Transportation policy has changed in the last decade, with the development of rail-based transport and promotion of bicycling, Light-Rail, and BRT, primarily on the local level. Local authorities in Israel were first to adopt emission reduction targets. On February 13, 2008, the biggest 18 cities in Israel signed an Air and Climate Preservation Convention, and joined the international network of Cities for Climate Protection (CCP). This is the first time an organization of local authorities led an international policy process. The mayors made a commitment to reduce air pollution and GHG emissions by 20% by 2020, according to a 2000 base level. All of the cities performed emission surveys, comparing emission data in 2000 to those of 2007. The surveys disclosed that most emissions result from buildings. These findings propelled the authorities to focus on green building with significant progress in the past decade (for more see chapter VIII).

14. Disaster Risk Reduction (DRR)

The second decade of the 21st century started with a number of extreme weather events in Israel. In December 2010, a great fire tore through the Carmel Mountain. The fire was extinguished after four days, during which approximately 17,000 residents were evacuated. Forty-four people lost their lives, alongside extensive property damage.

In December 2013, Israel was hit by an unusually extreme snowstorm, which hit primarily the northern and central areas of the country. The mounting snow caused traffic route blockages stranding thousands of civilians. Trees fell on top of power lines, and many residents were besieged in their own homes with no access to basic products and no means of heating.

Image 2: Cars stranded for 24 hours on the road to Jerusalem, 2013

Following these events, the State Comptroller published a special report about the preparedness of local authorities for extreme weather conditions. The report suggested improvement of preparedness for events of this type, both in the regulating bodies of central government and in the local authorities responsible for addressing such events.

After the Carmel fire, the national firefighting deployment system was modified. By force of new legislation,[26] local fire authorities were replaced by the new National Fire and Rescue Service established under the responsibility of the Ministry of Public Security.

Although there is no organized preparation for extreme weather events, the emergency system in Israel has ample experience of coping with security emergency situations, and these systems can be relied upon in climatic emergencies as well.

Israel does not yet have a climate adaptation policy in effect. As a first stage, in 2011 the Israel Climate Change Information Center was established, by the MoEP. In 2013, the center published "a guide on climate change adaptation for local authorities", which provides recommendations for preparation by local government for climate changes, addressing issues of municipal planning and building and the improvement of municipal management.

According to national estimates, around 40% of the buildings, were constructed before the 1975 construction regulation, and are at risk from earthquakes (Parliament Research Center, Report on Earthquakes, 2010). A National Masterplan (NMP38) was created to encourage earthquake retrofitting. According to Israel Planninng Administration data, between 2005 and 2015 some 4,769 building permits requests were submitted, of which about 2688 were approved. However, most of these projects are in the central area, despite the higher risk for a strong earthquake in the periphery, specifically along the Great Rift Valley.

Fig. 9: Building permits requests - submitted and approved in the framework of TAMA38, 2011-2015 (Source: Israel Planning Administration)
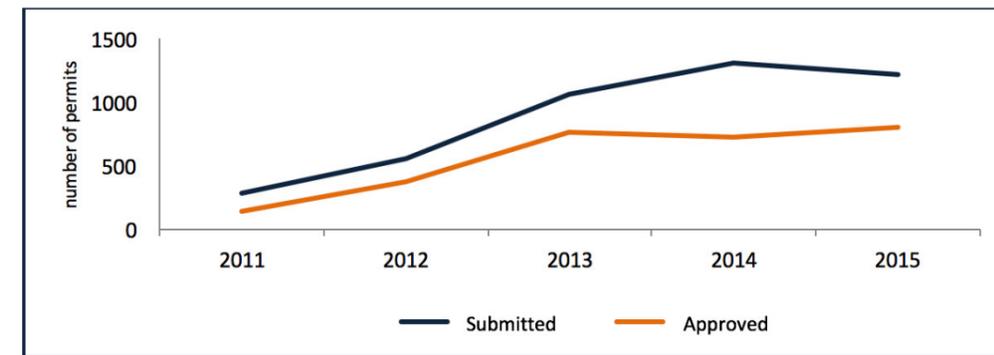
On the local level, cities are obliged by law to establish a local emergency deployment committee, and to prepare a municipal emergency portfolio. However, the natural disaster framework, outlined by the state, only includes fires and earthquakes, with no reference to storms or floods.

15. Minimizing transportation congestion

Traffic overloads are a key challenge facing the country and the government. In 1990, there were 803,000 private cars; by 2014 there were already 2,457,720 vehicles, driving 52,400 million km a year. Some 500-600 thousand cars and a million people commute into the Dan Metropolitan Area daily. About a third of the residents of the largest 14 cities spend more than an hour daily commuting to and from work.[27] According to the Ministry of Finance, the direct economic impact of traffic congestion in Israel is estimated at over NIS 15 billion annually.

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[25] CBS: Quality of Life in Israel Index, 2012 data.

[26] The National Fire and Rescue Service Law.
[27] Central Bureau of Statistics, 2015, General Transport Data.

Fig. 10: Number of vehicles by type: 1990-2015 (Source: CBS, Statistical Abstract of Israel)
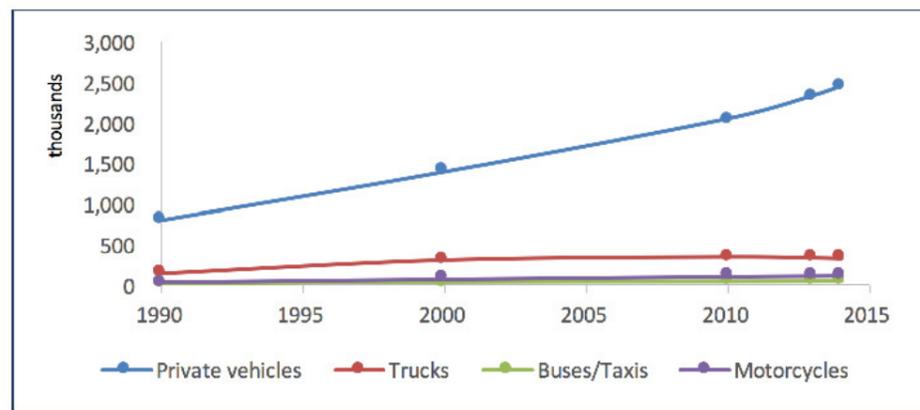
A comprehensive state program was instated in 2005 to address the massive traffic build up and limited public transportation. By 2014, the main components of the plan were already in place, including widening of the rail track to Beer Sheba, augmenting rail lines to the south and east, and initiating work on tracks of the Tel Aviv-Jerusalem, Jezreel Valley and Karmiel lines.[28] The introduction of train line has changed travel patterns in Israel, in particular among commuters.

Table 6: Train usage patterns: 1995-2014 (Source: CBS, Statistical Abstract of Israel)

	1995	2000	2010	2014
Passengers (thousands)	4845	12698	35877	48541
Passenger-km (per million)	267	781	1986	2485
Passenger railway track length (km)	858	925	1035	1194

Two additional players joined the transportation market in the 2000s, constituting two opposing axes and demonstrating the dichotomy of Israel's transportation sector; Bicycles as a vehicle for transportation and the company car.

The Company Car – while car expenses refunds or company cars were no strangers to Israel's transportation market, with the rise of the hi-tech industry and introduction of car leasing companies, the usage of such cars as a means of commuting increased exponentially, currently constituting approximately 20% of private vehicles. Nonetheless, a decline in the use of company cars can be observed since 2014, possibly due to changes in travel habits and economic constraints.

Bicycles – bicycles as a means of transportation are already significant in Tel Aviv-Yafo, where they constitute 16%[29] of daily travel. In the past decade, the municipality has paved more than 150km of cycling lanes, and in 2011 it launched the Tel-Ofan bike rental project. By 2014, approximately 9,000 journeys were made per day, and the service was used by 40,000 annual subscribers and some 300,000 incidental users. Recently, a cooperation was launched between Tel Aviv-Yafo and its neighboring cities Givatayim and Ramat Gan, expanding the Tel Ofan project into these cities as well.

In 2016 the MoEP and the MoTRS launched a joint program to reduce traffic air pollution by allocating 20 million NIS towards financing new electric buses for the four metropolitan areas.

Beyond the expected congestion in urban bottlenecks, education facilities have also become congestion points. Data on traffic accidents involving pedestrians indicates that significant percentages of them are children, frequently on the way to and from school. Local Authorities are aware of this problem; they are gradually introducing safety measures and incentives for walking instead of driving to school.

16. Air Pollution

Air pollution in Israel originates from three sources – transportation, industry (which can be divided into two - heavy industries and electricity generation) and climate-related.

Fig. 11: Volatile Organic Compound Emissions by Local Authority, 2014 (Source: MOE, Air Quality Report, 2015)
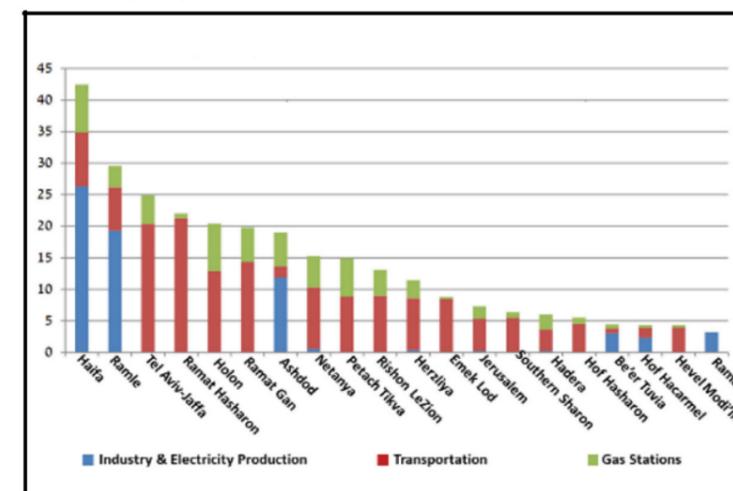
Industry related pollution is continually decreasing across the country. One of the key drivers of this change, is a comprehensive and substantial act regarding air pollution and the ways to diminish it, the "Clean Air Act", legislated in 2008 it goes back to the American act of the same name from 1970. Thanks to this law and other regulations, a significant downtrend in pollutants from industries is witnessed.

Traffic air pollutions is the second source of concern, affecting most urban areas. Transportation-related pollution (aerial NO2 levels) is in a moderate downtrend in the past years with exceptions in the center of the big metropolitans (Tel-Aviv area, Jerusalem and Haifa). These can be attributed to the heavy load of cars and diesel-powered vehicles traveling through those areas.

The third cause for air pollution, following industry and traffic, is energy production, this area is undergoing momentous change with the discovery of natural gas in the Mediterranean. Due to the transition to cleaner fuels (in particular natural gas) in power stations, there is a downtrend with very low yearly values of SO2. The discovery will provide Israel with a local energy source and enable reducing the amount of pollutants in the process.

In climate-related air pollution there is no clear trend – the reasons are the geographic location of Israel amongst the deserts of North Africa and Saudi Arabia and the changes in the synoptic systems over the years, which inflict the movement of dust particles towards the area. On average, in the past 15 years, the concentration of PM2.5 was under the annual target value (10mcg/m3). Analysis of the PM10 data led to the same conclusion – no characteristic trend emerged and some of the cities in Israel showed higher or lower rates.

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29 Tel Aviv-Yafo Municipality, 2014, Survey of Transportation Patterns.

17. Challenges Experienced and Lessons Learned

Climate – Status and Policy

Israel's environmental policy has gradually progressed from ensuring environmental quality and regulating hazards to directing planning and development. The MoEP is leading the national Climate policy, through inter-ministry cooperation. Climate policy requires comprehensive regulations and guiding targets, reflecting development trends and limiting GHG emissions. Israel has committed to the Paris Climate agreement and set tangible goals for 2030, transitioning to 17% renewable energy and reducing GHG emissions.

Mainstreaming climate policy on the local level, has made significant progress in the last decade, especially regarding building codes and energy efficiency measures. Local authorities have limited jurisdiction on transport issues, consequently, their climate policies are translated into green building codes, which have been made mandatory in most of the largest cities.

Disaster Risk Reduction (DRR)

The national and local mechanisms have been restructured through the years to better address emerging challenges. Security and earthquakes are the main issues the DRR systems cover. DRR systems are beginning to incorporate climate risk analyses and to develop adaptation plans. Climate risks vary across Israel, from rising sea level and floods in the coastal plain to winter storms in the higher mountains, increasing temperatures; heat waves, draughts and extra -hot days, are becoming national hazards, especially affecting children and the elderly. Cooperation between and across sectors is critical in order to build climate resiliency, as is community involvement and engagement. Israel is extremely successful in harnessing technologies to build resilience, and is now integrating this understanding into Climate Adaptation action plans.

Minimizing Transportation Congestion

Sustainable urban development is effective when transportation transitions from the hegemony of the private car to public transportation and non-motorized mobility.

These priorities were already set as policy guidelines in 1996, aiming to reduce the use of private cars through demand management. Entrance fees, restrictions in urban areas, parking restrictions and cost, were recognized as effective policy tools to achieve these objectives. Despite continuing pressures from varied interest groups- cars and economic benefits are gradually decoupled in order to change transportation preferences.

On the supply side, development of public transportation is rising significantly; trains are gradually becoming viable alternatives for travel.

Air Pollution

Industrial air pollution has decreased significantly in the past twenty years, mostly due to the "Clean air act", legislated in 2008. Factories were required to install improved equipment and to attain quality standards in order to renew their business license. Development policies are beginning to direct phasing out polluting industries where possible, with growing allocation to support Clean-Tech research and development. Coal power plants have been designated as top priority for phasing out completely and transitioning to renewable energy. As a first step, transition to a natural gas based industry, will significantly reduce the emission of pollutants to the environment.

While industrial air pollution is decreasing, air pollution from traffic has increased in the past twenty years. The first stage in addressing this challenge is already taking place, with the expansion of rail and bus transportation. In addition, restrictions, in terms of fuel prices, taxes and parking space, are being considered. Improving actual emissions is a complementary measure, especially for public vehicles. Just recently, in 2016, the MoEP and the MoTRS launched a joint program to reduce traffic air pollution by allocating 20 million NIS towards financing new electric buses, for the four metropolitan areas.

CHAPTER IV Urban Governance and Legislation

18. Improving urban legislation

The legislative power of local authorities is gradually transitioning to a more decentralized state. The legislative frameworks that define the activity of local government in Israel are the **Municipalities Ordinance (1934) and the Local Councils Ordinance (1941)**. The origin of the legislation is from the British Mandate in Palestine, in the spirit of the time, it propagates an extremely centralized governance system. Although the Municipalities Ordinance has been amended numerous times, the structure and rationale of the directive constitutes an influential factor on the conduct and level of independence of the municipality.

Municipal Acts, known as "by-laws" (literally "assistance laws") are defined as secondary legislation, subjugated to main legislation. Being last in the hierarchy of laws, following approval by the city council, bylaws are sent to the Ministries of Justice and Interior for review and approval.

In terms of **municipal taxation** (property tax, "Arnona"), central government also plays a key role. The tax is set and collected by the local authority within a minimum and maximum range determined by law (main legislation), and for every change of Arnona rates, the local authority must have approval of the Ministers of Interior and Finance.[30] Recently, the Federation of Local Authorities in Israel initiated a joint effort with pertinent government ministries to unify the municipal taxes acts.[31,32]

On the other hand, there are issues over which the local authority has relatively expansive jurisdiction, including **Planning and Building** (see Chapter II), in particular with regard to, planning authorities and procedures, issuing building permits (licensing) and supervising construction. During the last five years, the government has been promoting a comprehensive reform of the Planning and Building Law, seeking to empower local planning committees by granting them authority to approve a wide range of plans, subject to comprehensive local masterplans and upholding managerial-professional standards. The reform further introduces many amendments to the licensing procedure, which are meant to improve and shorten building permit processes; advance an online licensing system; create a one-stop-shop mechanism for permit seekers; promote information transparency for residents; and improve the quality of examination and service of the licensing process.

Legislative improvements were undertaken also with regard to business licensing, where local authorities also play a pivotal role. The local authority functions as a licensing authority and as an enforcement agency to ensure all measures and arrangements were made for orderly operation of businesses, in a way that guarantees public health, environmental quality, security and safety of proprietors, employees and customers. Furthermore, local authorities may determine additional terms and conditions for the business license, in accordance with local bylaws and municipal policies.[33]

Presently, the Ministry of Interior is advancing a business licensing reform, which aims to solve numerous failures. These include: standardizing the specifications for business licensing; enhancing enforcement measures on unlicensed business owners; curtailing licensing schedules;

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[30] Local Authorities in Israel – Background paper for the Parliament Interior and Security Committee, April 2013.
[31] Unified Arnona Act, Forum of 15, Union of Local Governments, 2016.
[32] "The Minister of Interior Declares Arnona Reform – Change of Calculation Method", Ministry of Interior Website, 2014.
[33] Business Licensing Law, 1968.

compatibility to other laws (in particular the Planning and Building Law); increasing transparency and availability of information to the public.

19. Decentralization and strengthening of local authorities

Over the past two decades, several attempts were made to promote new, modern legislation, to replace the outdated Municipalities Ordinance and provide a suitable legal framework for the conduct of local authorities in the contemporary era. The rationale at the core of such legislation is decentralization of responsibilities, stemming from recognition of the importance of local government whilst ensuring mechanisms with which the State can intervene if needed, in cases of dysfunction or budgetary collapse.

In 2014 a breakthrough was achieved, with the approval of the "Robust Municipalities Law", which constitutes a milestone in terms of the relationship between central and local government in Israel. The bill, originally initiated by the Forum 15, is in fact one chapter of the new Municipalities Law, and it empowers authorities that are declared robust (based on a set of determined criteria) with jurisdiction and independence of management in a number of fields, including the approval of municipal budgets without need for ratification by the Ministry of Interior; leeway with regard to real-estate transactions; independence in reaching franchise agreements and signing contracts; etc. Within this framework, 24 municipalities have already been declared "robust".

> **Forum of 15 Independent Cities: The Federation of Local Authorities in Israel is an association of all cities and local authorities. Within this framework operates Forum 15 (cities that do not receive governmental 'balancing grants'). The Forum acts to re-regulate relationships between central government and its member cities, striving to amplify their authority and broader managerial independence.**

In addition to this Legislation, a number of other initiatives were promoted in recent years to decentralize and strengthen local authorities in Israel. These include a reform of the **Planning and Building** Law (see also dedicated chapter), which led to broadening the jurisdiction of the local Planning and Building Committees. Broader authority has been awarded to committees which were deemed "professional and efficient" according to criteria defined by law. Since late 2012, 19 local committees were designated, four of which (Tel Aviv-Yafo, Haifa, Netanya and Herzliya) were awarded a "Special Independent Committee" status, granting them further authorization to address urban renewal projects.[34]

Another central challenge for the conduct of local authorities, has to do with the fact that there is no statutory framework for local authorities to cooperate and coordinate their activities. There are more than 250 local authorities in Israel, many of which reside in close proximity to each other and share joint infrastructures.

A good response to this situation is the successful model of the Municipal Associations. Such associations are municipal corporations established for a defined purpose by decree of the Minister of Interior, and they are affiliated with and are managed by a number of local authorities together. The associations address specific issues in which there are distinct advantages to size, such as: water and sewerage treatment; sanitation; firefighting; and environmental services.

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[34] Planning Administration, Central Emphases on the Planning and Building Reform – Amendment 101 to the Planning and Building Law (version 1.1). June 2014.

20. Improving participation and human rights in urban development

The latest municipal elections, held in 2013, had a national average voting rate of 51.1%, compared with the Knesset (Parliament) election rate of 67%. An interesting analysis of the data indicates quite high variance between municipal voting rates among the Jewish population – of about 60%, and the Arab population, more than 89%. Furthermore, in most large cities in Israel, the participation rates are very low. Tel Aviv-Yafo is the city with the lowest voter turnout – only 35.6%.[35]

Despite these trends and the sense of public indifference with regard to municipal affairs in large cities, there is growing recognition in many municipalities that urban processes should be shared with the public, and that the level of transparency should be increased.

In 1999 the Freedom of Information Law came into effect, anchoring the rights of the public to receive information from public institutions. The law, and the regulations emanating from it, obligate public authorities to publish certain information, such as: the organizational structure of the authority; contact details; details of the authority's budget and financial support; environmental information, etc. The law enables any person to submit a request for information to any public authority, and the latter is required to convey the information within a limited period of time.[36]

Furthermore, on issues of planning and building, there is a continuously increasing tendency to seek public involvement in the promotion of plans and projects. Although the Planning and Building Law does not require public participation processes in the preparation of plans, authorities are choosing to do so, particularly with regard to masterplans. Many authorities require, as a precondition in tenders, for social consultants to be included in the planning teams so that public participation programs are conducted.

The municipality of Tel Aviv-Yafo formulated a binding procedure for divisions within the municipality, detailing guidelines for measures of involving the public in planning processes.[37] The city further extended the public participation processes by means of advanced technological platforms, and participated in drafting policy outlines for Habitat III, via the Tel Aviv-Yafo Declaration for "Smart Civic Engagement".[38]

Another model for public participation is conducted in Jerusalem, the only city in Israel thus far to institutionalize a model of authority decentralization and self-management of urban quarters, by means of the so-called "Community Administrations". Under this model, most administrations employ community planners, whose role it is to mediate between residents and planning bodies, as well as to advance residents' wishes with regard to planning procedures. This guarantees that the voices of city residents is heard as a matter of routine, and that they are informed and updated with regard to all pertinent plans.[39]

21. Enhancing urban safety and security

Israelis feel relatively safe, in the 2015 Wellbeing survey, 75% noted they feel safe to walk alone in the dark in their neighborhood. Violence rates have not risen in the last decade, they remain stable for women and show a decline for men, as can be seen in the graph bellow, 2015, shows the lowest number of crimes since 2005. It should be noted that women, in general, feel less safe than men, both at home and in the public realm.

Fig. 12: Reported Crimes by Files Opened, 2006-2015 (Source: Israel Police, Annual Report, 2015)
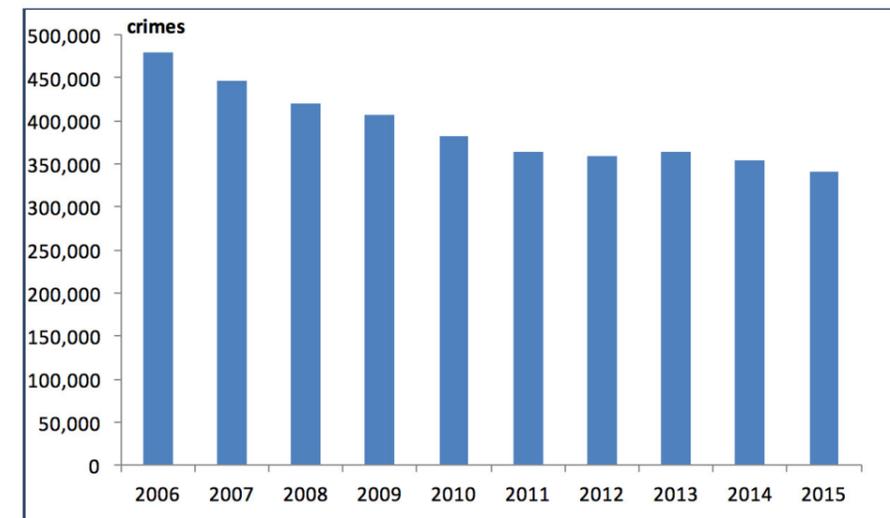
Many cities are augmenting the security and safety of their public spaces, by adding technological surveillance and expanding their response mechanisms. The police force is also improving their rate of response in addition to a substantial increase to the police force itself.

With regard to security issues in urban spaces, Israel faces distinctive and possibly unique issues. Unlike many countries that contend with maintaining public order and curtailing incidents of crime and delinquency, Israel also deals with ongoing security challenges due to the state of national-political conflict. The need to protect the civic population from terrorism and missile attacks impacts urban life with additional responsibilities to the local authorities.

The security issue is clearly reflected in the physical realm by the need to safeguard buildings and public spaces with security measures. Following the First Gulf War (1991), it was determined by law that every new building, private or residential, must be constructed with a secure room, necessitating thickening of walls, steel anti-shrapnel shield protection, installation of air filtering systems etc. Local authorities are also required to build public shelters in the public domain, including access passages to the shelters; signage of number and locations of openings; and additional guidelines with regard to spaces in proximity to these shelters.[40]

Image 3: Public Shelter in Herzliya (source; painting and photograph – Avi Blitstein)

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[35] Atmor, N.,Israel The Participation in Elections for Local Authorities – Differences in Voting Patterns, Democracy Institute, 2013.
[36] Freedom of Information Law, 1998.
[37] Public Participation in Planning Processes – Procedure Guidelines, the Municipality of Tel Aviv-Yafo, 2008.
[38] Civic Engagement in Smart Cities – Habitat III Policy Line, Municipality of Tel Aviv-Yafo' 2015.
[39] Planning and Building Law Reform – Addendum 9: Public Inclusion and Participation in Planning Processes, Planning Administration, July 2006.

[40] Assimilated Unified Regulation – Civic Defense Regulations (Shelter Building Specifications), Home Front Command, 2010.

In addition to the physical protection of buildings, residents of urban space in Israel commonly experience the presence of fences and security guards. In any location intended to contain a large number of people (educational and other institutions, hospitals, large shopping centers, and transportation hubs), armed security guards are stationed, each visitor undergoes a security check.

Security issues constitute an immense budgetary burden to both central and local government. First, the authorities are required to budget the construction of public shelters and protected spaces in public buildings (which make construction more expensive and are "wasteful" in terms of space). Secondly, the local authority is required by law to constantly maintain the public shelters under its jurisdiction. An additional role imposed on local authorities is to supervise the maintenance of private shelters shared by residential buildings. Security of public institutions, in particular kindergartens, also lies heavily on the local budget.

Security issues notwithstanding, public space is perceived as relatively safe. In recent years "urban policing" – an integrated enforcement agency that includes municipal inspectors and police officers – has begun to take hold. The arrangement is designed to meet municipal enforcement targets; prevent violent incidents and anti-social behavior; and strengthen the sense of personal security and safety of residents in urban spaces. The project, which began as a joint pilot of the police force, Ministry of Public Security and several municipalities, has expanded in recent years and presently operates in 55 local authorities.[41]

22. Improving social inclusion and equity

The strong polarity between center and periphery is also expressed by the socio-economic rating of cities in Israel. This rating, based on cluster classification (where cluster 1 represents the lowest socio-economic level, and 10 the highest), portrays a rather distinct picture, according to which the large cities in the center benefit from a higher socio-economic rating, whereas

small peripheral localities (in particular among populations of Bedouin, ultra-Orthodox Jews and Arabs) are the weakest.[42]

Table 7: Socio-Economic Cluster (Source: CBS, Local Councils and Municipalities by Socio Economic Clusters, 2008)

Socio-Economic Cluster	Type of Authorities Rated
1	Bedouin localities, ultra-orthodox localities
2-3	Bedouin localities, ultra-orthodox localities, Arab localities
4	Arab localities, development towns, poor large and medium-sized cities (poor due to large ultra-orthodox and/or Arab populations) such as: Jerusalem, Ramla, Lod, Acre/Akko
5	Development towns, peripheral large and medium-sized cities in the outer ring of the Tel Aviv metropolitan area, such as: Ashdod, Ashkelon
6-8	Most large and medium-sized cities in Israel, such as (by order of socio-economic rating): Holon, Netanya, Rishon LeZion, Tel Aviv-Yafo and Herzliya
9-10	Small towns in the center and wealthy peripheral localities

Variance between the cities is also reflected by housing prices in Israel, which have increased in recent years, (for more see chapter I and V). Thus, apartment prices in Tel Aviv-Yafo are some 80% higher than the national average.[43]

The potential for social friction in Israeli cities is prevalent. Mixed cities are especially required to address this ongoing issue. The mixed city of Acre, defined the issue of co-existence at the core of its urban agenda, striving for equity both in space and budget. City leaders are mobilized and committed to the issue, facilitating activities such as the city's Chief Imam and Chief Rabbi preaching tolerance in schools. The government is also deeply invested in closing the existing disparities, especially in relation to Israel's Arab population. These commitments are being translated to budget allocations and comprehensive strategic programs in education, employment and overall development, specifically through resolution 922 (detailed above).

One of the key strategies sought in recent years is the encouragement of young communities to move to the periphery and work there. This approach includes a relocation of young adults (students or young families) to peripheral towns or disadvantage neighborhoods. The authorities see these groups as contributing significantly to neighborhood revival, to improved public image of the town, and to inspiring other young adults to move and live in similar places.[44]

23. Challenges Experienced and Lessons Learned

Improving Urban Legislation

The legislative frameworks that define the activity of local government in Israel are the Municipalities Ordinance (1934) and the Local Councils Ordinance (1941), originating from the British Mandate, they still reflect the centralized state of those times. Although the Municipalities Ordinance has been amended numerous times, the structure and rationale of the directive still constitutes an influential factor on the ability of conduct and level of independence of the

[41] Ministry of Public Security website: Urban Policing, 2016.

[42] Characterizing Geographic Units and their Classification According to Socio-Economic Level of the Population, CBS, 2008.
[43] MoCH, Average Prices by Locality (2015), Table 1.1.
[44] Zfoni, G., Young Communities as a Resource for Urban Strategy – Field Research and Recommendations for the Jerusalem Strategic Plan, 2012.

municipality.

On the other hand, in regards to planning and licensing, local governments have relatively expansive jurisdiction. The changes in the status of planning permits and authority of local planning committees was instated through a reform of the National Planning Law in 2012. Legislative improvements were undertaken also with regard to **business licensing,** where local authorities also play a pivotal role. The local authority functions as a licensing authority and as an enforcement agency to ensure all measures and arrangements are made for orderly operation of businesses.

Local legislation is improving as more legislative power is transferred to the local councils and municipalities, enabling them to develop better governance and long term plans.

Decentralization and Strengthening of Local Authorities

Strengthening local authorities requires decentralization of responsibilities, recognition of the importance of local government, whilst ensuring the State can intervene if needed, in cases of dysfunction or budgetary collapse.

This is especially important in view of the varied standing of the local authorities around the country. The strong robust municipalities have the capabilities and finance to effectively govern their cities, while the weaker and peripheral municipalities are struggling with their independence. Decentralization is gradual, taking these disparities into account, building governance and recuperation plans for the weaker municipalities.

Another central challenge for the conduct of local authorities in Israel, has to do with the fact that there is no statutory framework for local authorities to cooperate and coordinate their activities. Regional and Metropolitan frameworks are gradually developing to bridge these gaps and to enable inter-city cooperation, which can strengthen the local governments and create new opportunities for urban development.

Improving Participation and Human Rights in Urban Development

Cities need to establish sustainable mechanisms that will enable their citizens to develop capacity and experience in civic responsibility, to broaden democratic platforms and responsible governance. This is a twofold challenge, for the city to become again a democratic arena and for the residents to reinvent themselves as citizens instead of consumers of services. Civic engagement needs to become an everyday practice, embedded into city life at all levels of municipal and community activities.

The city actively involves residents in the urban experience and urban development, while emphasizing engagement in decision-making processes and wisdom of the crowd as a means for sustainable municipal management. Municipalities can create a climate that facilitates the formation of collaborations between residents, business establishments, third sector organizations and the Municipality, while making use of cutting-edge technologies that enable learning, creativity and sharing to achieve social and economic prosperity. The technological and social tools available to the city enable better use of information and communication technologies to streamline the management of existing resources, save energy costs, provide improved service, enhance the quality of life, and fulfill the 'sustainable city' concept.

Enhancing Urban Safety and Security

Unlike many countries that contend with maintaining public order and curtailing incidents of crime and delinquency, Israel also deals with ongoing security challenges due to the state of national-political conflict. The need to protect the civic population from terrorism and missile attacks has a significant impact on urban life and on the conduct of authorities. The public sphere is subjected to physical interventions for safety purposes; this entails substantial funds and guidance from the national entities. On the other hand, the local typologies and characteristics need to be maintained and supported.

Whereas security needs to rely on national and regional support mechanism, public safety can rely more on local institutions. In recent years "urban policing" – an integrated enforcement agency that includes municipal inspectors and police officers – has begun to take hold. The arrangement is designed to meet municipal enforcement targets; prevent violent incidents and anti-social behavior; and strengthen the sense of personal security and safety of residents in urban spaces.

Improving social inclusion and equity

Social inclusion and equity on the urban level are ongoing challenges. Disparity between center and periphery and between sectors is recognized as one of Israel's prime challenges.

While most government ministries offer intervention plans to alleviate the situation, success is dependent in large, on local leadership and community resilience. Building and supporting local capacity is probably the most important driver to overcoming the social and economic challenges. Students and young communities are encouraged to move to the periphery and build their life there, reviving neglected towns and neighborhoods. Although the potential for social friction is present, there are already successful examples of mixed neighborhoods, either Arabs and Jews or secular and religious. Local diversity is gradually growing, through financial support for mixed housing, cultural and educational institutions and community actions.

CHAPTER V Improving municipal/local finance

24. Improving municipal/local finance

The 257 Israeli municipalities exhibit an exceptionally broad range of financial standing and economic wellbeing, as demonstrated by these two numbers:

23,316NIS   3,232NIS

The average expenditures of the ten wealthiest local municipalities in Israel is 23,316 NIS annually on each resident, while the weakest municipality can only allocate 3,232 NIS per resident, less than 15% of the rich cities. The economic crisis of 2008-2012 affected heavily on the Israeli local governments, as can be seen in table 8, more than 50% of the municipalities were in deficit, while in nearly 25% the mayor was replaced by a government comptroller.[45,46]

Table 8: End of Year Financial Status by Socio-Economic Cluster, 2008 (Source: CBS, Local Authorities, 2008)

Socio-Economic Cluster	1	2	3	4	5	6	7	8	9	10
	-45%	-70%	-55%	-9%	-15%	-2%	4%	0	-8%	4%

The past years have seen a succession of strategies and interventions to remedy the situation. As a result, more municipal budgets are balanced, local economic development is on the rise, and municipal responsibilities have been greatly expanded.

The main grant that the municipalities receive from the Ministry of Interior is the "Balancing grant". The grant is calculated in the following way: the municipality's "normative expenditures" minus the municipality's actual revenue = the "balancing grant".[47] The income in the ordinary budget of local authorities comes from three sources: locally-generated income, government participation and loans for balancing the ordinary budget.

Fig. 13: Sources of Income for Local Government

From the early 1970s to the mid-1980s, locally-generated income was low and government participation was high. This situation was reversed towards the 1990s with state lead reform - decreasing substantially both state support and supervision. The reform emphasized the expense

side of the municipal budget, advocating reducing costs in place of increasing income. Reform measures were mostly limited to cut-backs and efficiency measures, which unfortunately tends to affect the quality of services delivered.

The portfolio of the expenses of the strong and weak municipalities are very similar, with education and welfare being the largest expenditures: However, **on the income side the differences are bigger.** For instance, the income from property taxes of the robust municipalities is three times larger than the income of deficit municipalities, whereas the income generated from nonresidential property tax is **twelve times greater.** Consequently, as can be seen in the figure bellow, their ability to provide services varies accordingly. 90% of the "recuperating" municipalities are small municipalities with less than 25,000 residents. Municipalities of this type are usually also peripheral, both geographically and socially. They are dependent on yearly Balance Grants, in addition to designated support for education and welfare.[48]

Fig. 14: Average Expenditures per Resident by Financial Status of Municipalities (Source: CBS, Local Authorities, 2014)

The situation prompted the Ministry of Interior to explore new schemes for strengthening municipal finance, based on three strategies:

1. Supporting the municipalities in increasing their collection efficiency

2. Supporting development of nonresidential income sources, especially commercial and office enclosures

3. Exploring programs to merge small municipalities or create new frameworks for inter-municipality cooperation, specifically economic clusters (for more see local economy section in this chapter)

The new department of Economic Development at the Ministry of Interior, is responsible for advancing these new measures in line with both the national challenges and the HABITAT III urban agenda. A groundbreaking program, dedicated to improving the economic standing of the Arab musicalities, was launched by the Government towards the end of 2015 - Resolution No. 922, known as the "Economic Development Plan for the Arab Sector". This is the largest and most comprehensive plan advanced to close gaps for Israel's Arab society. The Plan articulates numerous targets for employment, education, transportation, zoning, housing, child-care, policing

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45 State Supervised Local Governments, the Israeli Parliament Center for Research and Information, 2011.
46 Ben Basat, A., Dahan, M., The local authorities' crisis, The Israel Democracy Institute, 2008.
47 Clarifications to the Balance Budget, Ministry of Interior, 2016.

48 The Crisis of the Local Governments - A special report, the State Comptroller, 2015.

and more, with special emphasize on the leadership role to be played by local Arab leaders.

25. Strengthening and improving access to housing finance

As the economic capacity of many Israeli municipalities declined in the last decade, housing prices soared, climaxing in 2011 with the "Tent Protest". The protest began with one tent appearing in the middle of Rothschild Boulevard in Tel Aviv, and within days spread out to thousands of tents in towns and cities across Israel.

Following the demonstrations, Prime Minister Netanyahu convened a special committee to propose a package of policy tools to reduce housing and household costs. In 2012, the plan was approved and set in motion with the establishment of the Housing Cabinet.

Fig. 15: Housing Prices in Israel by type; 2007-2013 (Source: MOH, Housing Prices data, 2014)
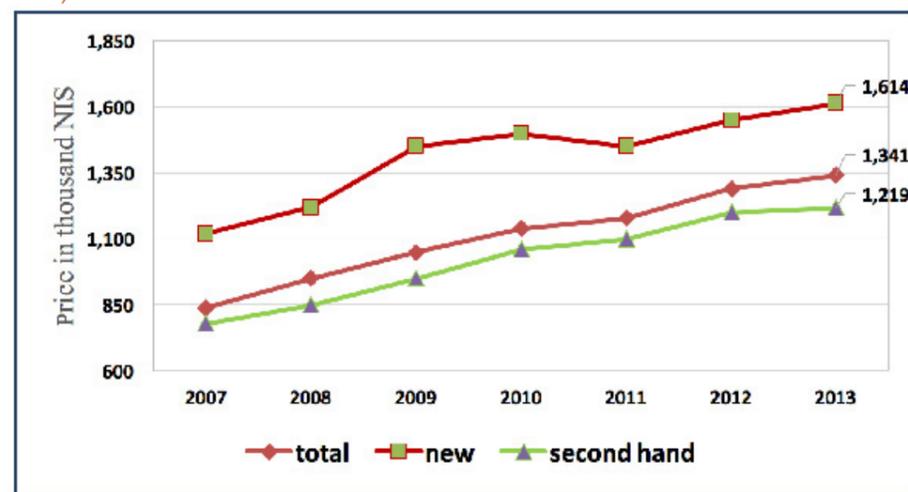
Regulating the housing market in Israel is challenging. The average cost of buying an apartment rose by 55% between 2008 and the end of 2013.[49] During the same period, the average monthly rent also rose by 30%.

70% of all Israelis own their home. Ownership in the lowest decile has increased by 14.6% in the last decade, due to expansion of public housing programs. With the increase in housing costs, rentals - a more affordable housing option - have increased, especially among city dwellers. In the large cities like Tel Aviv-Yafo, Beer Sheva, Haifa and Holon, more than a third of the residents are already renting their apartment, with the rate approaching 50% in Tel Aviv-Yafo.

Table 9: Percent of Renters in Leading Cities (Source: CBS, Statistical Abstract of Israel)

	1997	2002	2007	2012
National	24.3	25	26.1	26.9
Jerusalem	29.2	30.4	33	30.9
Tel Aviv-Yafo	39.5	43.6	45.7	46.7
Haifa	27.7	36.2	38.7	33.2
Beer Sheva	43.1	31.8	17.6	35.9
Holon	15.2	18.9	26.5	30.6
Bnei Brak	12.8	16	25.8	27.9

[49] MoCH report, 2014.

While the new housing programs are dominated by the state government, they recognize the key role that the local municipalities play and need to play in assuring a livable environment and services. The state local cooperation is translated into the "Roof Agreements".[50] These are financial support parcels that local authorities receive from the government in order to facilitate the construction of schools, daycare centers, public and infrastructures. Municipalities, especially the large ones, have also launched their own initiatives, in particular Tel Aviv and Jerusalem, who have independently developed plans for affordable housing (for rent but also for purchase). The first of these – "Ganey Shapira'" was completed and inhabited in 2014, offering 70 apartments – 75% allocated to local residents and 25% to newcomers.

Fig. 16: State Spending on Housing Subsidies, (Source: MOH, Housing Prices data, 2015)
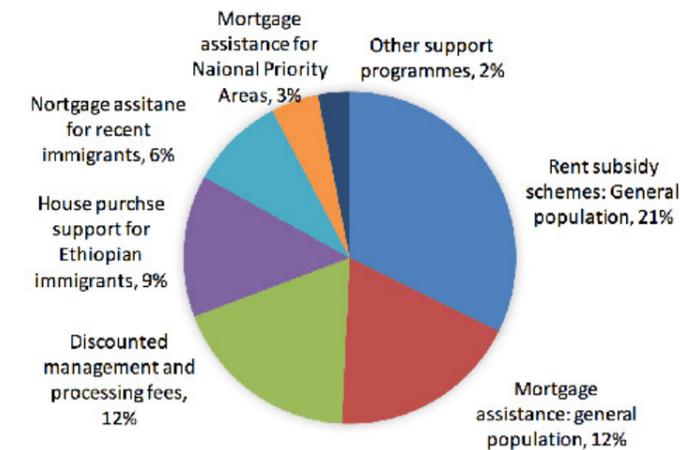
26. Supporting local economic development

Urban economy is a congruent system, with two drivers; municipal finance and the local economy. The two are naturally codependent but follow divergent development processes. The local economic system demonstrates the inherent challenges and opportunities of Israeli Urbanism. Two trends exemplify development in Israel, especially in the last decade:

Fig. 17: Development trends in Israel
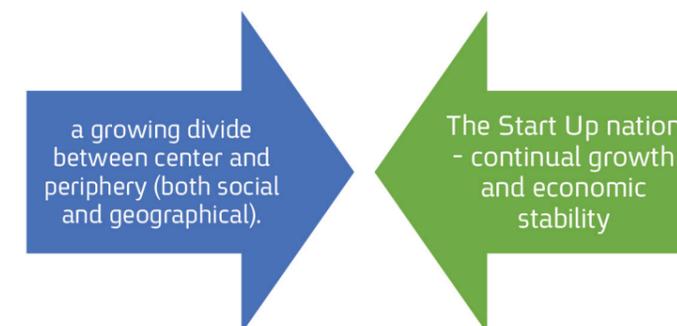
While cities are an integral part of the StartUp nation wave, smaller towns and communities, especially in the periphery, are confronting pressing economic challenges. Improving the structure of local economies is a joint task of the government, local authorities and civil society organizations. In order to counter the situation, national development strategy was streamlined

[50] MoCH 2015.

towards the North and the South, adopting a regional perspective in lieu of focus on individual communities.

The Ministry for Development of the Negev and the Galilee was established in 2005 in order to advance and promote the two regions and place them at the top of the national agenda. The operational arms of the Ministry are the Negev and Galilee Development Authorities, who are directly responsible for promoting economic growth by catalyzing initiatives and building partnerships between government ministries, local authorities and local development organizations. The unique regional focus of the authorities enables them to leverage integrative development of the Negev and Galilee in a systematic and strategic manner.

The economic structure of the two regions is more oriented towards traditional sectors such as manufacturing, agriculture, and tourism. The two regions are very different in their physical and geographical attributes but similar in their demographics, with a mix of Jewish and Arab[51] towns and communities.

Table 10: Regional Demographics – 2014 (Source: CBS, Statistical Abstract of Israel)

	Population	Jews	Arabs	# Towns	# Local authorities	Employment
Galilee	16.5%	43.5%	53%	16 (4 Arab)	35 (25 Arab)	14.8%
Negev	13.6%	66%	33%	12 (1 Arab)	12 (6 Arab)	13.2%
General	8,296.9	75%	20.7%	76 (11 Arab)	125 (63 Arab)	3,555,800

The strategic development plans of the two regions also share a similar conceptual structure;
* Building collaborative frameworks for neighboring authorities
* Empowerment and capacity building for the local population
* Bringing in infrastructure and formative opportunities

Collaborative frameworks

The collaborative frameworks for regional economic development are based on the Cluster concept, implemented jointly by the Ministry of Interior together with the local authorities and the JDC.[52] The Economic Clusters Program connects municipal leaders to one another through voluntary associations of local municipalities, in order to collectively create long-term development strategies. The program has already launched five clusters; Western Galilee, Beit Hakerem and Eastern Galilee, in the north, and Eastern and Western Negev in the south. The program gathers local leaders and resources needed to enhance the quality of education, welfare, tourism, and employment services in the region. The cluster brings together both rural and urban communities, to identify mutual interests and compile a sustainable development plan in order to improve local services and expand economic opportunities.

Infrastructure and formative opportunities

Regional development depends greatly on infrastructure and connectivity, specifically railroads, both for heavy and light trains. The Israel Rail Development Plan seeks to shorten the geographical distance between outlying communities and cities. The Negev and Galilee rail expansion plans were set in action in 2010. By 2016, about a 100 km were already in construction, connecting Karmiel in the Galilee with Acre and Haifa, Beit Shean with the central line, and the western Negev with Beer Sheva and Tel Aviv.

[51] The Arab population of the Negev is predominantly Bedouin.
[52] Jewish Distribution Committee working in Israel for the entire population.

The government also set in motion two formative opportunities for the regional economy;
1. Building a university hospital in the Galilee town of Zefat.
2. Transfer of the IDF bases to the Negev

Both prospects offer an extraordinary opportunity to improve the quality of life for residents in the region. These unique projects, especially the southern one, hold the potential to become a turning point for the Israeli periphery, to the benefit of all.

27. Creating decent jobs and livelihoods

More than 90% of the citizens of Israel live in cities, which serve as the locomotives of economic growth, industry, and the locus of employment. As of March 2016, the percentage of employment, ages 15 and up is 64.3%. Almost half of the Israeli work force is employed in the Tel-Aviv or Center regions.

Fig. 18: Distribution of the Israeli Workforce (Source: CBS, Statistical Abstract of Israel, 2014)
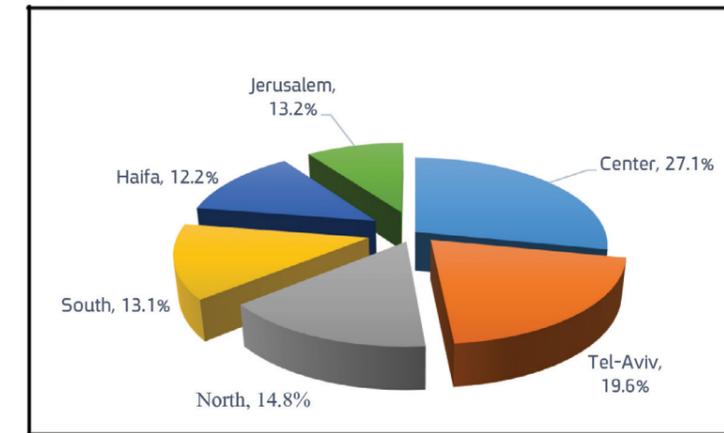
Through the years, the Israeli government has launched several initiatives to enhance employment rates in the more peripheral regions of Israel. The Capital Investment Encouragement Law (1959) is the most prominent law tackling this challenge. The aim of the law was to aid in the creation of job opportunities in terms of number and breadth. Incentives are offered for companies and entrepreneurs to establish enterprises, manufacturing plants, agriculture and tourism in peripheral areas of Israel, by providing them with benefits and grants. By the mid-60s this law played an essential role in the economic development of peripheral Israel.

A well-known example of government-encouraged industry establishment in the peripheral regions of Israel is the case of international chip giant – Intel. Intel decided to build two factories in Kiryat Gat – a city in the southern district of Israel. This decision came with and was influenced by substantial subsidization from the Israeli government. The first factory opened in 1999, and employs approximately 3,700- employees, mostly from Kiryat-Gat and Be'er Sheva.

The last three governments have all acted to promote job creation in the peripheral regions of Israel. The Sharon administration designated 450 million NIS to support building new factories or expanding existing ones in peripheral regions (2005). In addition, the Sharon administration allocated 40 million NIS annually to encourage the development of industrial zones in the Arab, Bedouin and Druze sector.

The Olmert administration (2008) expanded professional training facilities for youth in peripheral areas, alongside the establishment of thirty day-care centers to support the employment of

mothers. In addition, the Olmert administration allocated ten million NIS to allow the continued operation of a Bedouin employment center.

The Netanyahu administration (2009) re-determined what regions and communities would be defined as areas of national priority, giving the relevant ministers authority to grant significant benefits and incentives concerning employment, education and housing. The purpose of this decision was to reduce opportunity gaps and to enhance quality of life for residents of national priority areas compared to residents living in the Tel-Aviv district. In addition, the Netanyahu administration established the new medical school in Zefat – which will in turn create five thousand new jobs.

28. Integration of the urban economy into national development policy

Good Cities are the hub of national life, they catalyze innovation and creativity, nurture academic thought, and leverage business entrepreneurship. They are the backbone of national economy, producing the conditions for wealth and wellbeing. The Tel Aviv Metropolis occupies only 7% of the land but contributes about half of the national GDP.

Israel is a world leader in Hi Tech and innovation. This sector alone contributes 11 % of the annual GDP and supplies close to 200,000 jobs.[53] Entitled the Silicon Wadi (valley in Arabic), the central area of the state is the main driver for this industry, with the cities of Tel Aviv, Rehovot, Hertzelia and Ra'anana leading the way.

The age of information technology placed Israel's economy, and particularly its Hi Tech industries, in the forefront of world development in these fields. A number of internationally recognized Israeli companies have been bought by top business conglomerates in multi-billion dollar transactions. The growing presence of Israeli firms on Wall Street and the European stock exchanges is yet another manifestation of the respect with which Israel's Hi Tech industry is regarded. While the presence of Israeli companies abroad is a strong indicator of success, the presence of international companies in Israeli cities is the paramount indicator of global standing.[54]

Fig. 19: Hi-Tech Export Contribution to the Total Industrial Export ($M) (Source: CBS, Export-Import Balance, 2013)
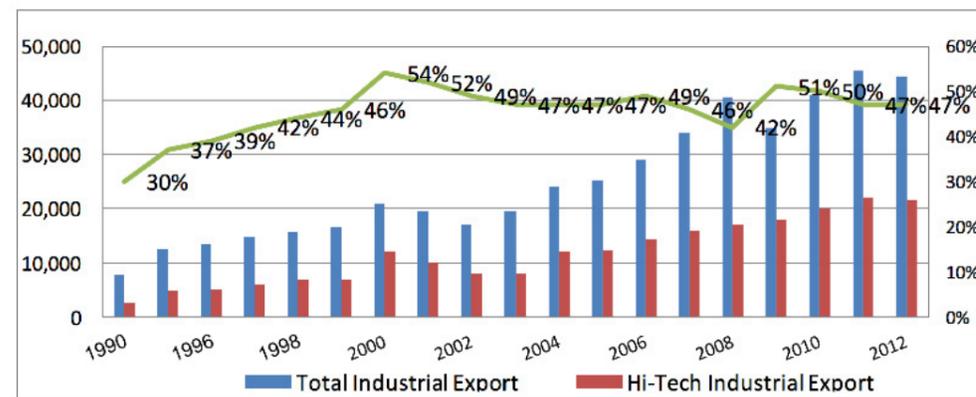
The large Israeli cities play a crucial role in the prosperity of the Hi Tech industry by creating the spatial and logistical conditions the industry requires, in terms of business space and employee satisfaction with work/life balance. Tel Aviv - Yafo accounts for 13% of businesses and for 8.3% of

[53] CBS, ICT Sector Review for 2007, 2014.
[54] MF, Israel, 2016.

living space for industry employees.

The first Hi Tech business parks were developed in the 1970's, usually as auxiliary research centers in conjunction with academic campuses and institutions, such as the Weizmann Science Institute in Rehovot. In 1999, there were still only four such centers in the country, but by 2016, there are 54 centers/parks, mostly in the Tel Aviv-Yafo, metropolitan area, housing 5,900 companies.

Fig. 20: Hi-Tech Employees – Place of Residence and Work (Source: CBS, Statistical Abstract of Israel)
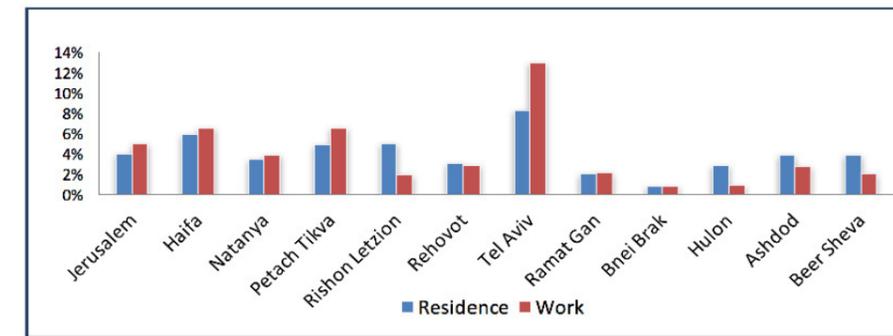
Countries and cities compete to attract investors and businesses. While the national level can offer grants and tax breaks, it's the urban level that has to supply the suitable environment, infrastructure and amenities for the day to day operations. These would include housing, environment, quality of education and cultural facilities, accessibility to airport and major highways, proximity to a university and to other similar businesses.

Israeli cities are developing specialized anchors to create specific industry clusters. Beer Sheva specializes in the Bio Tech industry, building on the joint research partnership between the Soroka Hospital and Ben Gurion University. Biotech companies are clustered around and in the city, supplying jobs, and income for the municipality.

Tel Aviv is renowned globally for its startup qualities. Close to 1000 startups work in Tel Aviv, supported by a dedicated municipal body, working to boost an ecosystem for small startup companies.

Jerusalem is also recognized as one of the world's top startup ecosystems. In 2014, 57 startups in Jerusalem raised a total of $227 million.

From Tel Aviv, to Jerusalem and Beer Sheva, Israeli cities are leveraging the national economy and creating the next frontier for industry and development.

29. Challenges Experienced and Lessons Learned

Improving municipal/local finance

The financial robustness of municipalities directly affects the wellbeing and opportunities of its residences. Municipal robustness depends largely on income from industry and commerce; accordingly, these depend on access to business opportunities, cost of services and vicinity to business centers. In 2005, the Ministry for Development of the Negev and the Galilee was established in order to promote economic growth in the periphery and encourage initiatives

and partnerships between different government offices, local authorities and local development organizations. Bridging between the center and the periphery is also a transportation challenge; the 2010 rail expansion plans were instated to expand the coastal line to connect regional centers to the Metropolitan areas.

Size is also a significant determinant of local wellbeing; smaller municipalities are less robust and depend more heavily on the government. Throughout the years, several interventions and development strategies have been devised. Currently, the government is establishing regional entities as economic and governance buffers, to strengthen and build the capacity of the smaller peripheral communities.

Strengthening and improving access to housing finance

Since the 80s, Israel has traversed from a "state governed housing market" to a "market driven" one. Although there are more and more public housing projects, and even municipal initiatives, home ownership is still a private affair. The National Housing Cabinet was established in 2012 to create new financial instruments to regulate and direct the housing market. Financial instruments would include: low loan-to value mortgages, regulation of the variable interest component of mortgages, tax wavers and discounts.

Supporting local economic development

Municipalities need to take a dominant role in developing the local economy, in supporting business and industrial enterprises and seeking new opportunities. This is a new role for most municipalities, bringing together the different stakeholders to improve the structure of local economies and leverage anchor enterprises. The government has already initiated two major projects as local economy drivers for the Negev and the Galilee: building a university hospital in the Galilee (at the city of Zefat) and transferring IDF bases to the Negev. These projects will become game-changers for the periphery, ensuring that most of the funding and income, circles and nurtures, local businesses and enterprises.

Local prosperity depends on local capacity - civic, professional; political and administrative entities– working together to attract and engage local residents, specifically women, Arabs, young adults and seniors, and new initiatives. A strong local economy, will produce more income, generate more jobs and create a lively urban space.

Creating decent jobs and livelihoods

Good cities are able to offer decent jobs and livelihoods to most of their residents' eliminating the need to commute daily. Today, more than 50% of the population work in the Tel Aviv (Dan) metropolitan area, over 1,000,000 commuters enter the city each day. The last three governments have all tried to disperse the job market and promote employment in the periphery. Strategies include creating opportunities for employment, building capacity and vocational expertise. Specific programs for Arab women and Ultra-Orthodox men and women[55] have been instated, already succeeding in increasing their representation in the workforce.

Integration of the urban economy into national development policy

The leading cities will always surge ahead, identifying opportunities and promoting innovation. The challenge of sustainable urbanizations is to harness the capabilities of the leading cities to support and nurture the weaker ones. The age of information placed Israel's economy and leading cities, in the forefront of world development in these fields. The state is a central driver for the local development, by offering grants and tax breaks to attract international corporations, and support to local R&D through research grants and accelerator projects. Government efforts can be expanded to replicate the success stories and link leading cities with weaker cities, through joint accelerators or development programs.

Israeli cities are already leveraging the national economy and creating the next frontier for industry and development. Now, in line with *"think globally – act locally'"*, these frontiers should be made accessible to all cities, around the country.

[55] To a lesser extent.

CHAPTER VI Housing and Basic Services

30. Slum upgrading and prevention

There are no slums in Israel, excluding very marginal illegal squatting.

31. Improving access to adequate housing

Since 2008, against the backdrop of low interest rates alongside accumulated shortage in residential housing, housing prices and rents in Israel have risen dramatically. Therefore, improving access to adequate housing became not only a matter of building standards and regulations, but also a matter of increasing the housing supply and reducing prices, to make adequate housing affordable for first time buyers and young families.

Table 11: Completion of housing units by area (Source: CBS, Statistical Abstract of Israel)

Year	Total	Center	South	North	Tel Aviv	Jerusalem	Haifa
2013	50,564	20,730	8,778	6,458	4,401	4,105	6,092
2006	28,731	10,058	4,204	5,914	3,912	2,108	2,535
1996	41,045	41,045	6,540	7,765	4,527	3,694	4,209

The Israeli Government has taken several measures to improve access to housing for the public. In order to increase housing supply, the Government has aimed to ease and reduce the existing bureaucracy in land zoning and building processes. For instance, the establishment of the Housing Cabinet, the establishment of the CPHA (National Committee for the Promotion of Construction in Priority Housing Areas) to increase the number of housing units. A Governmental Housing Strategic Plan is also in preparation, led by the National Economic Council and Israel Planning Administration. In addition, plans for developing the long-term rental market and for directly lowering housing prices are being promoted.

The vast majority of Israeli land is owned by the state. Since 2015, all state-owned land intended for high density building has been sold to building contractors with a large discount of up to 80% (along with other benefits). The land is sold by auction to construction companies that compete for the lowest price per square meter. As a result, first time homebuyers can purchase an apartment with a discount on market price of 10%-30%. In order to guarantee safety and sound quality, construction is set in accordance with standards set by the Government. Since the beginning of the program in the midst of 2015, the government sold land for contractors of nearly 20 thousand housing units with more than 60% of the land sold in the demand areas where property prices are relatively high. It is the government's intention to continue this project in order to allow the great majority of households that do not own apartments to become property owners.

Despite the fact that nearly 30% of Israeli households live in rented apartments, the rental housing market is still unorganized. Most rental apartments are owned by individuals. As a result, in the past there was little government intervention aimed at promoting affordable housing in the rental sector. However, in recent years the Government has been encouraging institutional rental housing by granting tax benefits and additional building rights to rental projects.

Fig. 21: Housing in Israel and leading Cities by type of ownership (Source: CBS, Statistical Abstract of Israel)
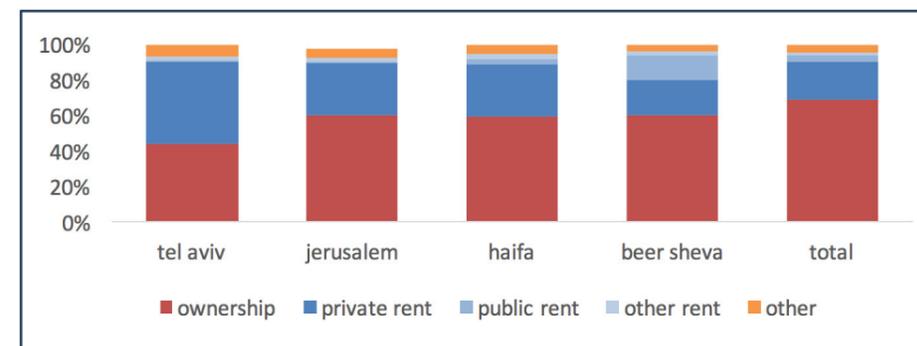
Assistance in finding adequate housing is provided for low-income families and individuals who meet the government-defined eligibility requirements. Assistance is provided in two ways: rent subsidies and public housing. Rent subsidies, which partly cover the rental fees in the private market and public housing apartments, are allocated to financially or functionally distressed families. Public housing apartments are owned, maintained and preserved by the state.

As of today, there is a gap between the needs for public housing and the number of apartments available. Some governmental projects are on way in order to minimize this gap and to shorten the period that families have to wait for suitable accommodation.

All building and construction activities, including renovations, are subject to Israel Planning and Building Law (IPBL 1965) and regulations. The construction regulations define mandatory standards and requirements for ensuring quality and safety of buildings and apartments. The regulations were introduced in the 1970s and are updated on a regular basis. Compliance with law and regulations is overseen by local authorities. In recent years the IPBL has been undergoing a substantial reform, intended to simplify and shorten the planning process, as well as to improve the quality of planning and its execution.

32. Improving access to sustainable means of transport

As already noted, massive measures are being taken, in the last decade, to overcome the lagging development of Public Transportation.

In order to prioritize public transportation above private cars, a variety of cheap, reliable and convenient public transportation options are being made accessible to the entire population.

The primary challenge of an advanced and accessible transportation system is synchronizing the varied means of transportation. This is a complicated problem that is slowly being unraveled. Challenges include connecting bus and rail stations so they can be easily accessed, synchronizing times between trains and buses, allowing bikes on both bus and train, and most importantly, offering one all-inclusive information and payment system. This concept is the basis for the 2011 Public Transportation Reform.

Information - In order to promote the accessibility to public transport, the MoTRS is developing a "Portal", which provides online information on public transportation in Israel. Information is provided also in Arabic to enhance accessibility for the Arab population.

Unified Pricing - In 2015 the Ministry of Transport and Road Safety, in cooperation with the Public Transportations operators, introduced a reform of the pricing and payment system.

The reform combines all means of public transportation under one subscription. The multi-pass subscription card can be charged online and via cellular applications, making accessibility easier and cheaper and also shortening turnover time, since the driver is no longer concerned with ticketing.

Innovation - In line with Israel's Startup Nation positioning, much emphasis is given to accessibility through technological applications. In 2011 the government established the Alternative Fuels Program, in order to promote and advance alternatives to the existing mobility structure, with special emphasis on development of digital and technological options and solutions. The private sector is already surging ahead and developing innovative applications such as; Waze, Moovit, and "Altrntib", offering the best available transportation option based on passenger information and location.

Inequality - The clear bias for private vehicles creates structured inequality in access to mobility and means of transport. Inequality is reflected particularly among vulnerable populations such as women, children, the elderly and small peripheral communities.

In the last five years the government is allocating substantial effort and funds to resolve the situation, including dedicated tenders and subsidies and a special campaign to encourage usage of public transportation in Arab Municipalities.

Fig. 22: Road accident casualties - % of Pedestrians: 2001-2014 (Source: CBS, Statistical Abstract of Israel)
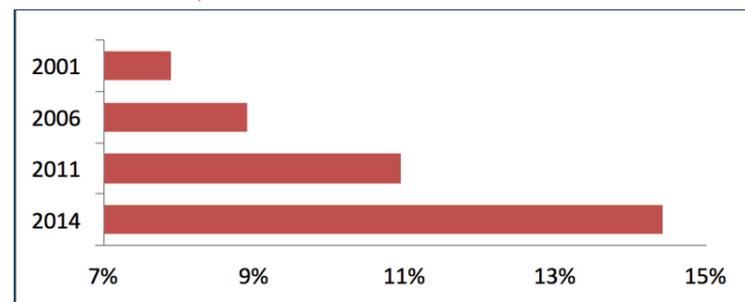
Accessibility to Public Transportation for the disabled is addressed by a series of state legislations, predominantly the Equal Rights for People with Disabilities Act (1998), with a dedicated reference to public transport. In addition, the Parking Act (1993), defines parking spaces for disabled. Many cities also exempt handicapped parking from payment. In 2003, a bill was instated securing the rights of people with disabilities, specifically the blind and vision impaired, in public transportation. In 2010, a "multi-year program to implement the accessibility of public transportation in Israel" was launched.[56]

33. Ensuring sustainable access to safe drinking water

All households in Israel are connected to safe drinking water, in accordance with the 1959 Water Law that ensures the right to safe and accessible water for all. The water delivery system is national, with about 30% supplied from local sources, and is operated through municipal frameworks. The real challenge for Israel is not access in terms of physical infrastructure, but availability. Israel is located in a semi desert region which is already experiencing variations in rain patterns as a result of climate change. In the last decade, due to a consecutive period of

drought, natural water resources were at an unprecedented low point, in quality and quantity.[57] In view of these trends, the government instated a comprehensive national plan in 2007, establishing the Water Authority as the executive body for both water and sewage. The national Water Management Plan sets operational objectives for the water sector till 2050, promoting the following steps for maintaining a sustainable and sufficient water supply:

- High efficiency was reached in the agricultural production per water unit.
- Home water consumption was reduced by 20% through education and media campaigns.
- A nationwide infrastructure of treated effluents plants was developed, attaining an unprecedented rate of 86% of treated sewage for reuse for irrigation and agriculture (for more, see case studies).
- Different agricultural crops were adjusted to irrigation with brackish or marginal water in total annual volume of hundreds of millions cubic meters.
- Large scale seawater desalination program. Current production supplies about 30% of Israel's water needs.

Fig. 23: Water sources Israel (Source: CBS, Statistical Abstract of Israel, 2014)
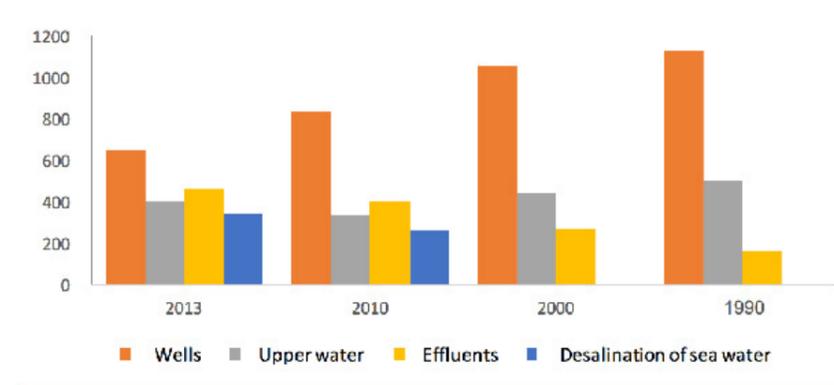
The local authority has a crucial role in the water management system, serving as the final link to and from the end user. Until 2001, municipalities were directly responsible for the water system, including collection and monitoring. This arrangement created a conflict of interest, since municipalities were both users and supervisors. Collection was low (especially in weaker authorities), and revenues were used for other municipal needs. There was also substantial water loss due to inefficiency and lack of investments in infrastructure.

The Water and Sewage Corporates Law of 2001 set out to address this situation by establishing Water and Sewage Municipal/Regional Corporations. The corporations are directly responsible for managing the water and sewage system, and are regulated directly by the Israel Water Authority. The main purpose of the reform is to ensure that water revenues are optimal, and that they are used for maintenance and development of the municipal water system. This process was especially beneficial for weaker municipalities, enabling them to improve their systems and attain better water quality.[58]

56 Ministry of Transport, 2010 – Multi Year Plan for Accessible Public Transportation.

57 Water Authority, 2015.
58 Potable water consumption data for local authorities, the Water Authority, 2014.

Table 12: Improvement of the Water supply systems (Source: Water Authority, 2014)

	Pre reform (2007)	Post reform (2014)
Water Suppliers (#)	193	108
Household consumption (MCM)	602.3	568.8
Household consumption per capita (CM/per year)	87.1	79

For many people water accessibility is not only an ecological issue but also an economic one. Water prices in Israel are relatively low, and take up only a small fraction, around 1%, of household expenditures. As can be seen in the table below, in 2013 water comprised only 1.46% of household expenditures in the lowest percentile, coming down from 3.4% in 1997.

Table 13: Percentage of Water Cost out of Household Expenses by Decile (Source: CBS, Statistical Abstract of Israel, 2014)

Year	1	2	3	4	5	6	7	8	9	10
2013	1.46%	1.38%	1.27%	1.20%	1.09%	0.99%	1.01%	0.92%	0.93%	0.88%
2006	1.45%	1.37%	1.23%	1.13%	1.03%	0.93%	0.89%	0.90%	0.76%	0.70%
1997	3.4%	2.33%	2.31%	1.75%	1.70%	1.71%	1.51%	1.30%	1.26%	1.30%

34. Ensuring sustainable access to basic sanitation and drainage

Water in all its forms is recognized as a national resource. Accordingly, effluent treatment is an integral part of the National Water Strategy, attaining a world record of 85% recycling.

505 MCM ⟶ 98% is treated ⟶ 87% reused

Connection to sanitation systems is governed by the Sanitation and Sewage Law of 1962. By 2015, more than 98% of households are connected to sewage treatment facilities,[59] with 51.7% connected to Tertiary Facilities.

The sewage system was previously managed by the local municipalities themselves. However, in 2010, as part of the Water System Reform, Municipal/Regional Corporations were formed. The corporations operate the systems on the local level, they are regulated by the National Water Authority, and monitored on quality by the MoEP.

Municipal effluents are essentially recycled and used for agricultural and gardening purposes. The largest Wastewater Treatment Plant in Israel, the Shafdan Facility, is the Dan Region (Greater Tel Aviv), feeding most of its recycled water to the southern Negev region.

## 35. Improving access to clean domestic energy

All cities and towns in Israel are connected to electricity, delivered by the National Electricity Corporation (IEC).

Energy consumption in Israel has risen by 34% percent in the past ten years, while the population rose by about 27%. Standard of living and consumption are continually rising, as is the cost of living. In general, electricity prices are relatively low, and are decreasing with the entry of natural gas into the market. Energy costs come to about 2% of total household cost in the higher percentile, whereas they are close to 5% in the lover deciles.

[59] Residents of unrecognized Bedouin villages and of East Jerusalem are still not connected to central systems.

Until 2012, the Israeli energy market was an "Energy Island", completely dependent on imported fuel sources, mostly coal. The discovery of natural gas in the Mediterranean within Israeli territorial water led to a structural change in the market, moving to local resource based production and opening up the market to private producers. This transition is regulated by the Natural Gas Market Law of 2002, supervised by the National Gas Authority. The following table presents the change in energy fuel sources between 1990 and 2014:

Fig. 24: Fuel Sources (Source: CBS, Statistical Abstract of Israel)
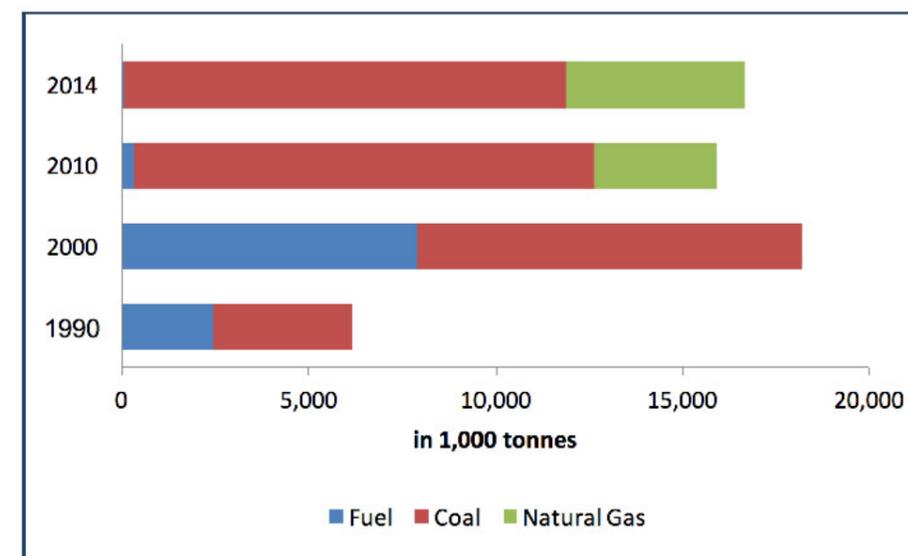
The transition to locally produced natural gas is a significant improvement of the energy market, both in terms of cost and in terms of air pollution.

Israel was one of the first countries in the world to realize the potential of using solar power. Already in the 1950s, an Israeli engineer developed the residential solar water heaters, by the mid 1960's 1 in 20 houses was equipped with heaters. The real leap came in the 1980s, when the Israeli Parliament passed a law requiring all new homes (except high towers with insufficient roof area) to install solar heaters.

Despite it's early awakening, renewables comprise less than 2% of total energy production. Although Israel can boast of highly developed research and CleanTech industry, advancement in implementation is still slow, However, line with the Paris Climate Agreement, the Israeli Government ratified Resolution No. 542, dated September 20, 2015 and set a target of 17% reduction in electricity consumption by 2020,[60] and at least 13% renewables by 2025.

Municipalities have very little sway over the energy market, since all electricity is delivered via the national grid, and infrastructure is planned and supervised nationally. Although their scope of action is still limited at this time, the local authorities are effecting the energy wellbeing of their cities. On the one hand, municipalities are major users of electricity for municipal purposes, they are responsible for street lights, public buildings, schools and all other civic facilities. On the other hand they control the urban space, through laws and plans, such as green building codes, reducing urban heat islands and creating more shade, attaining a more sustainable environment and energy usage. Several municipal energy efficiency programs were implemented in recent years with cooperation between the ministries of Infrastructure and Environment, and the Center for Local Authorities. About one third of the municipalities across the country

[60] Relative to the electricity consumption forecast for 2030 under the business as usual scenario.

participated in these programs; they produced energy efficiency plans and implemented varied measures to reduce electricity consumption. Local Energy production from renewable sources is still small, mostly restricted to installing solar panels on public buildings, particularly schools.

36. Challenges Experienced and Lessons Learned

Improving access to adequate housing

Housing policy in the early 1990's centered predominantly on supplying homes to the massive influx of new immigrants, mainly from the former USSR. In one decade, Israel succeeded in providing housing for around one million newcomers. However, between 1997 and 2009, the annual housing supply has dropped, which according to estimates resulted in a shortage of nearly 100 thousand apartments and a sharp rise in housing prices in the following years. At present, the main challenge of the Israeli Government is to promote increased supply of new homes which will eventually reduce the upward pressure on prices. New policy tools have been introduced in recent years, to provide more housing solutions and to integrate them in viable urban environments.

The rental market comprises a significant portion of the housing market, especially in the cities. For the most part it has been left to the market forces, however, since the 2011 protests, plans for developing long term rental market and lowering housing prices are being promoted.

Housing policies and urban policies should be interlinked; it should be far more convenient and lucrative to develop housing projects within existing cities than away in the suburbs.

Improving access to sustainable means of transport

More public transportation, less private cars, these need to be the guiding policy strictures for transport. The public opts for convenience, where public transportation is convenient and accessible, more people are leaving their cars, and choosing trains or buses. Infrastructure is naturally crucial but it is not the only determinant of accessibility. Information, compatibility between services, price levels and innovativeness, – in sum, the user experience – is also of immense importance.

Access to public transportation brings equality, linking peripheral communities to employment and commerce, enabling the elderly and young to reach educational and health facilities, and ensuring inter-city cooperation and relationship, these are crucial to national wellbeing.

In addition, lack of proper transport infrastructure is usually a major obstacle in housing development. Therefore, increasing housing supply is highly dependent on Government's ability to provide sufficient access to public transport.

Ensuring sustainable access to safe drinking water

Israel has a long tradition in overcoming water scarcity. In recent years, the water strategy is moving from controlling demand to creating supply. With the introduction of the national desalination programs, water availability is no longer a critical issue. Desalination is certainly a worthwhile solution; however, while it resolves the water problem, it enhances energy demand. Renewable energy needs to be incorporated within the desalination systems in order to reduce Green House Gas emissions and air pollution, and ensure sustainability.

Although the supply side is apparently addressed, demand management should not be neglected.

Water is still scarce and will get scarcer, there is less rain, and more heat, national water and climate policies should be interconnected, in both planning and implementation.

Ensuring sustainable access to basic sanitation and drainage

In the past twenty years, handling sewage has become a major issue in Israel, because of the growing population, in urban centers in particular. Research and development in this area need to continue and more emphasize should be made on disseminating the Israeli experience to other countries.

Improving access to clean domestic energy

Israel has tremendous potential for solar energy due to it's climate characteristics and the local expertise. However, currently, the local solar industry is concentrated mostly on export with limited in country implementation. This is being remedied, both on the national and the local level; Israel and Israeli cities could easily become beta sites for solar and sustainable energy, improving their own wellbeing and contributing to wellbeing elsewhere.

CHAPTER VII Indicators

The following indictors are based for the most part on data generated by the Central Bureau of Statistics, Israel, places where external data is used, are noted.

The indicators are aligned to UN Habitat's guidelines, presenting data for the two decades since HABITAT II; 1996, 2006 and 2013, in some cases, other years are presented for lack of data.

i.   Urban Population

- Total Urban population in 2014: 7,570,800   91%
- Total Urban population in 2006: 6,531,.200   92%
- Total Urban population in 1996: 5,157,700   90%

Urban Population by size of locality

Year	2013	2008	1995
Urban settlements 500,000+	829,900	-	-
Urban settlements 200,000+	1,365,200	1,298,300	608,500
Urban settlements 100,000+	1,282,100	1,197,200	1,307,700
Urban settlements 50,000+	1,115,400	819,300	602,100

ii.   *% of people living in slums = density of poor people*

There are no slums in Israel

iii.   *% of urban population with access to adequate housing*

Adequate housing is defined as a function of the following indicators:

Cost of Housing as percent of income by Decile:

Decile	1	2	3	4	5	6	7	8	9	10
2013	26%	25%	27%	27%	27%	27%	28%	25%	24%	24%
2006	22%	23%	23%	25%	23%	22%	24%	21%	20%	18%
1997	28%	26%	26%	26%	26%	23%	23%	21%	20%	17%

Cost of Housing Maintenance as percent of income by Decile:

Year	1	2	3	4	5	6	7	8	9	10
2013	11%	10%	10%	10%	10%	10%	10%	10%	10%	11%
2006	11%	12%	11%	11%	10%	11%	10%	11%	11%	11%
1997	9%	9%	10%	9%	9%	9%	9%	9%	10%	10%

iv.   *% of people residing in urban areas with access to safe drinking water*

Water is provided to 100% of urban areas, mostly by the National Water Company, some through local wells.

Sources of urban water by year by percentage

	2013	2010	1990
National Water Co.	46%	55%	64%
Local Wells	15%	14%	20%
Local Upper water	11%	9%	13%

	2013	2010	1990
Local Effluents	12%	9%	3%
Desalination of sea water	16%	13%	0%

Water cost as part of income by decile:

Year	1	2	3	4	5	6	7	8	9	10
2013	1.5%	1.4%	1.3%	1.2%	1.1%	1.0%	1.0%	0.9%	0.9%	0.9%
2006	1.5%	1.4%	1.2%	1.1%	1.0%	0.9%	0.9%	0.9%	0.8%	0.7%
1997	3.4%	2.3%	2.3%	1.8%	1.7%	1.7%	1.5%	1.3%	1.3%	1.3%

v.   *% of people residing in urban areas with access to adequate sanitation*

Adequate sanitation is defined as both connected to central systems and treated through these systems.

Year	connected	recycled
2013	100%	80%
2005	100%	72%
1997	Almost 100%	65%

vi.   *% of people residing in urban areas with access to regular waste collection*

All municipalities provide regular waste collection, however, municipalities who are deficit, are often delinquent in providing this service. There is no regular monitoring of these occurrences.

	2014	2006	1996
Annual waste generation per capita	1.7 kg	1.65 kg	1.91 kg
Recycling	17%	13%	NA

vii.   *% of people residing in urban areas with access to clean domestic energy*

The indicators bellow relate both to accessibility to energy in terms of economic accessibility and the level of clean production in terms of solar energy. Practically all urban households in Israel are connected to the national grid for their electric supply.

Energy production according to source:

Year	Renewables in kilowatts/hour	Percentage of production from renewables
2008	42.03	0.08%
2012	399.30	0.70%

Energy consumption and price:

Year	Consumption per household, in kilowatts/hour	Total Electricity consumption in kilowatts/hour
2013	15,662	50,162
2006	7,304	57,171
1997	5,780	NA

viii.   *% of people residing in urban areas with access to public transport*

Access to public transport is a function of both quality and frequency, the following indicators present data on both aspects for all types of settlements; urban and sub-urban:

Year	Connected to Public Transport	At least 12 daily trips per local authority
2016	92%	80%
2006	75%	NA

ix. *Level of effective decentralization, measured by:*

a. % of urban policies and legislation in whose formulation local and provincial government participated from 1996 to present

NA

b. % share of both income and expenditure allocated to provincial and local governments from national budget

Year	Government Balance allocations	Government Dedicated allocations
2013	7%	30%
2006	8%	25%
1996	15.5%	25.5%

c. % share of local authorities' expenditure financed from local revenue

- 2013: **30.3%**

- 2006: **27%**

- 1996: **23%**

ix. *% of city, regional and national governments that have implemented urban policies supportive of local economic development and creation of decent jobs and livelihoods.*

NA

x. *% of city, regional and national governments that have implemented urban policies supportive of local economic development and creation of decent jobs and livelihoods*

Community Policing[61] – **2010** – the Israeli Government passed a resolution in support of establishing municipal and community policing units. By 2014, thirteen local authorities have established such units – 7%

A City without Violence[62] - A national program chosen as the Israeli government and the Ministry of Public Security's flagship program for combating anti-social behavior, violence, delinquency and crime. The program is operational in 98 of all municipalities – 38%.

xii. *% of city and regional governments that have implemented plans and designs for sustainable, resilient cities that are inclusive and respond adequately to urban growth*

CCP Forum 15[63] - The Convention of the Forum 15 for reducing Air Pollution and for Climate Protection is a local Israeli version of the ICLEI`s international convention for climate protection. The convention initiative is supported by the Forum 15, in collaboration with the Local Sustainability Center of the Heschel Center, and the MoEP. The Forum 15 Convention was signed on **February 13 2008**, by Israel's eighteen major cities. Under the Convention,

[61] http://www.police.gov.il.
[62] http://www.cwv.gov.il.
[63] http://www.forum15.org.il.

the eighteen cities committed themselves to setting clear, quantitative goals for reducing urban greenhouse gas (GHG) emissions and air pollution, and preparing a municipal action plan to achieve those goals. The Convention contains a commitment to drawing up an urban master-plan according to clear and set in advance milestones, as detailed in the ICLEI international convention, as well as a commitment to set clear and quantitative reduction targets for each city, thus through a strategic sight to the year 2020.

Implementing the "Preliminary" and "Planning stages – Stage report

	Ashdod	Ashkelon	Beer Sheva	Bat Yam	Givatim	Herzliya	Hadera	Holon	Haifa	Jerusalem	Kfar Saba	Netanya	Petaç Tikva	Rishon Lezion	Rehovot	Ra.at Gan	Ramama	Tel aviv Yafo
Approve a budget	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green
Appoint a steering committee	green	green	green	green	red	green	red	green	green	green	green	green	green	green	green	green	green	green
Appoint a municipal referent	green	green	green	green	green	green	red	green	green	green	green	green	green	green	green	green	green	green
Train the steering committee	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green
Contract with a consultancy team	green	green	yellow	green	green	green	red	green	green	green	green	green	green	green	green	green	green	green
Perform immediate projects	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green	green
Perform the Urban Emissions survey	green	green	red	red	red	green	green	green	green	green	yellow	green	green	green	green	yellow	green	green
Complete an urban master plan	yellow	green	red	yellow	yellow	green	yellow	red	yellow	green	yellow	yellow	green	yellow	yellow	red	green	green

ENVIRONMET TAG Program - The Environmental Tag program, was instated by the Union of Local Governments with the support of the MoEP. The programs disseminates strategies and tools for urban efficiency in local authorities – specifically, electricity, water, and solid waste. The aim of the program, which was launched in 2010, is not only to benefit the environment, but also to cut expenses for the local authorities. An additional benefit to the program is that it helps raise public awareness about the importance of local governments adopting sustainable practices. 87 municipalities participate in the program, comprising 87 34% of the municipalities encompassing over 2,600,000 resident.

Sustainable Transportation Municipal Contest – 2008, The MoTRS launched this program to encourage initiatives and comprehensive planning by municipalities. The Sustainable Transportation Contest invited heads of Municipalities, and Local Councils to compile and publicly present transport plans for future projects. The Municipality of Ashdod was awarded two million nis for its plan, altogether, 17 medium size cities participated and submitted plans.

xiii. *Share of GDP produced in urban areas*

Acronyms and Hebrew terms

- Arnona: Municipal property tax
- BOI: Bank of Israel
- BSV: Beer Sheva
- CBS: Central Bureau of Statistics, Israel
- GR: Government Resolution
- IUED: Israel Union for Environmental Defense
- JSM: Jerusalem
- LTV: loan-to-value ratios
- MoCH: Ministry of Construction and Housing
- MoEP: Ministry for Environmental Protection
- MoF: Ministry of Finance
- MoSE: Ministry of Social Equality
- MoTRS: Ministry of Transport and Road Safety
- NEA: National Emergency Authority
- NIS: New Israeli Shekel - (local currency)
- NMP35: National Outline Master Plan for zoning and development
- PMO: Prime Minister's Office
- SNI: Shmuel Neeman Institute
- TAMA38: National Master Plan for strengthening structures for earthquakes
- TLV: Tel Aviv Yafo
- ULAI: Union of Local Authorities, Israel